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LIVINGSTONE'S LAST JOURNALS.



DAVID LIVINGSTONE.

Complete, Cheap, and Popular Edition,

Reprinted from Harper's Elegant Library Edition.

THE LAST JOURNALS
OF
DAVID LIVINGSTONE,
IN CENTRAL AFRICA.

FROM EIGHTEEN HUNDRED AND SIXTY-FIVE TO HIS DEATH.

CONTINUED BY A NARRATIVE OF

HIS LAST MOMENTS AND SUFFERINGS,

OBTAINED FROM

HIS FAITHFUL SERVANTS CHUMA AND SUSI,

BY HORACE WALLER, F.R.G.S.,

RECTOR OF TWYWELL, NORTHAMPTON.

WITH PORTRAIT, MAP, AND ILLUSTRATIONS.



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INTRODUCTION.

IN the midst of the universal sorrow caused by the intelligence that Dr. Livingstone had lost his life at the farthest point to which he had penetrated in his search for the true sources of the Nile, a faint hope was indulged that some of his journals might survive the disaster: this hope, I rejoice to say, has been realized beyond the most sanguine expectations.

It is due, in the first place, to his native attendants, whose faithfulness has placed his last writings at our disposal, and also to the reader, before he launches forth upon a series of travels and scientific geographical records of the most extraordinary character, to say that in the following narrative of seven years' continuous work and new discovery *no break whatever occurs*.

We have not to deplore the loss, by accident or carelessness, of a single entry, from the time of Livingstone's departure from Zanzibar, in the beginning of 1866, to the day when his note-book dropped from his hand, in the village of Ilala, at the end of April, 1873.

I trust it will not be uninteresting if I preface the history with a few words on the nature of these journals and writings as they have come to hand from Central Africa.

It will be remembered that when Mr. Stanley returned to England in 1872, Dr. Livingstone intrusted to his care a very large Letts's diary, sealed up and consigned to the safe-keeping of his daughter, Miss Agnes Livingstone. Upon the confirmation of the worst news, this book was examined and found to contain a considerable portion of the notes which her father made during his travels previous to the time of Mr. Stanley's meeting him.

The doctor's custom was always to have metallic note-books in use, in which the day's jottings were recorded. When time and opportunity served, the larger volume was posted up with scrupulous care.

It seems, however, that in the last three or four years of his life this excellent rule had to give way to the toils of travel and the exhaustion of most distressing illnesses. While in the Manyema country he ran out of note-books, ink, and pencils, and had to resort to shifts which at first made it a very debatable point whether the most diligent attempt at deciphering would succeed after all. Such pocket-books as remained at this period of his travels were utilized to the last inch of paper. In some of them we find lunar observations, the names of rivers, and the heights of hills advancing toward the middle from one end, while from the other the itinerary

grows day by day, interspersed with map routes of the march, botanical notes, and carefully made drawings. But in the mean time the middle portion of the book was filling up with calculations, private memoranda, words intended for vocabularies, and extracts from books, while here and there the stain of a pressed flower causes indistinctness; yet the thread of the narrative runs throughout. Nothing but his invariable habit of constantly repeating the month and year obviates hopeless confusion. Nor is this all; for pocket-books gave out at last, and old newspapers, yellow with African damp, were sewn together, and his notes were written across the type with a substitute for ink made from the juice of a tree. To Miss Livingstone and to the Rev. C. A. Alington I am very much indebted for help in the laborious task of deciphering this portion of the doctor's journals. Their knowledge of his handwriting, their perseverance, coupled with good eyes and a strong magnifying-glass, at last made their task a complete success.

In comparing this great mass of material with the journal brought home by Mr. Stanley, one finds that a great deal of most interesting matter can be added. It would seem that in the hurry of writing and copying dispatches previous to his companion's departure, the doctor rapidly entered up as much from his note-books as time and space permitted.

Most fortunately, he still carried the greater part of these original notes till the time of his death, so that they were forthcoming when his effects were subsequently saved.

This brings us to the second installment of the journals, for we have thus acknowledged the first to have reached us on Mr. Stanley's return.

When the battered tin traveling-case, which was with Livingstone to the last, was opened at the Foreign Office in the spring of this year, not only were these valuable papers disclosed which I have mentioned, but it was found also that Livingstone had kept a copious journal during his stay at Unyanyembé in some copy-books, and that when his stock of note-books was replenished a daily record of his subsequent travels had been made.

It was with fear and trembling that one looked to see whether all had been saved or only part, but with satisfaction and thankfulness I have subsequently discovered that his men preserved every single line, besides his maps, which now come to light for the first time.

Thus much on the material of the diaries. It remains to say a few words on the map which accompanies these journals. It has been compiled from Dr. Livingstone's original drawings and note-books, with the corrections and additions he made from time to time as the work of exploration progressed, and the details of physical geography became clearer to him. The compiler, Mr. John Bolton,* implicitly following the original outline of the drawing as far as possible, has honestly endeavored to give such a rendering of the entire work as the doctor would have done had he lived to return home and superintend the construction; and I take this opportunity of ex-

* Attached to Mr. Stanley's staff.

pressing my sincere gratification that Mr. Bolton's rare technical skill, scientific knowledge, and unwearying labor have been available for the purpose.

Among almost the last words that Livingstone wrote, I find an unfinished letter to myself, in which he gives me very clear and explicit directions concerning the geographical notes he had previously sent home, and I am but carrying out the sacred duty which is attached to a last wish when I call attention to the fact that he particularly desired in this letter that *no positions gathered from his observations for latitude and longitude, nor for the levels of the lakes, etc., should be considered correct till Sir Thomas Maclear had examined them.* The position of Casembe's town, and of a point near Pam-bété at the south-east, and of Lake Liemba (Tanganyika), have been computed and corrected by Sir T. Maclear and Dr. Mann. The observations for latitude were taken at short intervals, and where it has been possible to test them they have been found very correct; but I repeat, that until the imprimator of his old friend at the Cape of Good Hope stands over the whole of Livingstone's work, the map must be accepted as open to further corrections.

The journey from Kabwabwata to Mparru has been inserted *entirely* from notes, as the traveler was too ill to mark the route. This is the only instance in all his wanderings where he failed to give some indication on his map of the nature of the ground over which he passed. The journey from Mikindany Bay to Lake Nyassa has also been laid down from his journal and latitudes in consequence of the section of this part of his route (which he left at Ujiji) not having arrived in England at this date.* It will be observed that the outline of Lake Nyassa differs from that on any published map. It has been drawn from the original exploratory survey of its southern shores made by Dr. Livingstone in 1861-63. For some reason this original plan was not adhered to by a former draughtsman, but the lake has here been restored to a more accurate bearing and position.

How often shall we see in the pages of this concluding chapter of his life that unwavering determination which was pre-eminently the great characteristic of David Livingstone!

Naturally endowed with unusual endurance, able to concentrate faculties of no ordinary kind upon whatever he took in hand, and with a dread of exaggeration which at times almost militated against the importance of some of his greatest discoveries, it may be doubted if ever geographer went forth strengthened with so much true power. Let us add to these a sincere trust that slavery, the "great open sore of the world," as he called it, might, under God's good guidance, receive healing at his hands; a fervent hope that others would follow him after he had removed those difficulties which

* In February last this section of the map (as we suppose), together with some of the doctor's papers, was sent off from Ujiji by Lieutenant Cameron. Nothing, however, had arrived on the 22d of September at Zanzibar, and H. M. Consul, Captain Prideaux, entertained serious doubts at that time whether they would ever come to hand. All Livingstone's journals were saved through other instrumentality, as I have shown.

are comprised in a profound ignorance of the physical features of a new country, and we have the marching orders of him who left us in August, 1865, never to return alive.

Privileged to enjoy his near personal friendship for a considerable period in Africa, and also at home, it has been easy to trace—more especially from correspondence with him of late years—that Livingstone wanted just some such gigantic problem as that which he attacked at the last to measure his strength against: that he finally overrated and overtaxed it, I think all must admit.

He had not sufficiently allowed for an old wound which his constitution received while battling with dysentery and fever on his celebrated journey across Africa, and this finally sapped his vital powers, and, through the irritation of exhaustion, insidiously clouded much of his happiness.

Many of his old friends were filled with anxiety when they found that he intended to continue the investigation of the Nile sources, for the letters sent home by Mr. Stanley raised the liveliest apprehensions, which, alas! soon proved themselves well grounded.

The reader must be warned that, however versed in books of African travel he may be, the very novelty of his situation among these pages will render him liable, perhaps, to a danger which a timely word may avert. Truly it may be said he has an *embarrass de richesses!* To follow an explorer who, by his individual exertions, has filled up a great space in the map of Africa, who has not only been the first to set foot on the shores of vast inland seas, but who, with the simple appliances of his bodily stature for a sounding-pole and his stalwart stride for a measuring-tape, lays down new rivers by the hundreds, is a task calculated to stagger him. It may be provoking to find Livingstone busily engaged in bargaining for a canoe upon the shores of Bangweolo, much as he would have secured a boat on his own native Clyde; but it was not in his nature to be subject to those paroxysms in which travelers too often indite their discoveries and descriptions.

At the same time, these journals will be found to contain innumerable notes on the habits of animals, birds, and fishes, many of them probably new species, and on phenomena in every direction which the keen eye searched out as the great traveler moved among some of the grandest scenes of this beautiful world. It may be doubted if ever eye so keen was backed by so much perseverance to shield it from a mere superficial habit of noticing. Let his adventures speak for themselves.

Among the greatest facts recorded here the geographer will perceive that the doctor has placed it beyond doubt that Lake Nyassa belongs to a totally distinct system of waters to that which holds Lake Tanganyika, and the rivers running north and west. He was too sagacious to venture the surmise that Tanganyika has a subterranean outlet without having duly weighed the probabilities in the scale with his elaborate observations: the idea gathers force when we remember that in the case of limestone cliffs

water so often succeeds in breaking bounds by boring through the solid rock. No more interesting problem is left to solve, and we shall yet learn whether, through the caverns of Western Kabogo, this lake adds its waters to the vast northerly flow of rivers we now read of for the first time, and which are undoubtedly among the largest in the world.

I can not close these remarks without stating how much obliged I am to Mr. James Young, F. R. S., of Kelly, for having insured the presence of the doctor's men, Chuma and Susi. Ever ready to serve his old friend Livingstone, he took care that they should be at my elbow so long as I required them to help me amidst the pile of MSS. and maps. Their knowledge of the countries they traveled in is most remarkable, and from constantly aiding their master by putting questions to the natives respecting the course of rivers, etc., I found them actual geographers of no mean attainments. In one instance, when in doubt concerning a particular water-shed, to my surprise Susi returned a few hours afterward with a plan of the whole system of rivers in the region under examination, and I found his sketch tally well with the doctor's map. Known to me previously for years on the Zambesi and Shiré, it was a pleasure to have them with me for four months. Among other good services, they have aided the artist by reproducing the exact facsimile of the hut in which Dr. Livingstone expired, besides making models of the "kitanda" on which he was carried, and of the village in which his body lay for fourteen days.

I need not add what ready and valuable assistance I have derived from the doctor's old companion, Dr. Kirk, wherever I have found it necessary to apply to him; some of the illustrations are more particularly owing to his kindness.

It only remains to say that it has been thought advisable to retain all the strictly scientific matter found in Dr. Livingstone's journals for future publication. When one sees that a register of the daily rain-fall was kept throughout, that the temperature was continually recorded, and that barometrical and hypsometrical observations were made with unflagging thoroughness of purpose year in and year out, it is obvious that an accumulated mass of information remains for the meteorologist to deal with separately, which alone must engross many months of labor.

A constant sense of great responsibility has been mine throughout this task, for one can not doubt that much of the future welfare of distant tribes and races depends upon Livingstone obtaining through these records a distinct hearing for their woes, their misery, and, above all, for their willingness to welcome men drawn toward them by motives like his.

At the same time, memory and affection have not failed to bring back vividly the man, the traveler, and the friend. May that which he has said in his journals suffer neither loss of interest nor depth of meaning at the compiler's hands.

HORACE WALLER.

TWYWELL RECTORY, THRAPSTON,
NORTHAMPTONSHIRE, *Nov. 2d*, 1874.

CONTENTS.

CHAPTER I.

Arrival at Zanzibar.—Hearty Reception by Said Majid, the Sultan.—Murder of Baron van der Decken.—The Slave-market.—Preparations for starting to the Interior.—Embarkation in H. M. S. *Penguin* and *Dhow*.—Rovuma Bay impracticable.—Disembarks at Mikindany.—Joy at traveling once more.—Trouble with Sepoys.—Camels attacked by Tsetse Fly, and by Sepoys.—Jungle Sappers.—Meets old Enemies.—The Makondé.—Lake Nangandi.—Gum-copal Diggings.....Page 17

CHAPTER II.

Effect of *Pioneer's* former Visit.—The Poodle Chitané.—Result of Tsetse Bites.—Death of Camels and Buffaloes.—Disaffection of Followers.—Disputed Right of Ferry.—Mazitu Raids.—An old Friend.—Severe Privations.—The River Loendi.—Sepoys mutiny.—Dr. Roscher.—Desolation.—Tattooing.—Ornamental Teeth.—Singular Custom.—Death of the Nassick Boy, Richard.—A sad Reminiscence. . 40

CHAPTER III.

Horrors of the Slave-trader's Track.—System of Cultivation.—Pottery.—Special Exercising.—Death of the last Mule.—Rescue of Chirikaloma's Wife.—Brutalities of the Slave-drivers.—Mtarika's.—Desperate March to Mtaka's.—Meets Arab Caravans.—Dismay of Slavers.—Dismissal of Sepoys.—Mataka.—The Waiyau Metropolis.—Great Hospitality and good Feeling.—Mataka restores stolen Cattle.—Life with the Chief.—Beauty of Country and Healthiness of Climate.—The Waiyau People and their Peculiarities.—Regrets at the Abandonment of Bishop Mackenzie's Plans..... 59

CHAPTER IV.

Geology and Description of the Waiyau Land.—Leaves Mataka's.—The Nyumboplant.—Native Iron-foundry.—Blacksmiths.—Makes for the Lake Nyassa.—Delight at seeing the Lake once more.—The Manganja or Nyassa Tribe.—Arab Slave-crossing.—Unable to procure Passage across.—The Kungu Fly.—Fear of the English among Slavers.—Lake Shore.—Blue Ink.—Chitané changes Color.—The Nsaka Fish.—Makalaosé drinks Beer.—The Sanjika Fish.—London Antiquities.—Lake Rivers.—Mukaté's.—Lake Pamalombé.—Mponda's.—A Slave-gang.—Wikatani discovers his Relatives, and remains..... 79

CHAPTER V.

Crosses Cape Maclear.—The Havildar demoralized.—The discomfited Chief.—Reaches Marenga's Town.—The Earth-sponge.—Description of Marenga's Town.—Rumors of Mazitu.—Musa and the Johanna Men desert.—Reaches Kimsusa's.—His Delight at seeing the Doctor once more.—The fat Ram.—Kimsusa relates his Experience of Livingstone's Advice.—Chuma finds Relatives.—Kimsusa solves the

Transport Difficulty nobly.—Another old fishing Acquaintance.—Description of the People and Country on the west of the Lake.—The Kanthundas.—Kauma.—Iron-smelting.—An African Sir Colin Campbell.—Milandos..... Page 100

CHAPTER VI.

Progress northward.—An African Forest.—Destruction by Mazitu.—Native Salutations.—A disagreeable Chief.—On the Water-shed between the Lake and the Loangwa River.—Extensive Iron-workings.—An old Nimrod.—The Bua River.—Lovely Scenery.—Difficulties of Transport.—Chilobé.—An African Pythoness.—Enlists two Waiyau Bearers.—Ill.—The Chitella Bean.—Rains set in.—Arrives at the Loangwa..... 118

CHAPTER VII.

Crosses the Loangwa.—Distressing March.—The King-hunter.—Great Hunger.—Christmas Feast necessarily postponed.—Loss of Goats.—Honey-hunters.—A Meal at last.—The Babisa.—The Mazitu again.—Chitembo's.—End of 1866.—The New Year.—The northern Brim of the great Loangwa Valley.—Accident to Chronometers.—Meal gives out.—Escape from a Cobra Capello.—Pushes for the Chambezé.—Death of Chitané.—Great Pinch for Food.—Disastrous Loss of Medicine-chest.—Bead Currency.—Babisa.—The Chambezé.—Reaches Chitapangwa's Town.—Meets Arab Traders from Zanzibar.—Sends off Letters.—Chitapangwa and his People.—Complications..... 135

CHAPTER VIII.

Chitapangwa's parting Oath.—Course laid for Lake Tanganyika.—Moamba's Village.—Another Water-shed.—The Babemba Tribe.—Ill with Fever.—Threatening Attitude of Chibue's people.—Continued Illness.—Reaches Cliffs overhanging Lake Liemba.—Extreme Beauty of the Scene.—Dangerous Fit of Insensibility.—Leaves the Lake.—Pernambuco Cotton.—Rumors of War between Arabs and Nsama.—Reaches Chitimba's Village.—Presents Sultan's Letter to principal Arab Hamees.—The War in Itawa.—Geography of the Arabs.—Ivory Traders and Slave-dealers.—Appeal to the Koran.—Gleans Intelligence of the Wasongo to the eastward, and their Chief, Meréré.—Hamees sets out against Nsama.—Tedious Sojourn.—Departure for Ponda.—Native Cupping..... 162

CHAPTER IX.

Peace Negotiations with Nsama.—Geographical Gleanings.—Curious Spider.—Reaches the River Lofu.—Arrives at Nsama's.—Hamees marries the Daughter of Nsama.—Flight of the Bride.—Conflagration in Arab Quarters.—Anxious to visit Lake Moero.—Arab Burial.—Serious Illness.—Continues Journey.—Slave-traders on the March.—Reaches Moero.—Description of the Lake.—Information concerning the Chambezé and Luapula.—Hears of Lake Bemba.—Visits Spot of Dr. Lacerda's Death.—Casembe apprised of Livingstone's Approach.—Meets Mohamad Bogarib.—Lakelet Mofwé.—Arrives at Casembe's Town..... 184

CHAPTER X.

Grand Reception of the Traveler.—Casembe and his Wife.—Long Stay in the Town.—Goes to explore Moero.—Dispatch to Lord Clarendon, with Notes on recent Travels.—Illness at the End of 1867.—Farther Exploration of Lake Moero.—Flooded Plains.—The River Luao.—Visits Kabwawata.—Joy of Arabs at Mohamad bin Saleh's Freedom.—Again ill with Fever.—Stories of under-ground Dwellings.... 203

CHAPTER XI.

Riot in the Camp.—Mohamad's Account of his long Imprisonment.—Superstitions about Children's Teeth.—Concerning Dreams.—News of Lake Chowambé.—Life

of the Arab Slavers.—The Katanga Gold Supply.—Muabo.—Ascent of the Rua Mountains.—Syde bin Habib.—Birthday, March 19th, 1868.—Hostility of Mpwéto.—Contemplates visiting Lake Bemba.—Nile Sources.—Men desert.—The Shores of Moero.—Visits Fungafunga.—Return to Casembe's.—Obstrctiveness of "Cropped-ears."—Accounts of Pereira and Dr. Lacerda.—Major Monteiro.—The Line of Casembe's.—Casembe explains the Connection of the Lakes and the Luapula.—Queen Moãri.—Arab Sacrifice.—Kapika gets rid of his Wife.....Page 221

CHAPTER XII.

Prepares to examine Lake Bemba.—Starts from Casembe's, June 11th, 1868.—Dead Leopard.—Moenampanda's Reception.—The River Luongo.—Weird Death-song of Slaves.—The Forest Grave.—Lake Bembo changed to Lake Bangweolo.—Chikumbi's.—The Imbozwa People.—Kombokombo's Stockade.—Mazitu's Difficulties.—Discovers Lake Bangweolo on July 18th, 1868.—The Lake Chief Mapuni.—Description of the Lake.—Prepares to navigate it.—Embarks for Lifungé Island.—Immense Size of Lake.—Reaches Mpabala Island.—Strange Dream.—Fears of Canoe-men.—Return to Shore.—March back.—Sends Letters.—Meets Banyamwezi.—Reviews recent Explorations at length.—Disturbed State of the Country..... 241

CHAPTER XIII.

Cataracts of the Kalongosi.—Passage of the River disputed.—Leeches, and Method of detaching them.—Syde bin Habib's Slaves escape.—Enormous Collection of Tusks.—Ill.—Theory of the Nile Sources.—Tribute to Miss Tinné.—Notes on Climate.—Separation of Lake Nyassa from the Nile System.—Observations on Victoria Nyanza.—Slaves dying.—Repentant Deserters.—Mohamad Bogharib.—Enraged Imbozhwa.—An Attack.—Narrow Escape.—Renewed Attack.—A Parley.—Help arrives.—Bin Juma.—March from the Imbozhwa Country.—Slaves escape.—Burial of Syde bin Habib's Brother.—Singular Custom.—An Elephant killed.—Native Game-laws.—Rumor of Baker's Expedition.—Christmas Dinners..... 264

CHAPTER XIV.

Bad beginning of the New Year.—Dangerous Illness.—Kindness of Arabs.—Complete Helplessness.—Arrive at Tanganyika.—The Doctor is conveyed in Canoes.—Kasanga Islet.—Cochin-China Fowls.—Reaches Ujiji.—Receives some Stores.—Plundering Hands.—Slow Recovery.—Writes Dispatches.—Refusal of Arabs to take Letters.—Thani bin Suellim.—A Den of Slavers.—Puzzling Current in Lake Tanganyika.—Letters sent off at last.—Contemplates visiting the Manyema.—Arab Depredations.—Starts for new Explorations in Manyema, July 12th, 1869.—Voyage on the Lake.—Kabogo East.—Crosses Tanganyika.—Evil Effects of last Illness.—Elephant-hunter's Superstition.—Dugumbé.—The Lualaba reaches the Manyema.—Sons of Moenékuss.—Sokos first heard of.—Manyema Customs.—Illness..... 285

CHAPTER XV.

Prepares to explore River Lualaba.—Beauty of the Manyema Country.—Irritation at Conduct of Arabs.—Dugumbé's Ravages.—Hordes of Traders arrive.—Severe Fever.—Elephant Trap.—Sickness in Camp.—A good Samaritan.—Reaches Mamohela, and is prostrated.—Beneficial Effects of Nyumbo-plant.—Long Illness.—An Elephant of three Tusks.—All Men desert except Susi, Chuma, and Gardner.—Starts with these to Lualaba.—Arab assassinated by outraged Manyema.—Returns baffled to Mamohela.—Long and dreadful Suffering from ulcerated Feet.—Questionable Cannibalism.—Hears of four River Sources close together.—Resumé of Discoveries.—Contemporary Explorers.—The Soko.—Description of its Habits.—Dr. Livingstone feels himself failing.—Intrigues of Deserters..... 308

CHAPTER XVI.

Footsteps of Moses.—Geology of Manyema Land.—“A Drop of Comfort.”—Continued Sufferings.—A stationary Explorer.—Consequences of trusting to Theory.—Nomenclature of Rivers and Lakes.—Plunder and Murder is Ujijian Trading.—Comes out of Hut for first Time after eighty Days’ Illness.—Arab Cure for ulcerated Sores.—Rumor of Letters.—The Loss of Medicines a great Trial now.—The broken-hearted Chief.—Return of Arab Ivory-traders.—Future Plans.—Thankfulness for Mr. Edward Young’s Search Expedition.—The Horn-billed Phœnix.—Tedious Delays.—The Bargain for the Boy.—Sends Letters to Zanzibar.—Exasperation of Manyema against Arabs.—The “Sassassa Bird.”—The Disease “Safura.”.....Page 328

CHAPTER XVII.

Degraded State of the Manyema.—Want of Writing Materials.—Lion’s Fat a Specific against Tsetse.—The Neggeri.—Jottings about Meréré.—Various Sizes of Tusks.—An Epidemic.—The strangest Disease of all!—The New Year.—Detention at Bamarré.—Goître.—News of the Cholera.—Arrival of Coast Caravan.—The Parrot’s-feather Challenge.—Murder of James.—Men arrive as Servants.—They refuse to go North.—Parts at last with Malcontents.—Receives Letters from Dr. Kirk and the Sultan.—Doubts as to the Congo or Nile.—Katomba presents a young Soko.—Forest Scenery.—Discrimination of the Manyema.—They “want to eat a white one.”—Horrible Bloodshed by Ujiji Traders.—Heart-sore, and sick of Blood.—Approaches Nyañgwé.—Reaches the Lualaba..... 347

CHAPTER XVIII.

The Chitoka, or Market gathering.—The broken Watch.—Improvises Ink.—Builds a new House at Nyañgwé, on the Bank of the Lualaba.—Marketing.—Cannibalism.—Lake Kamalondo.—Dreadful Effect of Slaving.—News of Country across the Lualaba.—Tiresome Frustration.—The Bakuss.—Feeble Health.—Busy Scene at Market.—Unable to procure Canoes.—Disaster to Arab Canoes.—Rapids in Lualaba.—Project for visiting Lake Lincoln and the Lomamé.—Offers large Reward for Canoes and Men.—The Slave’s Mistress.—Alarm of Natives at Market.—Fiendish Slaughter of Women by Arabs.—Heart-rending Scene.—Death on Land and in the River.—Tagamoió’s Assassinations.—Continued Slaughter across the River.—Livingstone becomes desponding 367

CHAPTER XIX.

Leaves for Ujiji.—Dangerous Journey through Forest.—The Manyema understand Livingstone’s Kindness.—Zanzibar Slaves.—Kasonga’s.—Stalactite Caves.—Consequences of eating Parrots.—Ill.—Attacked in the Forest.—Providential Deliverance.—Another extraordinary Escape.—Taken for Mohamad Bogharib.—Running the Gauntlet for five Hours.—Loss of Property.—Reaches Place of Safety.—Ill.—Mamohela.—To the Luamo.—Severe Disappointment.—Recovers.—Severe Marching.—Reaches Ujiji.—Despondency.—Opportune Arrival of Mr. Stanley.—Joy and Thankfulness of the old Traveler.—Determines to examine north End of Lake Tanganyika.—They start.—Reach the Lnsizé.—No Outlet.—“Theoretical Discovery” of the real Outlet.—Mr. Stanley ill.—Returns to Ujiji.—Leaves Stores there.—Departure for Unyanyembé with Mr. Stanley.—Abundance of Game.—Attacked by Bees.—Serious Illness of Mr. Stanley.—Thankfulness at reaching Unyanyembé..... 389

CHAPTER XX.

Determines to continue his Work.—Proposed Route.—Refits.—Robberies discovered.—Mr. Stanley leaves.—Parting Messages.—Mteza’s People arrive.—Ancient

Geography. — Tabora. — Description of the Country. — The Banyamwezi. — A Baganda Bargain. — The Population of Unyanyembé. — The Mirambo War. — Thoughts on Sir S. Baker's Policy. — The Cat and the Snake. — Firm Faith. — Feathered Neighbors. — Mistaken Notion concerning Mothers. — Prospects for Missionaries. — Halima. — News of other Travelers. — Chuma is married. *Page* 410

CHAPTER XXI.

Letters arrive at last. — Sore Intelligence. — Death of an old Friend. — Observations on the Climate. — Arab Caution. — Dearth of Missionary Enterprise. — The Slave-trade and its Horrors. — Progressive Barbarism. — Carping Benevolence. — Geology of Southern Africa. — The Fountain Sources. — African Elephants. — A venerable Piece of Artillery. — Livingstone on Materialism. — Bin Nassib. — The Baganda leave at last. — Enlists a new Follower. 436

CHAPTER XXII.

Short Years in Baganda. — Boys' Playthings in Africa. — Reflections. — Arrival of the Men. — Ferent Thankfulness. — An End of the weary Waiting. — Jacob Wainwright takes Service under the Doctor. — Preparations for the Journey. — Flagging and Illness. — Great Heat. — Approaches Lake Tanganyika. — The Borders of Fipa. — Lepidosirens and Vultures. — Capes and Islands of Lake Tanganyika. — Higher Mountains. — Large Bay. 452

CHAPTER XXIII.

False Guides. — Very difficult Traveling. — Donkey dies of Tsetse Bites. — The Kasonso Family. — A hospitable Chief. — The River Lofu. — The Nutmeg-tree. — Famine. — Ill. — Arrives at Chama's Town. — A Difficulty. — An immense Snake. — Account of Casembe's Death. — The Flowers of the Babisa Country. — Reaches the River Lopoposi. — Arrives at Chituñkuè's. — Terrible Marching. — The Doctor is borne through the flooded Country. 465

CHAPTER XXIV.

Entangled among the Marshes of Bangweolo. — Great Privations. — Obligated to return to Chituñkuè's. — At the Chief's Mercy. — Agreeably surprised with the Chief. — Start once more. — Very difficult March. — Robbery exposed. — Fresh Attack of Illness. — Sends Scouts out to find Villages. — Message to Chirubwé. — An Ant Raid. — Awaits News from Matipa. — Distressing Perplexity. — The Bougas of Bangweolo. — Constant Rain above and Flood below. — Ill. — Susi and Chuma sent as Envoys to Matipa. — Reach Bangweolo. — Arrive at Matipa's Islet. — Matipa's Town. — The Donkey suffers in Transit. — Tries to go on to Kabinga's. — Dr. Livingstone makes a Demonstration. — Solution of the Transport Difficulty. — Susi and Detachment sent to Kabinga's. — Extraordinary Extent of Flood. — Reaches Kabinga's. — An Upset. — Crosses the Chambezé. — The River Muanakazi. — They separate into Companies by Land and Water. — A disconsolate Lion. — Singular Caterpillars. — Observations on Fish. — Coasting along the southern Flood of Lake Bangweolo. — Dangerous State of Dr. Livingstone. 486

CHAPTER XXV.

Dr. Livingstone rapidly sinking. — Last Entries in his Diary. — Susi and Chuma's additional Details. — Great Agony in his last Illness. — Carried across Rivers and through Flood. — Inquiries for the Hill of the Four Rivers. — Kalunganjovu's Kindness. — Crosses the Mohlamu into the District of Ilala in great Pain. — Arrives at Chitambo's Village. — Chitambo comes to visit the dying Traveler. — The last Night. — Livingstone expires in the Act of praying. — The Account of what the Men saw. — Remarks on his Death. — Council of the Men. — Leaders selected. — The Chief discovers that his Guest is dead. — Noble Conduct of Chitambo. — A

separate Village built by the Men wherein to prepare the Body for Transport.—The Preparation of the Corpse.—Honor shown by the Natives to Dr. Livingstone.—Additional Remarks on the Cause of Death.—Interment of the Heart at Chitambo's, in Ilala of the Wabisa.—An Inscription and memorial Sign-posts left to denote Spot.....Page 506

CHAPTER XXVI.

They begin the homeward March from Ilala.—Illness of all the Men.—Deaths.—Muanamazungu.—The Luapula.—The Donkey killed by a Lion.—A Disaster at N'kossu's.—Native Surgery.—Approach Chawende's Town.—Inhospitable Reception.—An Encounter.—They take the Town.—Leave Chawende's.—Reach Chiwaie's.—Strike the old Road.—Wire-drawing.—Arrive at Kumba-kumba's.—John Wainwright disappears.—Unsuccessful Search.—Reach Tanganyika.—Leave the Lake.—Cross the Lambalamfipa Range.—Immense Herds of Game.—News of East-Coast Search Expedition.—Confirmation of News.—They reach Baula.—Avant-couriers sent forward to Unyanyembé.—Chuma meets Lieutenant Cameron.—Start for the Coast.—Sad Death of Dr. Dillon.—Clever Precautions.—The Body is effectually concealed.—Girl killed by a Snake.—Arrival on the Coast.—Concluding Remarks..... 521

ILLUSTRATIONS.

[DR. LIVINGSTONE, though no artist, had acquired a practice of making rude sketches of scenes and objects, which have furnished material for the engravers in the Illustrations for this book.]

Full-page Illustrations.

	Page
1. PORTRAIT OF DR. LIVINGSTONE.....	<i>Frontispiece.</i>
2. SLAVERS REVENGING THEIR LOSSES.....	<i>faces</i> 59
3. SLAVES ABANDONED.....	" 64
4. CHITAPANGWA RECEIVING DR. LIVINGSTONE.....	" 155
5. THE VILLAGE ON LAKE LIEMBA (TANGANYIKA).....	" 170
6. THE ARRIVAL OF HAMEES'S BRIDE.....	" 189
7. DISCOVERY OF LAKE BANGWEOLO.....	" 252
8. GUHA HEAD-DRESSES.....	" 300
9. CHUMA AND SUSI.....	" 318
10. MANYUEMA HUNTERS KILLING SOKOS.....	" 323
11. PORTRAIT OF A YOUNG SOKO.....	" 324
12. A DANGEROUS PRIZE.....	" 354
13. FAC-SIMILE OF A PORTION OF DR. LIVINGSTONE'S JOURNAL.....	" 368
14. THE MASSACRE OF THE MANYUEMA WOMEN AT NYAÑGWE.....	" 383
15. THE MANYUEMA AMBUSCADE.....	" 393
16. "THE MAIN STREAM CAME UP TO SUSI'S MOUTH".....	" 484
17. THE LAST MILE OF DR. LIVINGSTONE'S TRAVELS.....	" 503
18. FISH-EAGLE ON HIPPOPOTAMUS TRAP.....	" 504
19. THE LAST ENTRY IN DR. LIVINGSTONE'S JOURNALS.....	" 506
20. EVENING. ILALA, APRIL 29TH, 1873.....	" 509
21. TEMPORARY VILLAGE IN WHICH DR. LIVINGSTONE'S BODY WAS PREPARED.....	" 518

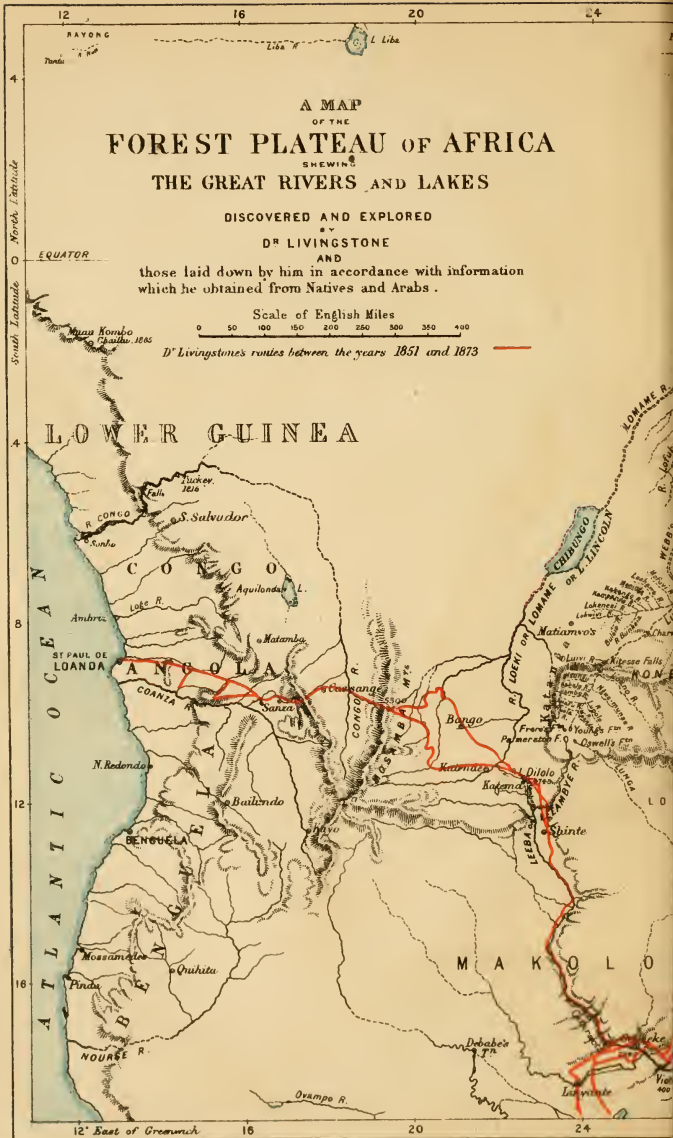
Smaller Illustrations.

1. DR. LIVINGSTONE'S HOUSE, ZANZIBAR.....	19
2. DHOW USED FOR TRANSPORT OF DR. LIVINGSTONE'S CAMELS.....	25
3. A THORN-CLIMBER.....	31
4. TOMAHAWK AND AXE.....	32

	Page
5. CARVED DOOR, ZANZIBAR.....	38
6. TATTOO OF MATAMBWÉ.....	53
7. MACHINGA AND WAIYAU TEETH.....	54
8. IMITATION OF BASKET-WORK IN POTTERY.....	76
9. DIGGING-STICK WEIGHTED WITH ROUND STONE.....	83
10. MANGANJA AND MACHINGA WOMEN.....	99
11. TATTOO ON WOMEN.....	110
12. CURIOSLY CUT-OUT STOOL MADE OF A SINGLE WOODEN BLOCK.....	112
13. WOMEN'S TEETH HOLLOWED.....	121
14. MODE OF FORGING HOES.....	125
15. MALLET FOR SEPARATING FIBRES OF BARK.....	132
16. THE CHIEF CHITAPANGWA.....	154
17. CHITAPANGWA'S WIVES.....	155
18. FILED TEETH OF QUEEN MOÄRI.....	242
19. A FOREST GRAVE.....	245
20. LINES OF GREEN SCUM ON LAKE TANGANYIKA.....	294
21. MODE OF CATCHING ANTS.....	306
22. DR. LIVINGSTONE'S MOSQUITO CURTAIN.....	495
23. MATIPA AND HIS WIFE.....	497
24. AN OLD SERVANT DESTROYED.....	524
25. KAWENDÉ SURGERY.....	526

MAP OF THE FOREST PLATEAU OF AFRICA.....*Before p. 17*





DR. LIVINGSTONE'S LAST JOURNALS.

CHAPTER I.

Arrival at Zanzibar.—Hearty Reception by Said Majid, the Sultan.—Murder of Baron van der Decken.—The Slave-market.—Preparations for starting to the Interior.—Embarkation in H. M. S. *Penguin* and *Dhow*.—Rovuma Bay impracticable.—Disembarks at Mikindany.—Joy at traveling once more.—Trouble with Sepoys.—Camels attacked by Tsetse Fly, and by Sepoys.—Jungle Sappers.—Meets old Enemies.—The Makondé.—Lake Nangandi.—Gum-copal Diggings.

ZANZIBAR, *January 28th*, 1866.—After a passage of twenty-three days from Bombay, we arrived at this island in the *Thule*, which was one of Captain Sherard Osborne's late Chinese fleet, and now a present from the Bombay Government to the Sultan of Zanzibar. I was honored with the commission to make the formal presentation, and this was intended by H. E., the Governor-in-Council, to show in how much estimation I was held, and thereby induce the Sultan to forward my enterprise. The letter to his highness was a commendatory epistle in my favor, for which consideration on the part of Sir Bartle Frere I feel deeply grateful. It runs as follows:

TO HIS HIGHNESS SEJUEL MAJID, SULTAN OF ZANZIBAR.

(*Copy.*)

"YOUR HIGHNESS,—I trust that this will find you in the enjoyment of health and happiness.

"I have requested my friend, Dr. David Livingstone, who is already personally well and favorably known to your highness, to convey to you the assurance of the continual friendship and good-will of her majesty's government in India.

"Your highness is already aware of the benevolent objects of Dr. Livingstone's life and labors, and I feel assured that your highness will continue to him the favor and protection which you have already shown to him on former occasions, and that your highness will direct every aid to be given him within your

highness's dominions which may tend to further the philanthropic designs to which he has devoted himself, and which, as your highness is aware, are viewed with the warmest interest by her majesty's government both in India and England.

"I trust your highness will favor me with continued accounts of your good health and welfare.

"I remain, your highness's sincere friend,

(Signed)

"H. B. E. FRERE.

"BOMBAY CASTLE, *January 2d, 1866.*"

When we arrived Dr. Seward, the acting consul, was absent at the Seychelles on account of serious failure of health; Mr. Schultz, however, was representing him, but he too was at the time away. Dr. Seward was expected back daily, and he did arrive on the 31st. I requested a private interview with the Sultan, and on the following day (29th) called and told him the nature of my commission to his highness. He was very gracious, and seemed pleased with the gift, as well he might, for the *Thule* is fitted up in the most gorgeous manner. We asked a few days to put her in perfect order, and this being the Ramadân, or fasting month, he was all the more willing to defer a visit to the vessel.

Dr. Seward arranged to have an audience with the Sultan, to carry out his instructions, which were to present me in a formal manner; Captain Bradshaw, of the *Wasp*, with Captain Leatham, of the *Vigilant*, and Bishop Tozer, were to accompany us in full dress, but the Sultan had a toothache and gum-boil, and could not receive us; he, however, placed one of his houses at my disposal, and appointed a man who speaks English to furnish board for my men and me, and also for Captain Brebner, of the *Thule*, and his men.

February 6th, 1866.—The Sultan being still unable to come, partly on account of toothache and partly on account of Ramadân, he sent his commodore, Captain Abdullah, to receive the *Thule*. When the English flag was hauled down in the *Thule*, it went up to the mainmast of the *Iskander Shah*, and was saluted by twenty-one guns; then the *Wasp* saluted the Arab flag with an equal number, which honor being duly acknowledged by a second royal salute from the *Iskander Shah*, Captain Abdullah's frigate, the ceremony ended.

Next day, the 7th, we were received by the Sultan, and through his interpreter I told him that his friend, the Governor of Bombay, had lately visited the South Mahratta princes, and had pressed on them the necessity of education; the world was mov-

ing on, and those who neglected to acquire knowledge would soon find that power slipped through their fingers, and that the Bombay Government, in presenting his highness with a portion of steam power, showed its desire to impart one of the greatest improvements of modern times, not desiring to monopolize power, but hoping to lift up others with themselves, and I wished him to live a hundred years and enjoy all happiness. The idea was borrowed partly from Sir Bartle Frere's addresses, because I thought it would have more weight if he heard a little from that source than if it emanated from myself. He was very anxious that Captain Brebner and his men, in returning to India, should take a passage from him in the *Nadir Shah*, one of his men-of-war, and though he had already placed his things aboard the *Vigilant*, to proceed to Seychelles, and thence to Bombay, we persuaded Captain Brebner to accept his highness's hospitality. He had evidently set his heart on sending them back with suitable honors, and an hour after consent was given to go by the *Nadir Shah*, he signed an order for the money to fit her out.



Livingstone's House, Zanzibar.

February 11th.—One of the foremost subjects that naturally occupied my mind here was the sad loss of the Baron van der Decken, on the River Juba, or Aljib. The first intimation of the unfortunate termination of his explorations was the appearance of Lieutenant von Schich at this place, who had left without knowing whether his leader were dead or alive, but an attack had been made on the encampment which had been planned after the steamer struck the rocks and filled, and two of the Europeans

were killed. The attacking party came from the direction in which the Baron and Dr. Link went, and three men of note in it were slain. Von Schich went back from Zanzibar to Brava to ascertain the fate of the Baron, and meanwhile several native sailors from Zanzibar had been allowed to escape from the scene of confusion to Brava.

February 18th.—All the Europeans went to pay visits of congratulation to his highness the Sultan upon the conclusion of the Ramadân, when sweetmeats were placed before us. He desired me to thank the Governor of Bombay for his magnificent gift, and to state that although he would like to have me always with him, yet he would show me the same favor in Africa which he had done here: he added that the *Thule* was at my service to take me to the Rovuma whenever I wished to leave. I replied that nothing had been wanting on his part; he had done more than I expected, and I was sure that his excellency the governor would be delighted to hear that the vessel promoted his health and prosperity; nothing would delight him more than this. He said that he meant to go out in her on Wednesday next (20th): Bishop Tozer, Captain Fraser, Dr. Steere, and all the English were present. The sepoys came in and did obeisance; and I pointed out the Nassick lads as those who had been rescued from slavery, educated, and sent back to their own country by the governor. Surely he must see that some people in the world act from other than selfish motives.

In the afternoon Sheik Sulieman, his secretary, came with a letter for the governor, to be conveyed by Lieutenant Brebner, I. N., in the *Nadir Shah*, which is to sail to-morrow. He offered money to the lieutenant, but this could not be heard of for a moment.

The translation of the letter is as follows, and is an answer to that which I brought:

TO HIS EXCELLENCY THE GOVERNOR OF BOMBAY.

[After compliments.]

“ . . . The end of my desire is to know ever that your excellency's health is good. As for me—your friend—I am very well.

“Your honored letter, borne by Dr. Livingstone, duly reached me, and all that you said about him I understood.

“I will show him respect, give him honor, and help him in all his affairs; and that I have already done this, I trust he will tell you.

"I hope you will let me rest in your heart, and that you will send me many letters.

"If you need any thing I shall be glad, and will give it.

"Your sincere friend,

"MAJID BIN SAID.

"Dated 2d Shaul, 1282 (February 18th, 1866)."

March 2d, 1866.—A northern dhow came in with slaves; when this was reported to the Sultan he ordered it to be burned, and we saw this done from the window of the consulate; but he has very little power over Northern Arabs. He has shown a little vigor of late. He wished to raise a revenue by a charge of ten per cent. on all articles brought into town for sale; but this is clearly contrary to treaty, which provides that no monopoly shall be permitted, and no dues save that of five per cent. import duty. The French consul bullies him: indeed the French system of dealing with the natives is well expressed by that word; no wonder they can not gain influence among them: the greatest power they exercise is by lending their flag to slaving dhows, so that it covers that nefarious traffic.

The stench arising from a mile and a half or two square miles of exposed sea-beach, which is the general depository of the filth of the town, is quite horrible. At night it is so gross or crass, one might cut out a slice and manure a garden with it: it might be called Stinkibar rather than Zanzibar. No one can long enjoy good health here.

On visiting the slave-market, I found about three hundred slaves exposed for sale, the greater part of whom came from Lake Nyassa and the Shiré River; I am so familiar with the peculiar faces and markings or tattooings, that I expect them to recognize me. Indeed one woman said that she had heard of our passing up Lake Nyassa in a boat, but she did not see me: others came from Chipéta, south-west of the Lake. All who have grown up seem ashamed at being hawked about for sale. The teeth are examined, the cloth lifted up to examine the lower limbs, and a stick is thrown for the slave to bring, and thus exhibit his paces. Some are dragged through the crowd by the hand, and the price called out incessantly: most of the purchasers were Northern Arabs and Persians. This is the period when the Sultan's people may not carry slaves coastwise; but they simply can not, for the wind is against them. Many of the dhows leave for Madagascar, and thence come back to complete their cargoes.

The Arabs are said to treat their slaves kindly, and this also

may be said of native masters; the reason is, master and slave partake of the general indolence, but the lot of the slave does not improve with the general progress in civilization. While no great disparity of rank exists, his energies are little tasked; but when society advances, wants multiply; and to supply these the slave's lot grows harder. The distance between master and man increases as the lust of gain is developed; hence we can hope for no improvement in the slave's condition, unless the master returns to or remains in barbarism.

March 6th.—Rains have begun, now that the sun is overhead. We expect the *Penguin* daily to come from Johanna and take us to the Rovuma. It is an unwholesome place; six of my men have fever; few retain health long; and considering the lowness of the island, and the absence of sanitary regulations in the town, it is not to be wondered at. The Sultan has little power, being only the successor to the captain of the horde of Arabs who came down and overran the island and maritime coasts of the adjacent continent. He is called only Said or Syed, never Sultan; and they can boast of choosing a new one if he does not suit them. Some coins were found in digging here which have Cufic inscriptions, and are about nine hundred years old. The island is low; the highest parts may not be more than one hundred and fifty feet above the sea; it is of a coral formation, with sandstone conglomerate. Most of the plants are African, but clove-trees, mangoes, and cocoa-nut groves give a luxuriant South Sea island look to the whole scenery.

We visited an old man to-day, the richest in Zanzibar, who is to give me letters to his friends at Tanganyika, and I am trying to get a *dépôt* of goods for provisions formed there, so that when I reach it I may not be destitute.

March 18th.—I have arranged with Koorje, a Banian, who farms the custom-house revenue here, to send a supply of beads, cloth, flour, tea, coffee, and sugar to Ujiji, on Lake Tanganyika. The Arab there, with whom one of Koorje's people will remain in charge of the goods, is called Thani bin Suelim.

Yesterday we went to take leave of the Sultan, and to thank him for all his kindness to me and my men, which has indeed been very great. He offered me men to go with me, and another letter if I wished it. He looks very ill.

I have received very great kindness during my stay from Dr. and Mrs. Seward. They have done every thing for me in their power: may God Almighty return it all abundantly into their bosoms in the way that he best can. Dr. Seward's views of the

policy pursued here I have no doubt are the right ones; in fact, the only ones which can be looked back to with satisfaction, or that have probability of success among a race of pariah Arabs.

The *Penguin* came a few days ago, and Lieutenant Garforth in command agrees to take me down to the Rovuma River, and land me there. I have a dhow to take my animals: six camels, three buffaloes, and a calf, two mules, and four donkeys. I have thirteen Sepoys, ten Johanna men, nine Nassick boys, two Shupanga men, and two Waiyaus, Wakatani and Chuma.*

[It may be well to point out that several of these men had previously been employed by Dr. Livingstone on the Zambesi and Shiré; thus Musa, the Johanna man, was a sailor on the *Lady Nyassa*, while Susi and Amoda were engaged at Shupanga to cut wood for the *Pioneer*. The two Waiyau lads, Wakatani and Chuma, were liberated from the slavers by the Doctor and Bishop Mackenzie in 1861, and lived for three years with the Mission party at Chibisa's before they were engaged by Livingstone. The Nassick lads were entire strangers, and were trained in India.]

March 19th.—We start this morning at 10 A.M. I trust that the Most High may prosper me in this work, granting me influence in the eyes of the heathen, and helping me to make my intercourse beneficial to them.

March 22d.—We reached Rovuma Bay to-day, and anchored about two miles from the mouth of the river, in five fathoms. I went up the left bank to see if the gullies which formerly ran into the bay had altered, so as to allow camels to cross them: they seemed to have become shallower. There was no wind for the dhow; and as for the man-of-war towing her, it was out of the question. On the 23d the cutter did try to tow the dhow, but without success, as a strong tide runs constantly out of the river at this season. A squall came up from the south-east, which would have taken the dhow in; but the master was on board the *Penguin*, and said he had no large sail. I got him off to his vessel, but the wind died away before we could reach the mouth of the river.

March 24th.—I went to the dhow, and there being no wind I left orders with the captain to go up the right bank should a breeze arise. Mr. Fane, midshipman, accompanied me up the left bank above, to see if we could lead the camels along in the water. Near the point where the river first makes a little bend

* Dhow is the name given to the coasting-vessel of East Africa and the Indian Ocean.

to the north, we landed and found three formidable gullies, and jungle so thick with bush, date-palms, twining bamboo, and hooked thorns, that one could scarcely get along. Farther inland it was sticky mud, thickly planted over with mangrove roots and gullies in whose soft banks one sank over the ankles. No camels could have moved, and men with extreme difficulty might struggle through; but we never could have made an available road. We came to a she-hippopotamus lying in a ditch, which did not cover her; Mr. Fane fired into her head, and she was so upset that she nearly fell backward, in plunging up the opposite bank: her calf was killed, and was like sucking-pig, though in appearance as large as a full-grown sow.

We now saw that the dhow had a good breeze, and she came up along the right bank, and grounded at least a mile from the spot where the mangroves ceased. The hills, about two hundred feet high, begin about two or three miles above that, and they looked invitingly green and cool. My companion and I went from the dhow inland, to see if the mangroves gave way, to a more walkable country; but the swamp, covered over thickly with mangroves only, became worse the farther we receded from the river. The whole is flooded at high tides; and had we landed all the men, we should have been laid up with fever ere we could have attained the higher land, which on the right bank bounds the line of vision, and the first part of which lies so near. I thought I had better land on the sand belt on the left of Rovuma Bay, and then explore and get information from the natives, none of whom had as yet come near us; so I ordered the dhow to come down to the spot next day, and went on board the *Penguin*. Lieutenant Garforth was excessively kind; and though this is his best time for cruising in the north, he most patiently agreed to wait and help me to land.

March 24th.—During the night it occurred to me that we should be in a mess if, after exploration and information from the natives, we could find no path; and when I mentioned this, Lieutenant Garforth suggested that we should proceed to Kilwa; so at 5 A.M. I went up to the dhow with Mr. Fane, and told the captain that we were going there. He was loud in his protestations against this, and strongly recommended the port of Mikindany, as quite near to Rovuma, Nyassa, and the country I wished to visit, besides being a good landing-place, and the finest port on the coast. Thither we went, and on the same evening landed all our animals in Mikindany Bay, which lies only twenty-five miles north of Rovuma. The *Penguin* then left.

The Rovuma is quite altered from what it was when first we visited it. It is probable that the freshets form banks inside the mouth, which are washed out into the deep bay, and this periodical formation probably has prevented the Arabs from using the Rovuma as a port of shipment. It is not likely that Mr. May* would have made a mistake if the middle were as shoal as now: he found soundings of three fathoms or more.



Dhow used for transport of Dr. Livingstone's Camels.

March 25th.—I hired a house for four dollars a month, and landed all our goods from the dhow. The bay gives off a narrow channel, about five hundred yards wide and two hundred yards long; the middle is deep, but the sides are coral reefs and shoal: the deep part seems about one hundred yards wide. Out-

* The commander of H. M. S. *Pioneer* in 1861.

side in the Bay of Mikindany there is no anchorage except on the edge of the reef where the *Penguin* got seven fathoms, but farther in it was only two fathoms. The inner bay is called Pemba, not Pimlea, as erroneously printed in the charts of Owen. It is deep, and quite sheltered; another of a similar round form lies somewhat to the south; this bay may be two miles square.

The cattle are all very much the worse for being knocked about in the dhow. We began to prepare saddles of a very strong tree called Ntibwé, which is also used for making the hooked spear with which hippopotami are killed—the hook is very strong and tough; I applied also for twenty carriers, and a Banian engaged to get them as soon as possible. The people have no cattle here; they are half-caste Arabs mostly, and quite civil to us.

March 26th.—A few of the Nassick boys have the slave spirit pretty strongly; it goes deepest in those who have the darkest skins. Two Gallah men are the most intelligent and hard-working among them; some look on work with indifference when others are the actors.

Now that I am on the point of starting on another trip into Africa, I feel quite exhilarated: when one travels with the specific object in view of ameliorating the condition of the natives, every act becomes ennobled.

Whether exchanging the customary civilities, or arriving at a village, accepting a night's lodging, purchasing food for the party, asking for information, or answering polite African inquiries as to our objects in traveling, we begin to spread a knowledge of that people by whose agency their land will yet become enlightened and freed from the slave-trade.

The mere animal pleasure of traveling in a wild unexplored country is very great. When on lands of a couple of thousand feet elevation, brisk exercise imparts elasticity to the muscles, fresh and healthy blood circulates through the brain, the mind works well, the eye is clear, the step is firm, and a day's exertion always makes the evening's repose thoroughly enjoyable.

We have usually the stimulus of remote chances of danger either from beasts or men. Our sympathies are drawn out toward our humble hardy companions by a community of interests, and it may be of perils, which make us all friends. Nothing but the most pitiable puerility would lead any manly heart to make their inferiority a theme for self-exaltation; however, that is often done, as if with the vague idea that we can, by magnifying their deficiencies, demonstrate our immaculate perfections.

The effect of travel on a man whose heart is in the right place is that the mind is made more self-reliant: it becomes more confident of its own resources—there is greater presence of mind. The body is soon well-knit; the muscles of the limbs grow as hard as a board, and seem to have no fat; the countenance is bronzed, and there is no dyspepsia. Africa is a most wonderful country for appetite; and it is only when one gloats over marrow-bones or elephant's feet that indigestion is possible. No doubt much toil is involved, and fatigue of which travelers in the more temperate climes can form but a faint conception; but the sweat of one's brow is no longer a curse when one works for God: it proves a tonic to the system, and is actually a blessing. No one can truly appreciate the charm of repose unless he has undergone severe exertion.

March 27th.—The point of land which on the north side of the entrance to the harbor narrows it to about three hundred yards is alone called Pemba; the other parts have different names. Looking northward from the point, the first hundred yards has ninety square houses of wattled daub; a ruin (a mosque) has been built of lime and coral. The whole point is coral, and the soil is red, and covered over with dense tropical vegetation, in which the baobab is conspicuous. Dhows at present come in with ease by the easterly wind, which blows in the evening, and leave next morning, the land wind taking them out.

While the camels and other animals are getting over their fatigues and bad bruises, we are making camels' saddles, and repairing those of the mules and buffaloes. Oysters abound on all the rocks and on the trees over which the tide flows: they are small, but much relished by the people.

The Arabs here are a wretched lot physically—thin, washed-out creatures—many with bleared eyes.

March 29th–30th.—This harbor has somewhat the shape of a bent bow, or the spade on a playing-card, the shaft of the arrow being the entrance in; the passage is very deep, but not more than one hundred yards wide, and it goes in nearly south-west; inside it is deep and quite secure, and protected from all winds. The lands westward rise at once to about two hundred feet, and John, a hill, is the landmark by which it is best known in coming along the coast—so say the Arabs. The people have no cattle, but say there are no tsetse flies: they have not been long here, *i. e.*, under the present system; but a ruin on the northern peninsula or face of the entrance, built of stone and lime—Arab fashion, and others on the north-west, show that the place has

been known and used of old. The adjacent country has large game at different water pools, and as the whole country is somewhat elevated it probably is healthy. There is very little mangrove, but another inclosed piece of water to the south of this probably has more. The language of the people here is Swaheli; they trade a little in gum-copal and orchilla weed. An agent of the Zanzibar custom-house presides over the customs, which are very small, and a jemidar acknowledging the Sultan is the chief authority; but the people are little superior to the natives whom they have displaced. The jemidar has been very civil to me, and gives me two guides to go on to Adondé, but no carriers can be hired. Water is found in wells in the coral rock which underlies the whole place.

April 4th, 1866.—When about to start from Pemba, at the entrance to the other side of the bay, one of our buffaloes gored a donkey so badly that he had to be shot: we cut off the tips of the offender's horns, on the principle of "locking the stable-door when the steed is stolen," and marched. We came to level spots devoid of vegetation, and hard on the surface, but a deposit of water below allowed the camels to sink up to their bodies through the crust. Hauling them out, we got along to the jemidar's house, which is built of coral and lime. Hamesh was profuse in his professions of desire to serve, but gave a shabby hut which let in rain and wind. I slept one night in it, and it was unbearable, so I asked the jemidar to allow me to sleep in his court-room, where many of the sepoy were: he consented, but when I went refused; then, being an excitable, nervous Arab, he took fright, mustered all his men, amounting to about fifteen, with matchlocks; ran off, saying he was going to kill a lion; came back, shook hands nervously with me, vowing it was a man who would not obey him, "it was not you."

Our goods were all out in the street, bound on the pack-saddles, so at night we took the ordinary precaution of setting a guard. This excited our dignitary, and after dark all his men were again mustered with matches lighted. I took no notice of him, and after he had spent a good deal of talk, which we could hear, he called Musa and asked what I meant. The explanations of Musa had the effect of sending him to bed; and in the morning, when I learned how much I had most unintentionally disturbed him, I told him that I was sorry, but it did not occur to me to tell him about an ordinary precaution against thieves. He thought he had given me a crushing reply when he said with vehemence, "But there are no thieves here." I did not know till

afterward that he and others had done me an ill turn in saying that no carriers could be hired from the independent tribes adjacent. They are low-coast Arabs, three-quarters African, and, as usual, possess the bad without the good qualities of both parents. Many of them came and begged brandy, and laughed when they remarked that they could drink it in secret but not openly; they have not, however, introduced it as an article of trade, as we Christians have done on the West Coast.

April 6th.—We made a short march round to the south-west side of the Lake, and spent the night at a village in that direction. There are six villages dotted round the inner harbor, and the population may amount to two hundred and fifty or three hundred souls—coast Arabs and their slaves; the southern portion of the harbor is deep, from ten to fourteen fathoms, but the north-western part is shoal and rocky. Very little is done in the way of trade; some sorghum, sem-sem seed, gum-copal, and orchilla weed, constitute the commerce of the port: I saw two Banian traders settled here.

April 7th.—Went about south from Kindany with a Somalie guide, named Ben Ali or Bon Ali, a good-looking, obliging man, who was to get twenty dollars to take us up to Ngomano. Our path lay in a valley, with well-wooded heights on each side, but the grass towered over our heads, and gave the sensation of smothering, while the sun beat down on our heads very fiercely, and there was not a breath of air stirring. Not understanding camels, I had to trust to the sepoys, who overloaded them, and before we had accomplished our march of about seven miles they were knocked up.

April 8th.—We spent the Sunday at a village called Nyañgedi. Here on the evening of the 7th of April our buffaloes and camels were first bitten by the tsetse fly.* We had passed through some pieces of dense jungle which, though they offered no obstruction to foot-passengers, but rather an agreeable shade, had to be cut for the tall camels, and fortunately we found the Makondé of this village glad to engage themselves by the day either as wood-cutters or carriers. We had left many things with the jemidar, from an idea that no carriers could be procured. I lightened the camels, and had a party of wood-cutters to heighten and widen the path in the dense jungle into which we now penetrated. Every now and then we emerged on open spaces, where the Ma-

* Those who have read the accounts given by African travelers will remember that the bites inflicted by two or three of these small flies will usually lay the foundation of a sickness which destroys oxen, horses, and dogs in a few weeks.

kondé have cleared gardens for sorghum, maize, and cassava. The people were very much more taken up with the camels and buffaloes than with me. They are all independent of each other, and no paramount chief exists. Their foreheads may be called compact, narrow, and rather low; the *alæ nasi* expanded laterally; lips full, not excessively thick; limbs and body well formed; hands and feet small; color dark and light-brown; height middle size, and bearing independent.

April 10th.—We reached a village called Narri, lat. $10^{\circ} 23' 14''$ S. Many of the men had touches of fever. I gave medicine to eleven of them, and next morning all were better. Food is abundant and cheap. Our course is nearly south, and in "wadys," from which, following the trade-road, we often ascend the heights, and then from the villages, which are on the higher land, we descend to another on the same wady. No running water is seen; the people depend on wells for a supply.

April 11th.—At Tandahara we were still ascending as we went south; the soil is very fertile, with a good admixture of sand in it, but no rocks are visible. Very heavy crops of maize and sorghum are raised, and the cassava bushes are seven feet in height. The bamboos are cleared off them, spread over the space to be cultivated and burned to serve as manure. Iron is very scarce, for many of the men appear with wooden spears; they find none here, but in some spots where an ooze issued from the soil iron-rust appeared. At each of the villages where we spent a night we presented a fathom of calico, and the head man always gave a fowl or two, and a basket of rice or maize. The Makondé dialect is quite different from Swaheli, but from their intercourse with the coast Arabs many of the people here have acquired a knowledge of Swaheli.

April 12th.—On starting we found the jungle so dense that the people thought "there was no cutting it:" it continued upward of three miles. The trees are not large, but so closely planted together that a great deal of labor was required to widen and heighten the path: where bamboos prevail they have starved out the woody trees. The reason why the trees are not large is because all the spaces we passed over were formerly garden ground before the Makondé had been thinned by the slave-trade. As soon as a garden is deserted, a thick crop of trees of the same sorts as those formerly cut down springs up, and here the process of woody trees starving out their fellows, and occupying the land without dense scrub below, has not had time to work itself out. Many are mere poles, and so intertwined with climbers as to pre-

sent the appearance of a ship's ropes and cables shaken in among them, and many have woody stems as thick as an eleven-inch hawser. One species may be likened to the scabbard of a dragon's sword, but along the middle of the flat side runs a ridge from which springs up every few inches a bunch of inch-long straight sharp thorns. It hangs straight for a couple of yards, but as if it could not give its thorns a fair chance of mischief, it suddenly bends on itself, and all its cruel points are now at right angles to what they were before. Darwin's observation shows



A Thorn-climber.

a great deal of what looks like instinct in these climbers. This species seems to be eager for mischief; its tangled limbs hang out ready to inflict injury on all passers-by. Another climber is so tough it is not to be broken by the fingers; another appears at its root as a young tree, but it has the straggling habits of its class, as may be seen by its cords stretched some fifty or sixty feet off; it is often two inches in diameter; you cut it through at one part and find it re-appear forty yards off.

Another climber is like the leaf of an aloe, but convoluted as strangely as shavings from the plane of a carpenter. It is dark green in color, and when its bark is taken off it is beautifully striated beneath, lighter and darker green, like the rings of growth on wood; still another is a thin string with a succession of large knobs, and another has its bark pinched up all round at intervals so as to present a great many cutting edges. One sort need scarcely be mentioned, in which all along its length are strong bent hooks, placed in a way that will hold one if it can but grapple with him, for that is very common and not like those mentioned, which the rather seem to be stragglers from the carboniferous period of geologists, when *Pachydermata* wriggled unscathed among tangled masses worse than these. We employed about ten jolly young Makondé to deal with these prehistoric plants in their own way, for they are accustomed to clearing spaces for gardens, and went at the work with a will, using tomahawks well adapted for the work. They whittled away right manfully, taking an axe when any trees had to be cut. Their pay, arranged beforehand, was to be one yard of calico per day: this is not much, seeing we are still so near the sea-coast. Climbers and young trees melted before them like a cloud before the sun! Many

more would have worked than we employed, but we used the precaution of taking the names of those engaged. The tall men became exhausted soonest, while the shorter men worked vigorously still; but a couple of days' hard work seemed to tell on the best of them. It is doubtful if any but meat-eating people can stand long-continued labor without exhaustion: the Chinese may be an exception. When French navvies were first employed, they could not do a tithe of the work of our English ones; but when the French were fed



Tomahawk and Axe.

in the same style as the English, they performed equally well. Here the Makondé have rarely the chance of a good feed of meat: it is only when one of them is fortunate enough to spear a wild hog or an antelope that they know this luxury; if a fowl is eaten, they get but a taste of it with their porridge.

April 13th.—We now began to descend the northern slope down to the Rovuma, and a glimpse could occasionally be had of the country; it seemed covered with great masses of dark green forest, but the undulations occasionally looked like hills, and here and there a *Sterculia* had put on yellow foliage in anticipation of the coming winter. More frequently our vision was circumscribed to a few yards till our merry wood-cutters made for us the pleasant scene of a long vista fit for camels to pass. As a whole, the jungle would have made the authors of the natty little hints to travelers smile at their own productions; good enough, perhaps, where one has an open country with trees and hills, by which to take bearings, estimate distances, see that one point is on the same latitude, another on the same longitude with such another, and all to be laid down fair and square with protractor and compass; but so long as we remained within the vegetation that is fed by the moisture from the Indian Ocean, the steamy, smothering air, and dank, rank, luxuriant vegetation made me feel, like it, struggling for existence, and no more capable of taking bearings than if I had been in a hogshead and observing through the bung-hole!

An old Monyiñko head man presented a goat and asked if the sepoys wished to cut its throat: the Johannees, being of a different sect of Mohammedans, wanted to cut it in some other way than their Indian co-religionists: then ensued a fierce dispute as to who was of the right sort of Moslem! It was interesting to see that not Christians alone, but other nations, feel keenly on religious subjects.

I saw rocks of gray sandstone like (that which overlies coal) and the Rovuma in the distance. Didi is the name of a village whose head man, Chombokëa, is said to be a doctor; all the head men pretend or are really doctors; however one, Fundindomba, came after me for medicine for himself.

April 14th.—To-day we succeeded in reaching the Rovuma, where some very red cliffs appear on the opposite heights, and close by where it is marked on the map that the *Pioneer* turned back in 1861. Here we rested on Sunday, 15th.

April 16th.—Our course now lay westward, along the side of that ragged outline of table-land, which we had formerly seen from the river as flanking both sides. There it appeared a range of hills shutting in Rovuma, here we had spurs jutting out toward the river, and valleys retiring from a mile to three miles inland. Sometimes we wended our way round them, sometimes rose over and descended their western sides, and then a great deal of wood-cutting was required. The path is not straight, but from one village to another. We came perpetually on gardens, and remarked that rice was sown among the other grain; there must be a good deal of moisture at other times to admit of this succeeding: at present the crops were suffering for want of rain. We could purchase plenty of rice for the sepoys, and well it was so, for the supply which was to last till we arrived at Ngomano was finished on the 13th. An old doctor, with our food awaiting, presented me with two large bags of rice, and his wife husked it for us.

April 17th.—I had to leave the camels in the hands of the sepoys: I ordered them to bring as little luggage as possible, and the havildar assured me that two buffaloes were amply sufficient to carry all they would bring. I now find that they have more than full loads for two buffaloes, two mules, and two donkeys; but when these animals fall down under them, they assure me with so much positiveness that they are not overloaded, that I have to be silent, or only, as I have several times done before, express the opinion that they will kill these animals. This observation on my part leads them to hide their things in the packs of the camels, which also are overburdened. I fear that my experiment with the tsetse will be vitiated, but no symptoms yet occur in any of the camels except weariness.* The sun is very sharp; it scorches. Nearly all the sepoys had fever, but it is

* Dr. Livingstone was anxious to try camels and Indian buffaloes in a tsetse country to see the effect upon them.

easily cured; they never required to stop marching, and we can not make over four or five miles a day, which movement aids in the cure. In all cases of fever, removal from the spot of attack should be made: after the fever among the sepoy, the Nassick boys took their turn along with the Johanneses.

April 18th.—Ben Ali misled us away up to the north in spite of my protest; when we turned in that direction, he declared that was the proper path. We had much wood-cutting, and found that our course that day and next was to enable him to visit and return from one of his wives—a comely Makondé woman! He brought her to call on me, and I had to be polite to the lady, though we lost a day by the zigzag. This is one way by which the Arabs gain influence; a great many very light-colored people are strewed among the Makondé, but only one of these had the Arab hair. On asking Ali whether any attempts had been made by Arabs to convert those with whom they enter into such intimate relationships, he replied that the Makondé had no idea of a deity—no one could teach them, though Makondé slaves when taken to the coast and elsewhere were made Mohammedans. Since the slave-trade was introduced this tribe has much diminished in numbers, and one village makes war upon another and kidnaps, but no religious teaching has been attempted. The Arabs come down to the native ways, and make no efforts to raise the natives to theirs; it is better that it is so, for the coast Arab's manners and morals would be no improvement on the pagan African!

April 19th.—We were led up over a hill again, and on to the level of the plateau (where the evaporation is greater than in the valley), and tasted water of an agreeable coldness for the first time this journey. The people, especially the women, are very rude, and the men very eager to be employed as wood-cutters. Very merry they are at it, and every now and then one raises a cheerful shout, in which all join. I suppose they are urged on by a desire to please their wives with a little clothing. The higher up the Rovuma we ascend, the people are more and more tattooed on the face, and on all parts of the body. The teeth are filed to points, and huge lip-rings are worn by the women; some few Mabeha men from the south side of the river have lip-rings too.

April 20th.—A Johanna man allowed the camels to trespass and destroy a man's tobacco-patch: the owner would not allow us after this to pass through his rice-field, in which the route lay. I examined the damage, and made the Johanna man pay a yard of calico for it, which set matters all right.

Tsetse are biting the buffaloes again. Elephants, hippopotami, and pigs are the only game here, but we see none: the tsetse feed on them. In the low meadow land, from one to three miles broad, which lies along both banks, we have brackish pools, and one, a large one, which we passed, called Wrongwé, had much fish, and salt is got from it.

April 21st.—After a great deal of cutting we reached the valley of Mehambwé to spend Sunday, all glad that it had come round again. Here some men came to our camp from Ndongé, who report that an invasion of Mazitu had three months ago swept away all the food out of the country, and they are now obliged to send in every direction for provisions. When saluting, they catch each other's hands and say, "Ai! Ai!" but the general mode (introduced probably by the Arabs) is to take hold of the right hand, and say, "Marhaba" (welcome).

A wall-eyed, ill-looking fellow, who helped to urge on the attack on our first visit in 1861, and the man to whom I gave cloth to prevent a collision, came about us disguised in a jacket. I knew him well, but said nothing to him.*

April 23d.—When we marched this morning we passed the spot where an animal had been burned in the fire, and on inquiry I found that it is the custom when a leopard is killed to take off the skin and consume the carcass thus, because the Makondé do not eat it. The reason they gave for not eating flesh which is freely eaten by other tribes, is that the leopard devours men; this shows the opposite of an inclination to cannibalism.

All the rocks we had seen showed that the plateau consists of gray sandstone, capped by a ferruginous sandy conglomerate. We now came to blocks of silicified wood lying on the surface; it is so like recent wood, that no one who has not handled it would conceive it to be stone and not wood; the outer surface preserves the grain or woody fibre, the inner is generally silica.

Buffaloes bitten by tsetse again show no bad effects from it: one mule is, however, dull and out of health; I thought that this might be the effect of the bite, till I found that his back was so strained that he could not stoop to drink, and could only eat the tops of the grasses. An ox would have been ill in two days after the biting on the 7th.

A carrier stole a shirt, and went off unsuspected; when the loss was ascertained, the man's companions tracked him with Ben

* This refers to an attack made upon the boats of the *Pioneer* when the Doctor was exploring the River Rovuma in 1861.

Ali by night, got him in his hut, and then collected the head men of the village, who fined him about four times the value of what had been stolen. They came back in the morning without seeming to think that they had done aught to be commended; this was the only case of theft we had noticed, and the treatment showed a natural sense of justice.

April 24th.—We had showers occasionally, but at night all the men were under cover of screens. The fevers were speedily cured; no day was lost by sickness, but we could not march more than a few miles, owing to the slowness of the sepoy; they are a heavy drag on us, and of no possible use, except when acting as sentries at night.

When in the way between Kendany and Rovuma, I observed a plant here, called *Mandaré*, the root of which is in taste and appearance like a waxy potato; I saw it once before at the falls below the Barotsé Valley, in the middle of the continent; it had been brought there by an emigrant, who led out the water for irrigation, and it still maintained its place in the soil. Would this not prove valuable in the soil of India? I find that it is not cultivated farther up the country of the Makondé, but I shall get Ali to secure some for Bombay.

April 25th.—A serpent bit Jack, our dog, above the eye; the upper eyelid swelled very much, but no other symptoms appeared, and next day all swelling was gone; the serpent was either harmless, or the quantity of poison injected very small. The pace of the camels is distressingly slow, and it suits the sepoy to make it still slower than natural by sitting down to smoke and eat. The grass is high, and ground under it damp and steamy.

April 26th.—On the 25th we reached Narri, and resolved to wait the next day and buy food, as it is not so plentiful in front; the people are eager traders in meal, fowls, eggs, and honey; the women are very rude. Yesterday I caught a sepoy, Pando, belaboring a camel with a big stick as thick as any part of his arm; the path being narrow, it could not get out of his way. I shouted to him to desist; he did not know I was in sight; to-day the effect of the bad usage is seen in the animal being quite unable to move its leg: inflammation has set up in the hip-joint. I am afraid that several bruises which have festered on the camels, and were to me unaccountable, have been willfully bestowed. This same Pando and another left Zanzibar drunk: he then stole a pair of socks from me, and has otherwise been perfectly useless; even a pimple on his leg was an excuse for doing nothing for many days. We had to leave this camel at Narri under charge of the head man.

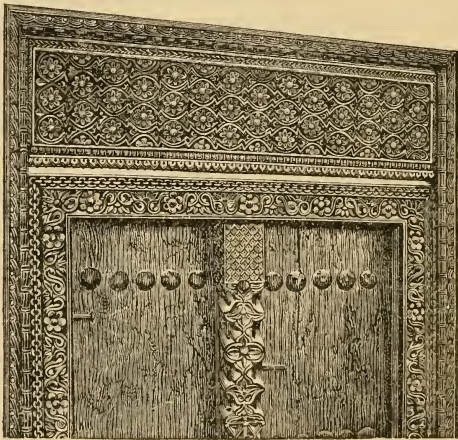
April 28th.—The hills on the north now retire out of our sight. A gap in the southern plateau gives passage to a small river, which arises in a lakelet of some size eight or ten miles inland: the river and lakelet are both called Nangadi; the latter is so broad that men can not be distinguished, even by the keen eyes of the natives on the other side: it is very deep, and abounds in large fish: the people who live there are Mabiha. A few miles above this gap the southern highland falls away, and there are lakelets on marshes, also abounding in fish; an uninhabited space next succeeds, and then we have the Matambwé country, which extends up to Ngomano. The Matambwé seem to be a branch of the Makondé, and a very large one: their country extends a long way south, and is well stocked with elephants and gum-copal-trees.

They speak a language slightly different from that of the Makondé, but they understand them. The Matambwé women are, according to Ali, very dark, but very comely, though they do wear the lip-ring. They carry their ivory, gum-copal, and slaves to Ibo or Wibo.

April 29th.—We spend Sunday, the 29th, on the banks of the Rovuma, at a village called Nachuchu, nearly opposite Kona-yumba, the first of the Matambwé, whose chief is called Kimbembé. Ali draws a very dark picture of the Makondé. He says they know nothing of a Deity; they pray to their mothers when in distress or dying; know nothing of a future state, nor have they any religion except a belief in medicine; and every head man is a doctor. No Arab has ever tried to convert them, but occasionally a slave taken to the coast has been circumcised in order to be clean; some of them pray, and say they know not the ordeal or muavé. The Nassick boys failed me when I tried to communicate some knowledge through them. They say they do not understand the Makondé language, though some told me that they came from Ndongé's, which is the head-quarters of the Makondé. Ali says that the Makondé blame witches for disease and death; when one of a village dies, the whole population departs, saying "that is a bad spot." They are said to have been notorious for fines, but an awe has come over them; and no complaints have been made, though our animals, in passing the gardens, have broken a good deal of corn. Ali says they fear the English. This is an answer to my prayer for influence on the minds of the heathen. I regret that I can not speak to them that good of His name which I ought.

I went with the Makondé to see a specimen of the gum-copal-

tree in the vicinity of this village. The leaves are in pairs, glossy green, with the veins a little raised on both face and back; the smaller branches diverge from the same point: the fruit, of which we saw the shells, seems to be a nut; some animal had, in eating them, cut them through. The bark of the tree is of a light ash color; the gum was oozing from the bark at wounded places, and it drops on the ground from branches; it is thus that insects are probably imbedded in the gum-copal. The people dig in the vicinity of modern trees in the belief that the more ancient trees which dropped their gum before it became an article of commerce must have stood there. "In digging, none may be



Carved Door, Zanzibar.

found on one day, but God (Mungu) may give it to us on the next.' To this all the Makondé present assented, and showed me the consciousness of His existence was present in their minds. The Makondé get the gum in large quantities, and this attracts the coast Arabs, who remain a long time in the country purchasing it. *Hernia humoralis* abounds; it is ascribed to beer-drinking.

April 30th.—Many ulcers burst forth on the camels; some seem old dhow bruises. They come back from pasture, bleeding in a way that no rubbing against a tree would account for. I am sorry to suspect foul play: the buffaloes and mules are badly used, but I can not be always near to prevent it.

Bhang* is not smoked, but tobacco is: the people have no sheep or goats; only fowls, pigeons, and Muscovy ducks are seen. Honey is very cheap; a good large pot of about a gallon, with four fowls, was given for two yards of calico. Buffaloes again bitten by tsetse, and by another fly exactly like the house-fly, but having a straight hard proboscis instead of a soft one; other large flies make the blood run. The tsetse does not disturb the buffaloes, but these others and the smaller flies do. The tsetse seem to like the camel best; from these they are gorged with blood; they do not seem to care for the mules and donkeys.

* A species of hemp.

CHAPTER II.

Effect of *Pioneer's* former Visit.—The Poodle Chitané.—Result of Tsetse Bites.—Death of Camels and Buffaloes.—Disaffection of Followers.—Disputed Right of Ferry.—Mazitu Raids.—An old Friend.—Severe Privations.—The River Loendi.—Sepoys mutiny.—Dr. Roscher.—Desolation.—Tattooing.—Ornamental Teeth.—Singular Custom.—Death of the Nassick Boy, Richard.—A sad Reminiscence.

May 1st, 1866.—WE now came along through a country comparatively free of wood, and we could move on without perpetual cutting and clearing. It is beautiful to get a good glimpse out on the surrounding scenery, though it still seems nearly all covered with great masses of umbrageous foliage mostly of a dark green color, for nearly all of the individual trees possess dark glossy leaves like laurel. We passed a gigantic specimen of the Kumbé, or gum-copal-tree. Kumba means, to dig. Chang-kumbé, or things dug, is the name of the gum; the Arabs call it "sandarusé." Did the people give the name Kumbé to the tree after the value of the gum became known to them? The Malolé, from the fine-grained wood of which all the bows are made, had shed its fruit on the ground; it looks inviting to the eye—an oblong peach-looking thing, with a number of seeds inside, but it is eaten by maggots only.

When we came to Ntandé's village, we found it inclosed in a strong stockade, from a fear of attack by Mabiha, who come across the river and steal their women when going to draw water: this is for the Ibo market. They offered to pull down their stockade and let us in if we would remain overnight, but we declined. Before reaching Ntandé we passed the ruins of two villages; the owners were the attacking party when we ascended the Rovuma in 1862. I have still the old sail, with four bullet-holes through it, made by the shots which they fired after we had given cloth and got assurances of friendship. The father and son of this village were the two men seen by the second boat preparing to shoot; the fire of her crew struck the father on the chin and the son on the head. It may have been for the best that the English are thus known as people who can hit hard when unjustly attacked, as we on this occasion most certainly were: never was a murderous assault more unjustly made or less

provoked. They had left their villages and gone up over the highlands away from the river to their ambush while their women came to look at us.

May 2d.—Mountains again approach us, and we pass one which was noticed in our first ascent, from its resemblance to a table-mountain. It is six or eight hundred feet high, and called Liparu: the plateau now becomes mountainous, giving forth a perennial stream which comes down from its western base, and forms a lagoon on the meadow-land that flanks the Rovuma. The trees which love these perpetual streams spread their roots all over the surface of the boggy banks, and make a firm surface, but at spots one may sink a yard deep. We had to fill up these deep ditches with branches and leaves, unload the animals, and lead them across. We spent the night on the banks of the Liparu,* and then proceeded on our way.

May 3d.—We rested in a Makoa village, the head of which was an old woman. The Makoa or Makoané are known by a half-moon figure tattooed on their foreheads or elsewhere. Our poodle-dog Chitané chased the dogs of this village with unrelenting fury. His fierce looks inspired terror among the wretched pariah dogs of a yellow and white color, and those looks were entirely owing to its being difficult to distinguish at which end his head or tail lay. He enjoyed the chase of the yelping curs immensely; but if one of them had turned he would have bolted the other way.

A motherly-looking woman came forward and offered me some meal; this was when we were in the act of departing: others had given food to the men, and no return had been made. I told her to send it on by her husband, and I would purchase it, but it would have been better to have accepted it: some give merely out of kindly feeling, and with no prospect of a return.

Many of the Makoa men have their faces thickly tattooed in double raised lines of about half an inch in length. After the incisions are made charcoal is rubbed in and the flesh pressed out, so that all the cuts are raised above the level of the surface. It gives them rather a hideous look, and a good deal of that fierceness which our kings and chiefs of old put on while having their portraits taken.

May 4th.—The stream, embowered in perpetual shade and overspread with the roots of water-loving, broad-leaved trees, we found to be called Nkonya. The spot of our encampment was

* Farther on we found it called Nkonya.

an island formed by a branch of it parting and re-entering it again: the owner had used it for rice.

The buffaloes were bitten again by tsetse on the 2d, and also to-day, from the bites of other flies (which look much more formidable than tsetse); blood of arterial color flows down. This symptom I never saw before; but when we slaughtered an ox which had been tsetse-bitten, we observed that the blood had the arterial hue. The cow has inflammation of one eye, and a swelling on the right lumbar portion of the pelvis: the gray buffalo has been sick, but this I attribute to unmerciful loading; for his back is hurt; the camels do not seem to feel the fly, though they get weaker from the horrid running sores upon them and hard work. There are no symptoms of tsetse in mules or donkeys, but one mule has had his shoulder sprained, and he can not stoop to eat or drink.

We saw the last of the flanking range on the north. The country in front is plain, with a few detached granitic peaks shot up. The Makoa, in large numbers, live at the end of the range in a place called Nyuchi. At Nyamba, a village where we spent the night of the 5th, was a doctress and rain-maker, who presented a large basket of soroko, or, as they call it in India, "mung," and a fowl. She is tall and well made, with fine limbs and feet, and was profusely tattooed all over; even her hips and buttocks had their elaborate markings: no shame is felt in exposing these parts.

A good deal of salt is made by lixiviation of the soil and evaporating by fire. The head woman had a tame khanga tolé, or tufted guinea-fowl, with bluish instead of white spots.

In passing along westward after leaving the end of the range, we came first of all on sandstone hardened by fire; then masses of granite, as if in that had been contained the igneous agency of partial metamorphosis; it had also lifted up the sandstone, so as to cause a dip to the east. Then the syenite or granite seemed as if it had been melted, for it was all in striæ, which striæ, as they do elsewhere, run east and west. With the change in geological structure we get a different vegetation. Instead of the laurel-leaved trees of various kinds, we have African ebonies, acacias, and mimosæ: the grass is shorter and more sparse, and we can move along without wood-cutting. We were now opposite a hill on the south called Simba, a lion, from its supposed resemblance to that animal. A large Mabiha population live there, and make raids occasionally over to this side for slaves.

May 6th. — Tsetse again. The animals look drowsy. The

cow's eye is dimmed; when punctured, the skin emits a stream of scarlet blood. The people hereabouts seem intelligent and respectful. At service a man began to talk; but when I said "Ku soma Mlungu"—"We wish to pray to God," he desisted. It would be interesting to know what the ideas of these men are, and to ascertain what they have gained in their communings with nature during the ages past. They do not give the idea of that boisterous wickedness and disregard of life which we read of in our own dark ages, but I have no one to translate, although I can understand much of what is said on common topics chiefly from knowing other dialects.

May 7th.—A camel died during the night, and the gray buffalo is in convulsions this morning. The cruelty of these sepoy vitiates my experiment, and I quite expect many camels, one buffalo, and one mule to die yet; they sit down and smoke and eat, leaving the animals loaded in the sun. If I am not with them, it is a constant dawdling; they are evidently unwilling to exert themselves; they can not carry their belts and bags, and their powers of eating and vomiting are astounding. The Makondé villages are remarkably clean; but no sooner do we pass a night in one than the fellows make it filthy. The climate does give a sharp appetite, but these sepoy indulge it till relieved by vomiting and purging. First of all they breakfast, then an hour afterward they are sitting eating the pocketfuls of corn maize they have stolen and brought for the purpose, while I have to go ahead, otherwise we may be misled into a zigzag course to see Ali's friends; and if I remain behind to keep the sepoy on the move, it deprives me of all the pleasure of traveling. We have not averaged four miles a day in a straight line, yet the animals have often been kept in the sun for eight hours at a stretch. When we get up at 4 A.M., we can not get underway before eight o'clock. Sepoy is a mistake.

May 7th.—We are now opposite a mountain called Nabungala, which resembles from the north-east an elephant lying down. Another camel, a very good one, died on the way: its shiverings and convulsions are not at all like what we observed in horses and oxen killed by tsetse; but such may be the cause, however. The only symptom pointing to the tsetse is the arterial-looking blood, but we never saw it ooze from the skin after the bite of the gadfly as we do now.

May 8th.—We arrived at a village called Jpondé, or Lipondé, which lies opposite a granitic hill on the other side of the river (where we spent a night on our boat-trip), called Nakapuri; this

is rather odd, for the words are not Makondé, but Sichuana, and signify goat's horn, from the projections jutting out from the rest of the mass. I left the havildar, sepoy, and Nassick boys here in order to make a forced march forward, where no food is to be had, and sent either to the south or westward for supplies, so that after they have rested the animals and themselves five days, they may come. One mule is very ill; one buffalo drowsy and exhausted; one camel a mere skeleton, from bad sores; and another has an enormous hole at the point of the pelvis, which sticks out at the side. I suspect that this was made maliciously, for he came from the field bleeding profusely; no tree would have perforated a round hole in this way. I take all the goods, and leave only the sepoy's luggage, which is enough for all the animals now.

May 9th.—I went on with the Johanna men and twenty-four carriers, for it was a pleasure to get away from the sepoy and Nassick boys; the two combined to overload the animals. I told them repeatedly that they would kill them; but no sooner had I adjusted the burdens and turned my back than they put on all their things. It was, however, such continual vexation to contend with the sneaking spirit, that I gave up annoying myself by seeing matters, though I felt certain that the animals would all be killed. We did at least eight miles pleasantly well, and slept at Moedaa village. The rocks are still syenite. We passed a valley with the large thorny acacias of which canoes are often made, and a euphorbiaceous tree, with seed-vessels as large as mandarin oranges, with three seeds inside. We were now in a country which, in addition to the Mazitu invasion, was suffering from one of those inexplicable droughts to which limited and sometimes large portions of this country are subject. It had not been nearly so severe on the opposite or south side, and thither, too, the Mazitu had not penetrated. Rushes, which plagued us nearer the coast, are not observed now; the grass is all crisp and yellow; many of the plants are dead, and leaves are fallen off the trees as if winter had begun. The ground is covered with open forest, with here and there thick jungle on the banks of the streams. All the rivulets we have passed are mere mountain torrents filled with sand, in which the people dig for water.

We passed the spot where an Arab called Birkal was asked payment for leave to pass. After two and a half days' parley he fought, killed two Makondé, and mortally wounded a head man, which settled the matter; no fresh demand has been made. Ali's brother also resisted the same sort of demand, fought sever-

al times, or until three Makondé and two of his people were killed; they then made peace, and no other exactions have been made.

May 11th.—We now found a difficulty in getting our carriers along, on account of exhaustion from want of food. In going up a sand stream called Nyédé, we saw that all moist spots had been planted with maize and beans; so the loss caused by the Mazitu, who swept the land like a cloud of locusts, will not be attended by much actual starvation. We met a runaway woman: she was seized by Ali, and it was plain that he expected a reward for his pains. He thought she was a slave, but a quarter of a mile off was the village she had left; and it being doubtful if she were a runaway at all, the would-be fugitive slave-capture turned out a failure.

May 12th.—About 4' east-north-east of Matawatawa, or Nyamatololé, our former turning-point.

May 13th.—We halted at a village at Matawatawa. A pleasant-looking lady, with her face profusely tattooed, came forward with a bunch of sweet reed, or *Sorghum saccharatum*, and laid it at my feet, saying, "I met you here before," pointing to the spot on the river where we turned. I remember her coming then, and that I asked the boat to wait while she went to bring us a basket of food, and I think it was given to Chiko, and no return made. It is sheer kindness that prompts them sometimes, though occasionally people do make presents with a view of getting a larger one in return: it is pleasant to find that it is not always so. She had a quiet, dignified manner, both in talking and walking, and I now gave her a small looking-glass, and she went and brought me her only fowl and a basket of cucumber-seeds, from which oil is made; from the amount of oily matter they contain, they are nutritious when roasted and eaten as nuts. She made an apology, saying they were hungry times at present. I gave her a cloth, and so parted with Kanañgoné, or, as her name may be spelled, Kanañóné. The carriers were very useless from hunger, and we could not buy any thing for them; for the country is all dried up, and covered sparsely with mimosas and thorny acacias.

May 14th.—I could not get the carriers on more than an hour and three-quarters: men tire very soon on empty stomachs. We had reached the village of Hassané, opposite to a conical hill named Chisulwé, which is on the south side of the river, and evidently of igneous origin. It is tree-covered, while the granite always shows lumps of naked rock. All about lie great patches

of beautiful dolomite. It may have been formed by baking of the tufa, which in this country seems always to have been poured out with water after volcanic action. Hassané's daughter was just lifting a pot of French beans, boiled in their pods, off the fire when we entered the village. These he presented to me; and when I invited him to partake, he replied that he was at home and would get something, while I was a stranger on a journey. He, like all the other head men, is a reputed doctor, and his wife, a stout old lady, a doctress; he had never married any wife but this one, and he had four children, all of whom lived with their parents. We employed one of his sons to go to the south side and purchase food, sending at the same time some carriers to buy for themselves. The siroko and rice bought by Hassané's son we deposited with him for the party behind, when they should arrive. The amount of terror the Mazitu inspire can not be realized by us. They shake their shields, and the people fly like stricken deer. I observed that a child would not go a few yards for necessary purposes unless grandmother stood in sight. Matumora, as the Arabs call the chief at Ngomano, gave them a warm reception, and killed several of them: this probably induced them to retire.

May 15th, 16th.—Miserably short marches from hunger, and I sympathize with the poor fellows. Those sent to buy food for themselves on the south bank were misled by a talkative fellow named Chikungu, and went off north, where we knew nothing could be had. His object was to get paid for three days, while they only loitered here. I suppose hunger has taken the spirit out of them; but I told them that a day in which no work was done did not count: they admitted this. We pay about two feet of calico per day, and a fathom or six feet for three days' carriage.

May 17th.—With very empty stomachs they came on a few miles, and proposed to cross to the south side; as this involved crossing the Loendi too, I at first objected; but in hopes that we might get food for them, we consented, and were taken over in two very small canoes. I sent Ali and Musa meanwhile to the south to try and get some food. I got a little green sorghum for them and paid them off. These are the little troubles of traveling, and scarce worth mentioning. A granitic peak now appears about 15' off, to the west-south-west. It is called Chihoka.

May 18th.—At our crossing-place metamorphic rocks of a chocolate color stood on edge; and in the country round we have patches of dolomite sometimes as white as marble. The country

is all dry; grass and leaves crisp and yellow. Though so arid now, yet the great abundance of the dried stalks of a water-loving plant, a sort of herbaceous acacia, with green pea-shaped flowers, proves that at other times it is damp enough. The marks of people's feet floundering in slush, but now baked, show that the country can be sloppy.

The head man of the village where we spent the night of 17th is a martyr to rheumatism. He asked for medicine, and when I gave some he asked me to give it to him out of my own hand. He presented me with a basket of siroko and of green sorghum as a fee, of which I was very glad; for my own party were suffering, and I had to share out the little portion of flour I had reserved to myself.

May 19th.—Coming on with what carriers we could find at the crossing-place, we reached the confluence without seeing it; and Matumora being about two miles up the Loendi, we sent over to him for aid. He came over this morning early—a tall, well-made man, with a somewhat severe expression of countenance, from a number of wrinkles on his forehead. He took us over the Loendi, which is decidedly the parent stream of the Rovuma, though that, as it comes from the west, still retains the name Loendi from the south-west here, and is from one hundred and fifty to two hundred yards wide; while the Rovuma above Matawatawa is from two hundred to two hundred and fifty, full of islands, rocks, and sand-banks. The Loendi has the same character. We can see the confluence from where we cross about 2' to the north. Both rivers are rapid, shoal, and sandy; small canoes are used on them, and the people pride themselves on their skillful management: in this the women seem in no way inferior to the men.

In looking up the Loendi, we see a large granitic peak, called Nkanjé, some twenty miles off, and beyond it the dim outline of distant highlands, in which seams of coal are exposed. Pieces of the mineral are found in Loendi's sands.

Matumora has a good character in the country, and many flee to him from oppression. He was very polite. Sitting on the right bank till all the goods were carried over, then coming in the same canoe with me himself, he opened a fish-basket in a weir and gave me the contents, and subsequently a little green sorghum. He literally has lost all his corn, for he was obliged to flee, with his people, to Marumba, a rocky island in Rovuma, about six miles above Matawatawa. He says that both Loendi and Rovuma come out of Lake Nyassa; a boat could not ascend, however, because many water-falls are in their course: it is strange if all

this is a myth. Matumora asked if the people through whose country I had come would preserve the peace I wished. He says he has been assailed on all sides by slave-hunters: he alone has never hunted for captives: if the people in front should attack me, he would come and fight them: finally, he had never seen a European before (Dr. Roscher traveled as an Arab), nor could I learn where Likumbu at Ngomano lives; it was with him that Roscher is said to have left his goods.

The Mazitu had women, children, oxen, and goats with them. The whole tribe lives on plundering the other natives by means of the terror their shields inspire; had they gone farther down the Rovuma, no ox would have survived the tsetse.

May 20th.—I paid Ali to his entire satisfaction, and intrusted him with a dispatch, "No. 2 Geographical," and then sent off four men south to buy food. Here we are among Matambwé. Two of Matumora's men act as guides. We are about 2' south and by west of the confluence Ngomano. Lat. $11^{\circ} 26' 23''$ S.; long. $37^{\circ} 49' 52''$ E.

Abraham, one of the Nassick boys, came up and said he had been sent by the sepoy, who declared they would come no farther. It was with the utmost difficulty they had come so far, or that the havildar had forced them on. They would not obey him; would not get up in the mornings to march; lay in the paths, and gave their pouches and muskets to the natives to carry: they make themselves utterly useless. The black buffalo is dead; one camel ditto, and one mule left behind ill. Were I not aware of the existence of the tsetse, I should say they died from sheer bad treatment and hard work.

I sent a note to be read to the sepoy, stating that I had seen their disobedience, unwillingness, and skulking, and as soon as I received the havildar's formal evidence, I would send them back. I regretted parting with the havildar only.

A leopard came a little after dark while the moon was shining, and took away a little dog from among us; it is said to have taken off a person a few days ago.

May 22d.—The men returned, with but little food in return for much cloth. Matumora is very friendly, but he has nothing to give save a little green sorghum, and that he brings daily.

A south wind blows strongly every afternoon. The rains ceased about the middle of May, and the temperature is lowered. A few heavy night showers closed the rainy season.

May 23d-24th.—I took some lunar observations.

May 25th.—Matumora is not Ndongé. A chief to the south-

west of this owns that name, and belongs to the Matumbwé tribe.

May 26th.—I sent Musa westward to buy food, and he returned on the evening of the 27th without success; he found an Arab slave-dealer waiting in the path, who had bought up all the provisions. About 11 P.M. we saw two men pass our door with two women in a chain; one man carried fire in front, the one behind a musket. Matumora admits that his people sell each other.

May 27th.—The havildar and Abraham came up. Havildar says that all I said in my note was true, and when it was read to the sepoys they bewailed their folly; he adds that if they were all sent away disgraced, no one would be to blame but themselves. He brought them to Hassané's, but they were useless, though they begged to be kept on: I may give them another trial, but at present they are a sad incumbrance. South-west of this the Manganja begin; but if one went by them, there is a space beyond in the south-west without people.

The country due west of this is described by all to be so mountainous and beset by Mazitu, that there is no possibility of passing that way; I must therefore make my way to the middle of the Lake, cross over, and then take up my line of 1863.

June 2d, 1866.—The men sent to the Matambwé south-east of this returned with a good supply of grain. The sepoys will not come; they say they can not—a mere excuse, because they tried to prevail on the Nassick boys to go slowly like them, and wear my patience out. They killed one camel with the butt-ends of their muskets, beating it till it died. I thought of going down, disarming them all, and taking five or six of the willing ones; but it is more trouble than profit, so I propose to start westward on Monday the 4th, or Tuesday the 5th. My sepoys offered Ali eight rupees to take them to the coast; thus it has been a regularly organized conspiracy.

From the appearance of the cow-buffalo, I fear the tsetse is its chief enemy; but there is a place like a bayonet-wound on its shoulder, and many of the wounds or bruises on the camels were so probed that I suspect the sepoys.

Many things African are possessed of as great vitality in their line as the African people. The white ant was imported accidentally into St. Helena from the coast of Guinea, and has committed such ravages in the town of St. James, that numerous people have been ruined, and the governor calls out for aid against them. In other so-called new countries a wave of English weeds follows the tide of English emigration, and so with insects; the

European house-fly chases away the blue-bottle-fly in New Zealand. Settlers have carried the house-fly in bottles and boxes for their new locations; but what European insect will follow us and extirpate the tsetse? The Arabs have given the Makondé bugs; but we have the house-fly wherever we go, the blue-bottle, and another like the house-fly, but with a sharp proboscis, and several enormous gadflies. Here there is so much room for every thing. In New Zealand the Norwegian rat is driven off by even the European mouse; not to mention the Hanoverian rat of Waterton, which is lord of the land. The Maori say that "as the white man's rat has driven away the native rat, so the European fly drives away our own; and as the clover kills our fern, so will the Maori disappear before the white man himself." The hog placed ashore by Captain Cook has now overrun one side of the island, and is such a nuisance that a large farmer of one hundred thousand acres has given sixpence per head for the destruction of some twenty thousand, and without any sensible diminution; this would be no benefit here, for the wild hogs abound, and do much damage, besides affording food for the tsetse: the brutes follow the ewes with young, and devour the poor lambs as soon as they make their appearance.

June 3d.—The cow-buffalo fell down foaming at the mouth, and expired. The meat looks fat and nice, and is relished by the people. A little glariness seemed to be present on the fore-leg; and I sometimes think that, notwithstanding the dissimilarity of the symptoms observed in the camels and buffaloes now, and those we saw in oxen and horses, the evil may be the tsetse, after all; but they have been badly used, without a doubt. The calf has a cut half an inch deep; the camels have had large ulcers; and at last a peculiar smell, which portends death. I feel perplexed, and not at all certain as to the real causes of death.

I asked Matumora if the Matambwé believed in God; he replied that he did not know him, and I was not to ask the people among whom I was going if they prayed to him, because they would imagine that I wished them to be killed. I told him that we loved to speak about him, etc. He said, when they prayed they offered a little meal, and then prayed, but did not know much about him.

They have all great reverence for the Deity; and the deliberate way in which they say "we don't know him" is to prevent speaking irreverently, as that may injure the country. The name is "Mulungu;" Makochera afterward said that "he was not good, because he killed so many people."

June 4th.—Left Ngomano. I was obliged to tell the Nassick boys that they must either work or return. It was absurd to have them eating up our goods, and not even carrying their own things, and I would submit to it no more: five of them carry bales, and two the luggage of the rest. Abraham and Richard are behind. I gave them bales to carry, and promised them ten rupees per month, to begin on this date. Abraham has worked hard all along, and his pay may be due from April 7th, the day we started from Kindany.

June 5th.—We slept at a village called Lamba, on the banks of the Rovuma, near a brawling torrent of one hundred and fifty yards, or two hundred perhaps, with many islands and rocks in it. The country is covered with open forest, with patches of cultivation everywhere, but all dried up at present and withered, partly from drought and partly from the cold of winter. We passed a village with good ripe sorghum cut down, and the heads or ears all laid neatly in a row. This is to get it dried in the sun, and not shaken out by the wind, by waving to and fro; besides, it is also more easily watched from being plundered by birds. The sorghum occasionally does not yield seed, and is then the *Sorghum saccharatum*; for the stalk contains abundance of sugar, and is much relished by the natives. Now that so much has failed to yield seed, being indeed just in flower, the stalks are chewed as if sugar-cane, and the people are fat thereon; but the hungry time is in store, when these stalks are all done. They make the best provision in their power against famine by planting beans and maize in moist spots. The common native pumpkin forms a bastard sort in the same way, but that is considered very inferior.

June 6th.—Great hills of granite are occasionally in sight toward the north, but the trees, though scraggy, close in the view. We left a village, called Mekosi, and soon came to a slaving-party by a sand stream. They said that they had bought two slaves, but they had run away from them, and asked us to remain with them; more civil than inviting. We came on to Makochera, the principal head man in this quarter, and found him a merry, laughing mortal, without any good looks to recommend his genial smile—low forehead, covered with deep wrinkles; flat nose, somewhat of the Assyrian shape; a big mouth and lean body. He complained of the Machinga, a Waiyau tribe north of him, and the Rovuma, stealing his people. Latitude of village, $11^{\circ} 22' 49''$ S. The river being about 2' north, still shows that it makes a trend to the north after we pass Ngomano. Makochera has been an elephant-hunter. Few acknowledge as a reason for slaving that

sowing and spinning cotton for clothing is painful. I waited some days for the Nassick boys, who are behind, though we could not buy any food except at enormous prices and long distances off.

June 7th.—The havildar and two sepoy came up with Abraham; but Richard, a Nassick boy, is still behind from weakness. I sent three off to help him with the only cordials we could muster. The sepoy sometimes profess inability to come on, but it is unwillingness to encounter hardship: I must move on, whether they come or not, for we can not obtain food here. I sent the sepoy some cloth, and on the 8th proposed to start, but every particle of food had been devoured the night before; so we dispatched two parties to scour the country round, and give any price rather than want.

I could not prevail on Makochera to give me a specimen of poetry. He was afraid; neither he nor his forefathers had ever seen an Englishman. He thought that God was not good, because he killed so many people. Dr. Roscher must have traveled as an Arab if he came this way, for he was not known.*

June 9th.—We now left, and marched through the same sort of forest, gradually ascending in altitude as we went west; then we came to huge masses of granite, or syenite, with flakes peeling off. They are covered with a plant with grassy-looking leaves and rough stalk, which strips into portions similar to what are put round candles as ornaments. It makes these hills look light gray, with patches of black rock at the more perpendicular parts; the same at about ten miles off look dark blue. The ground is often hard and stony, but all covered over with grass and plants: looking down at it, the grass is in tufts, and like that on the Kalahari desert. Trees show uplands. One tree of which bark cloth is made, *Pterocarpus*, is abundant. Timber-trees appear here and there; but for the most part the growth is stunted, and few are higher than thirty feet. We spent the night by a hill of the usual rounded form, called Njeñgo. The Rovuma comes close by, but leaves us again, to wind among similar great masses. Lat. $11^{\circ} 20' 05''$ S.

June 10th.—A very heavy march through the same kind of country, no human habitation appearing; we passed a dead body—recently, it was said, starved to death. The large tract between Makochera's and our next station at Ngozo hill is without any perennial stream; water is found often by digging in the

* It will be remembered that this German traveler was murdered near Lake Nyassa. The native chiefs denounced his assassins, and sent them to Zanzibar, where they were executed.—Ed.

sand streams which we several times crossed; sometimes it was a trickling rill, but I suspect that at other seasons all is dry, and people are made dependent on the Rovuma alone. The first evidence of our being near the pleasant haunts of man was a nice little woman drawing water at a well. I had become separated from the rest; on giving me water she knelt down, and, as country manners require, held it up to me with *both* hands. I had been misled by one of the carriers, who got confused, though the rounded mass of Ngozo was plainly visible from the heights we crossed east of it.

An Arab party bolted on hearing of our approach: they do not trust the English, and this conduct increases our importance among the natives. Lat. $11^{\circ} 18' 10''$ S.

June 11th.—Our carriers refuse to go farther, because they say that they fear being captured here on their return.

June 12th.—I paid off the carriers, and wait for a set from this. A respectable man, called Makoloya, or Impandé, visited me, and wished to ask some questions as to where I was going, and how long I should be away. He had heard from a man who came from Ibo, or Wibo, about the Bible, a large book which was consulted.



Tattoo of Matambwé.

June 13th.—Makoloya brought his wife and a little corn, and says that his father told him that there is a God, but nothing more. The marks on their foreheads and bodies are meant only to give beauty in the dance. They seem a sort of heraldic ornament, for they can at once tell by his tattoo to what tribe or portion of tribe a man belongs. The tattoo or tembo of the Matambwé and Upper Makondé very much resembles the drawings of the old Egyptians—wavy lines, such as the ancients made to

signify water, trees, and gardens inclosed in squares, seem to have been meant of old for the inhabitants who lived on the Rovuma, and cultivated also—the son takes the tattoo of his father, and thus it has been perpetuated, though the meaning now appears lost. The Makoa have the half or nearly full moon; but it is, they say, all for ornament. Some blue stuff is rubbed into the cuts (I am told it is charcoal), and the ornament shows brightly in persons of light complexion, who, by-the-bye, are common. The Makondé and Matambwé file their front teeth to points; the Machinga, a Waiyau tribe, leave two points on the sides of the front teeth, and knock out one of the middle incisors above and below.



Machinga and Waiyau Teeth.

June 14th.—I am now as much dependent on carriers as if I had never bought a beast of burden—but this is poor stuff to fill a journal with. We started off to Metaba to see if the chief there would lend some men. The head man, Kitwanga, went a long way to convoy us; then turned, saying he was going to get men for Musa next day. We passed near the base of the rounded masses Ngozo and Mekanga, and think; from a near inspection, that they are over two thousand feet above the plain, possibly three thousand feet, and nearly bare, with only the peculiar grassy plant on some parts which are not too perpendicular. The people are said to have stores of grain on them, and on one the chief said there is water; he knows of no stone buildings of the olden time in the country. We passed many masses of ferruginous conglomerate, and I noticed that most of the gneiss dips westward. The striæ seem as if the rock had been partially molten: at times the strike is north and south, at others east and west; when we come to what may have been its surface, it is as if the striæ had been stirred with a rod while soft.

We slept at a point of the Rovuma, above a cataract where a reach of comparatively still water from one hundred and fifty to two hundred yards wide allows a school of hippopotami to live: when the river becomes fordable in many places, as it is said to do in August and September, they must find it difficult to exist.

June 15th.—Another three hours' march brought us from the sleeping-place on the Rovuma to Metaba, the chief of which, Kinazombé, is an elderly man, with a cunning and severe cast of countenance, and a nose Assyrian in type; he has built a large reception-house, in which a number of half-caste Arabs have taken up their abode. A great many of the people have

guns; and it is astonishing to see the number of slave-taming sticks abandoned along the road as the poor wretches gave in, and professed to have lost all hope of escape. Many huts have been built by the Arabs to screen themselves from the rain as they traveled. At Kinazombé's the second crop of maize is ready, so the hunger will not be very much felt.

June 16th.—We heard very sombre accounts of the country in front: four or five days to Mtarika, and then ten days through jungle to Mataka's town: little food at Mtarika's, but plenty with Mataka, who is near the Lake. The Rovuma trends southerly after we leave Ngozo, and Masusa, on that river, is pointed out as south-west from Metaba; so at Ngozo the river may be said to have its farthest northing. Masusa is reported to be five days, or at least fifty miles, from Metaba. The route now becomes south-west.

The cattle of Africa are like the Indian buffalo, only partially tamed; they never give their milk without the presence of the calf, or its stuffed skin, the "fulchan." The women adjacent to Mozambique partake a little of the wild animal's nature; for, like most members of the inferior races of animals, they refuse all intercourse with their husbands when enceinte, and they continue this for about three years afterward, or until the child is weaned, which usually happens about the third year. I was told, on most respectable authority, that many fine young native men marry one wife, and live happily with her till this period; nothing will then induce her to continue to cohabit with him; and as the separation is to continue for three years, the man is almost compelled to take up with another wife: this was mentioned to me as one of the great evils of society. The same absurdity prevails on the West Coast, and there it is said that the men acquiesce from ideas of purity.

It is curious that trade-rum should form so important an article of import on the West Coast while it is almost unknown on the East Coast, for the same people began the commerce in both instances. If we look north of Cape Delgado, we might imagine that the religious convictions of the Arabs had something to do with the matter; but the Portuguese south of Cape Delgado have no scruples in the matter, and would sell their grandfathers as well as the rum, if they could make money by the transaction. They have even erected distilleries to furnish a vile spirit from the fruit of the cashew and other fruits and grain, but the trade does not succeed. They give their slaves also rewards of spirit, or "mata bicho" ("kill the creature," or "craving within"), and

you may meet a man who, having had much intercourse with Portuguese, may beg spirits; but the trade does not pay. The natives will drink it if furnished gratis. The indispensable "dash" of rum on the West Coast in every political transaction with independent chiefs is, however, quite unknown. The Moslems would certainly not abstain from trading in spirits were the trade profitable. They often asked for brandy from me in a sly way—as medicine; and when reminded that their religion forbade it, would say, "Oh, but we can drink it in secret."

It is something in the nature of the people quite inexplicable, that throughout the Makondé country *hernia humoralis* prevails to a frightful extent; it is believed by the natives to be the result of beer-drinking, so they can not be considered as abstemious.

June 18th.—Finding that Musa did not come up with the goods I left in his charge, and fearing that all was not right, we set off with all our hands who could carry, after service yesterday morning, and in six hours' hard tramp arrived here just in time; for a tribe of Wanindi, or Manindi, who are either Ajawas (Waiyan),* or pretended Mazitu, had tried to cross the Rovuma from the north bank. They came as plunderers, and Musa, having received no assistance, was now ready to defend the goods. A shot or two from the people of Kitwanga made the Wanindi desert after they had entered the water.

Six sepoy and Simon had come up this length; Reuben and Mabruki reported Richard to be dead. This poor boy was left with the others at Lipondé, and I never saw him again. I observed him associating too much with the sepoy, and often felt inclined to reprove him, as their conversation is usually very bad, but I could not of my own knowledge say so. He came on with the others as far as Hassané or Paehassané: there he was too weak to come farther; and as the sepoy were notoriously skulkers, I feared that poor Richard was led away by them, for I knew that they had made many attempts to draw away the other Nasick boys from their duty. When, however, Abraham came up and reported Richard left behind by the sepoy, I became alarmed, and sent off three boys, with cordials, to help him on: two days after Abraham left, he seems to have died, and I feel very sorry that I was not there to do what I could. I am told now that he never consented to the sepoy temptation: he said to

* Farther westward among the Manganja or Nyassa people the Waiyan tribe is called "Ajawa," and we find Livingstone always speaking of them as Ajawas in his previous explorations on the River Rovuma. (See "The Zambesi and its Tributaries.")—Ed.

Abraham that he wished he were dead, he was so much troubled. The people where he died were not very civil to Simon.

The sepoy had now made themselves such an utter nuisance that I felt that I must take the upper hand with them; so I called them up this morning, and asked if they knew the punishment they had incurred by disobeying orders, and attempting to tamper with the Nassick boys to turn them back. I told them they not only remained in the way when ordered to march, but offered eight rupees to Ali to lead them to the coast, and that the excuse of sickness was naught, for they had eaten heartily three meals a day while pretending illness. They had no excuse to offer, so I disgraced the naik or corporal, and sentenced the others to carry loads: if they behave well, then they will get fatigue pay for doing fatigue duty; if ill, nothing but their pay. Their limbs are becoming contracted from sheer idleness; while all the other men are well and getting stronger, they alone are disreputably slovenly and useless-looking. Their filthy habits are to be reformed; and if found at their habit of sitting down and sleeping for hours on the march, or without their muskets and pouches, they are to be flogged. I sent two of them back to bring up two comrades left behind yesterday. All who have done work are comparatively strong.

[We may venture a word in passing on the subject of native recruits enlisted for service in Africa, and who return thither after a long absence. All the Nassick boys were native-born Africans, and yet we see one of them succumb immediately. The truth is that natives, under these circumstances, are just as liable to the effects of malaria on landing as Europeans, although it is not often that fever assumes a dangerous form in such cases. The natives of the interior have the greatest dread of the illnesses which they say are sure to be in store for them if they visit the coast.]

June 19th.—I gave the sepoy light loads, in order to inure them to exercise and strengthen them, and they carried willingly so long as the fright was on them; but when the fear of immediate punishment wore off, they began their skulking again. One, Perim, reduced his load of about twenty pounds of tea by throwing away the lead in which it was rolled, and afterward about fifteen pounds of the tea, thereby diminishing our stock to five pounds.

[Dr. Livingstone's short stay in England in 1864-'65 was mainly taken up with compiling an account of his travels on the Zambesi and Shiré: during this time his mother expired in Scotland

at a good old age. When he went back to Africa he took with him, as part of his very scanty traveling equipment, a number of letters which he received from friends at different times in England, and he very often quoted them when he had an opportunity of sending letters home. We come to an entry at this time which shows that in these reminiscences he had not thus preserved an unmixed pleasure. He says:]

I lighted on a telegram to-day :

“Your mother died at noon on the 18th June.”

This was in 1865: it affected me not a little.



SLAVERS REVENGING THEIR LOSSES.

CHAPTER III.

Horrors of the Slave-trader's Track.—System of Cultivation.—Pottery.—Special Exercising.—Death of the last Mule.—Rescue of Chirikaloma's Wife.—Brutalities of the Slave-drivers.—Mtarika's.—Desperate March to Mtaka's.—Meets Arab Caravans.—Dismay of Slavers.—Dismissal of Sepoys.—Mataka.—The Waiyau Metropolis.—Great Hospitality and good Feeling.—Mataka restores stolen Cattle.—Life with the Chief.—Beauty of Country and Healthiness of Climate.—The Waiyau People and their Peculiarities.—Regrets at the Abandonment of Bishop Mackenzie's Plans.

June 19th, 1866.—WE passed a woman tied by the neck to a tree, and dead. The people of the country explained that she had been unable to keep up with the other slaves in a gang, and her master had determined that she should not become the property of any one else if she recovered after resting for a time. I may mention here that we saw others tied up in a similar manner, and one lying in the path shot or stabbed,* for she was in a pool of blood. The explanation we got invariably was that the Arab who owned these victims was enraged at losing his money by the slaves becoming unable to march, and vented his spleen by murdering them; but I have nothing more than common report in support of attributing this enormity to the Arabs.

June 20th.—Having returned to Metaba, we were told by Kinazombé, the chief, that no one had grain to sell but himself. He had plenty of powder and common cloth from the Arabs, and our only chance with him was parting with our finer cloths and other things that took his fancy. He magnified the scarcity in front in order to induce us to buy all we could from him, but he gave me an ample meal of porridge and guinea-fowl before starting.

June 21st.—We had difficulties about carriers; but on reaching an island in the Rovuma called Chimiki, we found the people were Makoa, and more civil and willing to work than the Waiyau: we sent men back to bring up the havildar to a very civil head man called Chirikaloma.

June 22d.—A poor little boy with *prolapsus ani* was carried

* There is a double purpose in these murders; the terror inspired in the minds of the survivors spurs them on to endure the hardships of the march: the Portuguese drovers are quite alive to the merits of this stimulus.—ED.

yesterday by his mother many a weary mile, lying over her right shoulder—the only position he could find ease in; an infant at the breast occupied the left arm, and on her head were carried two baskets. The mother's love was seen in binding up the part when we halted, while the coarseness of low civilization was evinced in the laugh with which some black brutes looked at the sufferer.

June 23d.—The country is covered with forest, much more open than farther east. We are now some eight hundred feet above the sea. The people all cultivate maize near the Rovuma, and on islands where moisture helps them; nearly all possess guns, and plenty of powder and fine beads—red ones strung on the hair, and fine blue ones in rolls on the neck, fitted tightly like soldiers' stocks. The lip-ring is universal; teeth filed to points.

June 24th.—Immense quantities of wood are cut down, collected in heaps, and burned to manure the land, but this does not prevent the country having an appearance of forest. Divine service at 8.30 A.M.; great numbers looking on. They have a clear idea of the Supreme Being, but do not pray to him. Cold south winds prevail; temperature, 55°. One of the mules is very ill; it was left with the havildar when we went back to Ngozo, and probably remained uncovered at night; for as soon as we saw it, illness was plainly visible. Whenever an animal has been in their power, the sepoys have abused it. It is difficult to feel charitably to fellows whose scheme seems to have been to detach the Nassick boys from me first; then, when the animals were all killed, the Johanna men; afterward they could rule me as they liked, or go back and leave me to perish; but I shall try to feel as charitably as I can in spite of it all, for the mind has a strong tendency to brood over the ills of travel. I told the havildar, when I came up to him at Metaba, what I had done, and that I was very much displeased with the sepoys for compassing my failure, if not death; an unkind word had never passed my lips to them: to this he could bear testimony. He thought that they would only be a plague and trouble to me, but he "would go on and die with me."

Stone boiling is unknown in these countries, but ovens are made in ant-hills. Holes are dug in the ground for baking the heads of large game, as the zebra, feet of elephants, humps of rhinoceros; and the production of fire by drilling between the palms of the hands is universal. It is quite common to see the sticks so used attached to the clothing or bundles in traveling; they wet the blunt end of the upright stick with the tongue, and dip it in the sand to make some particles of silica adhere before

inserting it in the horizontal piece. The wood of a certain wild fig-tree is esteemed as yielding fire readily.

In wet weather they prefer to carry fire in the dried balls of elephants' dung which are met with—the male's being about eight inches in diameter, and about a foot long; they also employ the stalk of a certain plant which grows on rocky places for the same purpose.

We bought a *senzé*, or *Aulacaudatus Swindernianus*, which had been dried over a slow fire. This custom of drying fish, flesh, and fruits, on stages over slow fires, is practiced very generally: the use of salt for preservation is unknown. Besides stages for drying, the Makondé use them, about six feet high, for sleeping on, instead of the damp ground: a fire beneath helps to keep off the mosquitoes, and they are used by day as convenient resting-places and for observation.

Pottery seems to have been known to the Africans from the remotest times, for fragments are found everywhere, even among the oldest fossil bones in the country. Their pots for cooking, holding water and beer, are made by the women, and the form is preserved by the eye alone, for no sort of machine is ever used. A foundation or bottom is first laid, and a piece of bone or bamboo used to scrape the clay, or to smooth over the pieces which are added to increase the roundness; the vessel is then left a night: the next morning a piece is added to the rim—as the air is dry, several rounds may be added—and all is then carefully smoothed off; afterward it is thoroughly sun-dried. A light fire of dried cow-dung, or corn-stalks, or straw, and grass with twigs, is made in a hole in the ground for the final baking. Ornaments are made on these pots of black-lead, or before being hardened by the sun they are ornamented for a couple or three inches near the rim, all the tracery being in imitation of plaited basket-work.

Chirikaloma says that the surname of the Makoa, to whom he belongs, is *Mirazi*; others have the surname *Melola* or *Malola*—*Chimposola*. All had the half-moon mark when in the south-east; but now they leave it off a good deal and adopt the *Waiyau* marks, because of living in their country. They show no indications of being named after beasts and birds. *Mirazi* was an ancestor. They eat all clean animals, but refuse the hyena, leopard, or any beast that devours dead men.*

June 25th.—On leaving Chirikaloma, we came on to Namalo,

* A tribal distinction turns on the customs prevailing with respect to animal food, *e. g.*, one tribe will eat the elephant, the next looks on such flesh as unclean, and so with other meat. The neighboring Manganja gladly eat the leopard and hyena.—Ed.

whose village that morning had been deserted, the people moving off in a body toward the Matambwé country, where food is more abundant. A poor little girl was left in one of the huts from being too weak to walk, probably an orphan. The Arab slave-traders flee from the path as soon as they hear of our approach. The Rovuma is from fifty-six to eighty yards wide here. No food to be had for either love or money.

Near many of the villages we observe a wand bent, and both ends inserted into the ground. A lot of medicine, usually the bark of trees, is buried beneath it. When sickness is in a village, the men proceed to the spot, wash themselves with the medicine and water, creep through beneath the bough, then bury the medicine and the evil influence together. This is also used to keep off evil spirits, wild beasts, and enemies.

Chirikaloma told us of a child in his tribe which was deformed from his birth. He had an abortive toe where his knee should have been. Some said to his mother, "Kill him;" but she replied, "How can I kill my son?" He grew up and had many fine sons and daughters, but none deformed like himself; this was told in connection with an answer to my question about the treatment of Albinos: he said they did not kill them, but they never grew to manhood. On inquiring if he had ever heard of cannibals, or people with tails, he replied, "Yes, but we have always understood that these and other monstrosities are met with only among you sea-going people." The other monstrosities he referred to were those who are said to have eyes behind the head as well as in front. I have heard of them before, but then I was near Angola, in the west.

The rains are expected here when the Pleiades appear in the east soon after sunset; they go by the same name here as farther south: Lemila, or the "hoeings."

In the route along the Rovuma, we pass among people who are so well supplied with white calico by the slave-trade from Kilwa that it is quite a drug in the market: we can not get food for it. If we held on westward, we should cross several rivers flowing into the Rovuma from the southward, as the Zandulo, the Sanjenzé, the Lochiringo, and then, in going round the north end of Nyassa, we should pass among the Nindi, who now inhabit the parts vacated by the Mazitu, and imitate them in having shields and in marauding. An Arab party went into their country, and got out again only by paying a whole bale of calico. It would not be wise in me to venture there at present, but if we return this way we may; meanwhile we shall push on to Mataka,

who is only a few days off from the middle of the Lake, and has abundance of provisions.

June 26th.—My last mule died. In coming along in the morning we were loudly accosted by a well-dressed woman who had just had a very heavy slave-taming stick put on her neck. She called in such an authoritative tone to us to witness the flagrant injustice of which she was the victim, that all the men stood still, and went to hear the case. She was a near relative of Chirikaloma, and was going up the river to her husband, when the old man (at whose house she was now a prisoner) caught her, took her servant away from her, and kept her in the degraded state we saw. The withes with which she was bound were green and sappy. The old man said in justification that she was running away from Chirikaloma, and he would be offended with him if he did not secure her.

I asked the officious old gentleman in a friendly tone what he expected to receive from Chirikaloma, and he said, "Nothing." Several slaver-looking fellows came about, and I felt sure that the woman had been seized in order to sell her to them, so I gave the captor a cloth to pay to Chirikaloma if he were offended, and told him to say that I, feeling ashamed to see one of his relatives in a slave-stick, had released her, and would take her on to her husband.

She is evidently a lady among them, having many fine beads and some strung on elephant's hair; she has a good deal of spirit too, for on being liberated she went into the old man's house and took her basket and calabash. A virago of a wife shut the door and tried to prevent her, as well as to cut off the beads from her person; but she resisted like a good one, and my men thrust the door open and let her out, but minus her slave. The other wife—for old Officious had two—joined her sister in a furious tirade of abuse, the elder holding her sides in regular fish-wife fashion, till I burst into a laugh, in which the younger wife joined. I explained to the different head men in front of this village what I had done, and sent messages to Chirikaloma explanatory of my friendly deed to his relative, so that no misconstruction should be put on my act.

We passed a slave woman shot or stabbed through the body, and lying on the path. A group of men stood about a hundred yards off on one side, and another of women on the other side, looking on; they said an Arab who passed early that morning had done it, in anger at losing the price he had given for her, because she was unable to walk any longer.

June 27th.—To-day we came upon a man dead from starvation, as he was very thin. One of our men wandered and found a number of slaves with slave-sticks on, abandoned by their master from want of food; they were too weak to be able to speak or say where they had come from; some were quite young. We crossed the Tulosi, a stream coming from south, about twenty yards wide.

At Chenjewala's the people are usually much startled when I explain that the numbers of slaves we see dead on the road have been killed partly by those who sold them; for I tell them that if they sell their fellows, they are like the man who holds the victim while the Arab performs the murder.

Chenjewala blamed Macheмба, a chief above him on the Rovuma, for encouraging the slave-trade; I told him I had traveled so much among them that I knew all the excuses they could make: each head man blamed some one else.

"It would be better if you kept your people, and cultivated more largely," said I. "Oh, Macheмба sends his men and robs our gardens after we have cultivated," was the reply. One man said that the Arabs who come and tempt them with fine clothes are the cause of their selling: this was childish, so I told them they would very soon have none to sell; their country was becoming jungle, and all their people who did not die in the road would be making gardens for Arabs at Kilwa and elsewhere.

June 28th.—When we got about an hour from Chenjewala's we came to a party in the act of marauding; the owners of the gardens made off for the other side of the river, and waved to us to go against the people of Macheмба, but we stood on a knoll with all our goods on the ground, and waited to see how matters would turn out. Two of the marauders came to us, and said they had captured five people. I suppose they took us for Arabs, as they addressed Musa. They then took some green maize, and so did some of my people, believing that as all was going, they who were really starving might as well have a share.

I went on a little way with the two marauders, and by the foot-prints thought the whole party might amount to four or five, with guns: the gardens and huts were all deserted. A poor woman was sitting, cooking green maize, and one of the men ordered her to follow him. I said to him, "Let her alone; she is dying." "Yes," said he, "of hunger;" and went on without her.

We passed village after village, and gardens all deserted! We were now between two contending parties. We slept at one garden; and as we were told by Chenjewala's people to take what



SLAVES ABANDONED.

we liked, and my men had no food, we gleaned what congo-beans, bean-leaves, and sorghum stalks we could—poor fare enough, but all we could get.

June 29th.—We came on to Macheмба's brother, Chimseia, who gave us food at once. The country is now covered with deeper soil, and many large acacia-trees grow in the rich loam; the holms too are large, and many islands afford convenient maize grounds. One of the Nassick lads came up and reported his bundle, containing two hundred and forty yards of calico, had been stolen; he went aside, leaving it on the path (probably fell asleep), and it was gone when he came back. I can not impress either on them or the sepoys that it is wrong to sleep on the march.

Akosakoné, whom we had liberated, now arrived at the residence of her husband, who was another brother of Macheмба. She behaved like a lady all through, sleeping at a fire apart from the men. The ladies of the different villages we passed condoled with her, and she related to them the indignity that had been done to her. Besides this she did us many services: she bought food for us, because, having a good address, we saw that she could get double what any of our men could purchase for the same cloth; she spoke up for us when any injustice was attempted, and, when we were in want of carriers, volunteered to carry a bag of beads on her head. On arriving at Macheмба's brother, Chimseia, she introduced me to him, and got him to be liberal to us in food on account of the service we had rendered to her. She took leave of us all with many expressions of thankfulness, and we were glad that we had not mistaken her position or lavished kindness on the undeserving.

One Johanna man was caught stealing maize, then another, after I had paid for the first. I sent a request to the chief not to make much of a grievance about it, as I was very much ashamed at my men stealing; he replied that he had liked me from the first, and I was not to fear, as whatever service he could do he would most willingly, in order to save me pain and trouble. A sepoy now came up, having given his musket to a man to carry, who therefore demanded payment. As it had become a regular nuisance for the sepoys to employ people to carry for them, telling them that I would pay, I demanded why he had promised in my name. "Oh, it was but a little way he carried the musket," said he. Chimseia warned us next morning, June 30th, against allowing any one to straggle or steal in front, for stabbing and plundering were the rule. The same sepoy who had employed

a man to carry his musket now came forward, with his eyes fixed and shaking all over. This, I was to understand, meant extreme weakness; but I had accidentally noticed him walking quite smartly before this exhibition, so I ordered him to keep close to the donkey that carried the havildar's luggage, and on no account to remain behind the party. He told the havildar that he would sit down only for a little while; and, I suppose, fell asleep, for he came up to us in the evening as naked as a robin.

I saw another person bound to a tree and dead—a sad sight to see, whoever was the perpetrator. So many slave-sticks lie along our path, that I suspect the people hereabouts make a practice of liberating what slaves they can find abandoned on the march, to sell them again.

A large quantity of maize is cultivated at Chimsaka's, at whose place we this day arrived. We got a supply, but being among thieves, we thought it advisable to move on to the next place (Mtarika's). When starting, we found that fork, kettle, pot, and shot-pouch had been taken. The thieves, I observed, kept up a succession of jokes with Chuma and Wikatani, and when the latter was enjoying them, gazing to the sky, they were busy putting the things of which he had charge under their cloths! I spoke to the chief, and he got the three first articles back for me.

A great deal if not all the lawlessness of this quarter is the result of the slave-trade, for the Arabs buy whoever is brought to them; and in a country covered with forest as this is, kidnapping can be prosecuted with the greatest ease; elsewhere the people are honest and have a regard for justice.

July 1st, 1866.—As we approach Mtarika's place, the country becomes more mountainous, and the land sloping for a mile down to the south bank of the Rovuma supports a large population. Some were making new gardens by cutting down trees and piling the branches for burning; others had stored up large quantities of grain, and were moving it to a new locality; but they were all so well supplied with calico (Merikano) that they would not look at ours. The market was in fact glutted by slavers from (Quiloa) Kilwa. On asking why people were seen tied to trees to die as we had seen them, they gave the usual answer that the Arabs tie them thus, and leave them to perish, because they are vexed, when the slaves can walk no farther, that they have lost their money by them. The path is almost strewed with slave-sticks, and though the people denied it, I suspect that they make a practice of following slave caravans and cutting off the sticks from those who fall out in the march, and thus stealing

them. By selling them again they get the quantities of cloth we see. Some asked for gaudy prints, of which we had none, because we knew that the general taste of the Africans of the interior is for strength rather than show in what they buy.

The Rovuma here is about one hundred yards broad, and still keeps up its character of a rapid stream, with sandy banks and islands: the latter are generally occupied, as being defensible when the river is in flood.

July 2d, 1866.—We rested at Mtarika's old place; and though we had to pay dearly with our best table-cloths* for it, we got as much as made one meal a day. At the same dear rate we could give occasionally only two ears of maize to each man; and if the sepoys got their comrades' corn into their hands they ate it without shame. We had to bear a vast amount of staring, for the people, who are Waiyau, have a great deal of curiosity, and are occasionally rather rude. They have all heard of our wish to stop the slave-trade, and are rather taken aback when told that by selling they are art and part guilty of the mortality of which we had been unwilling spectators. Some were dumfounded when shown that in the eye of their Maker they are parties to the destruction of human life which accompanies this traffic both by sea and land. If they did not sell, the Arabs would not come to buy. Chuma and Wakatani render what is said very eloquently in Chiyau, most of the people being of their tribe, with only a sprinkling of slaves. Chimseia, Chimsaka, Mtarika, Mtendé, Makanjela, Mataka, and all the chiefs and people in our route to the Lake, are Waiyau, or Waiiau.†

On the southern slope down to the river there are many oozing springs and damp spots where rice has been sown and reaped. The adjacent land has yielded large crops of sorghum, congo-beans, and pumpkins. Successive crowds of people came to gaze. My appearance and acts often cause a burst of laughter; sudden standing up produces a flight of women and children. To prevent peeping into the hut which I occupy, and making the place quite dark, I do my writing in the veranda. Chitané, the poodle-dog, the buffalo-calf, and our only remaining donkey are greeted with the same amount of curiosity and laughter-exciting comment as myself.

Every evening a series of loud musket reports is heard from the different villages along the river; these are imitation evening

* A colored cloth manufactured expressly for barter in East Africa.

† This is pronounced "Y-yow."—ED.

guns. All copy the Arabs in dress, and chewing tobacco with "nora" lime, made from burned river shells instead of betel-nut and lime. The women are stout, well-built persons, with thick arms and legs; their heads incline to the bullet shape; the lip-rings are small; the tattoo a mixture of Makoa and Waiyau. Fine blue and black beads are in fashion, and so are arm-coils of thick brass wire. Very nicely inlaid combs are worn in the hair; the inlaying is accomplished by means of a gum got from the root of an orchis called *Nangazu*.

July 3d.—A short march brought us to Mtarika's new place. The chief made his appearance only after he had ascertained all he could about us. The population is immense; they are making new gardens, and the land is laid out by straight lines about a foot broad, cut with the hoe. One goes miles without getting beyond the marked or surveyed fields.

Mtarika came at last; a big, ugly man, with large mouth and receding forehead. He asked to see all our curiosities, as the watch, revolver, breech-loading rifle, sextant. I gave him a lecture on the evil of selling his people, and he wished me to tell all the other chiefs the same thing.

They dislike the idea of guilt being attached to them for having sold many who have lost their lives on their way down to the sea-coast. We had a long visit from Mtarika next day; he gave us meal, and meat of wild hog, with a salad made of bean-leaves. A wretched Swaheli Arab, ill with rheumatism, came for aid, and got a cloth. They all profess to me to be buying ivory only.

July 5th.—We left for Mtendé, who is the last chief before we enter on a good eight days' march to Mataka's. We might have gone to Kandulo's, who is near the Rovuma, and more to the north, but all are so well supplied with every thing by slave-traders that we have difficulty in getting provisions at all. Mataka has plenty of all kinds of food. On the way we passed the burned bones of a person who was accused of having eaten human flesh; he had been poisoned, or, as they said, killed by poison (*muavé?*), and then burned. His clothes were hung up on trees by the wayside as a warning to others. The country was covered with scraggy forest, but so undulating that one could often see all around from the crest of the waves. Great mountain masses appear in the south and south-west. It feels cold, and the sky is often overcast.

July 6th.—I took lunars yesterday, after which Mtendé invited us to eat at his house where he had provided a large mess of rice porridge and bean-leaves as a relish. He says that many Arabs pass him, and many of them die in their journeys. He knows no

deaf or dumb person in the country. He says that he cuts the throats of all animals to be eaten, and does not touch lion or hyena.

July 7th.—We got men from Mtendé to carry loads and show the way. He asked a cloth to insure his people going to the journey's end and behaving properly; this is the only case of any thing like tribute being demanded in this journey: I gave him a cloth worth 5s. 6d. Upland vegetation prevails; trees are dotted here and there among bushes five feet high, and fine blue and yellow flowers are common. We pass over a succession of ridges and valleys as in Londa; each valley has a running stream or trickling rill; garden willows are in full bloom, and also a species of sage with variegated leaves beneath the flowers.

When the sepoy Perim threw away the tea and the lead lining, I only reprov'd him, and promised him punishment if he committed any other willful offense; but now he and another skulked behind, and gave their loads to a stranger to carry, with a promise to him that I would pay. We waited two hours for them; and as the havildar said that they would not obey him, I gave Perim and the other some smart cuts with a cane; but I felt that I was degrading myself, and resolved not to do the punishment myself again.

July 8th.—Hard traveling through a depopulated country. The trees are about the size of hop-poles, with abundance of tall grass; the soil is sometimes a little sandy, at other times that reddish, clayey sort which yields native grain so well. The rock seen uppermost is often a ferruginous conglomerate, lying on granite rocks. The gum-copal-tree is here a mere bush, and no digging takes place for the gum; it is called mchenga, and yields gum when wounded, as also bark-cloth, and cordage when stripped. Mountain masses are all around us: we sleep at Linata mountain.

July 9th.—The masuko fruit abounds: the name is the same here as in the Batoka country: there are also rhododendrons of two species, but the flowers white. We slept in a wild spot, near Mount Leziro, with many lions roaring about us; one hoarse fellow serenaded us a long time, but did nothing more. Game is said to be abundant, but we saw none, save an occasional diver springing away from the path. Some streams ran to the north-west to the Lismyando, which flows north for the Rovuma; others to the south-east, for the Loendi.

July 10th, 11th.—Nothing to interest, but the same weary trudge; our food so scarce that we can only give a handful or half a pound of grain to each person per day. The masuko fruit

is formed, but not ripe till rains begin; very few birds are seen or heard, though there is both food and water in the many grain-bearing grasses and running streams, which we cross at the junction of every two ridges. A dead body lay in a hut by the way-side; the poor thing had begun to make a garden by the stream, probably in hopes of living long enough (two months or so) on wild fruits to reap a crop of maize.

July 12th.—A drizzling mist set in during the night and continued this morning. We set off in the dark, however, leaving our last food for the havildar and sepoys who had not yet come up. The streams are now of good size. An Arab brandy-bottle was lying broken in one village, called Msapa. We hurried on as fast as we could to the Luatizé, our last stage before getting to Mataka's; this stream is rapid, about forty yards wide, waist-deep, with many podostemons on the bottom. The country gets more and more undulating, and is covered with masses of green foliage, chiefly masuko-trees, which have large hard leaves. There are hippopotami farther down the river on its way to the Loendi. A little rice which had been kept for me I divided, but some did not taste food.

July 13th.—A good many stragglers behind, but we push on to get food, and send it back to them. The soil all reddish clay, the roads baked hard by the sun, and the feet of many of us are weary and sore—a weary march and long, for it is perpetually up and down now. I counted fifteen running streams in one day; they are at the bottom of the valley which separates the ridges. We got to the brow of a ridge about an hour from Mataka's first gardens, and all were so tired that we remained to sleep; but we first invited volunteers to go on and buy food, and bring it back early next morning: they had to be pressed to do this duty.

July 14th.—As our volunteers did not come at 8 A.M., I set off to see the cause, and after an hour of perpetual up-and-down march, as I descended the steep slope which overlooks the first gardens, I saw my friends start up at the apparition—they were comfortably cooking porridge for themselves! I sent men of Mataka back with food to the stragglers behind, and came on to his town.

An Arab, Sef Rupia or Rubea, head of a large body of slaves, on his way to the coast, most kindly came forward and presented an ox, bag of flour, and some cooked meat, all of which were extremely welcome to half-famished men, or indeed under any circumstances. He had heard of our want of food and of a band of

sepoys; and what could the English think of doing but putting an end to the slave-trade? Had he seen our wretched escort, all fear of them would have vanished! He had a large safari, or caravan, under him. This body is usually divided into ten or twelve portions, and all are bound to obey the leader to a certain extent. In this case there were eleven parties, and the traders numbered about sixty or seventy, who were dark coast Arabs. Each underling had his men under him, and when I saw them they were busy making the pens of branches in which their slaves and they sleep. Sef came on with me to Mataka's, and introduced me in due form with discharges of gunpowder. I asked him to come back next morning, and presented three cloths with a request that he would assist the havildar and sepoys, if he met them, with food: this he generously did.

We found Mataka's town situated in an elevated valley surrounded by mountains; the houses numbered at least one thousand, and there were many villages around; the mountains were pleasantly green, and had many trees which the people were incessantly cutting down. They had but recently come here: they were besieged by Mazitu at their former location west of this; after fighting four days they left unconquered, having beaten the enemy off.

Mataka kept us waiting some time in the veranda of his large square house, and then made his appearance, smiling, with his good-natured face. He is about sixty years of age, dressed as an Arab, and, if we may judge from the laughter with which his remarks were always greeted, somewhat humorous. He had never seen any but Arabs before. He gave me a square house to live in, indeed the most of the houses here are square, for the Arabs are imitated in every thing: they have introduced the English pea, and we were pleased to see large patches of it in full bearing, and ripe in moist hollows which had been selected for it. The numerous springs which come out at various parts are all made use of. Those parts which are too wet are drained, while beds are regularly irrigated by water-courses and ridges. We had afterward occasion to admire the very extensive draining which has been effected among the hills. Cassava is cultivated on ridges along all the streets in the town, which give it a somewhat regular and neat appearance. Pease and tobacco were the chief products raised by irrigation, but batatas and maize were often planted too; wheat would succeed if introduced. The altitude is about two thousand seven hundred feet above the sea; the air at this time is cool, and many people have coughs.

Mataka soon sent a good mess of porridge and cooked meat (beef); he has plenty of cattle and sheep; and the next day he sent abundance of milk. We stand a good deal of staring unmoved, though it is often accompanied by remarks by no means complimentary; they think that they are not understood, and probably I do misunderstand sometimes. The Waiyau jumble their words, as I think, and Mataka thought that I did not enunciate any thing, but kept my tongue still when I spoke.

TOWN OF MATAKA, MOEMBÉ. *July 15th.*—The safari under Sef set off this morning for Kilwa. Sef says that about one hundred of the Kilwa people died this year; so slaving as well as philanthropy is accompanied with loss of life. We saw about seven of their graves; the rest died on the road up.

There are two roads from this to the Lake, one to Loséwa, which is west of this, and opposite Kotakota; the other, to Makatu, is farther south: the first is five days, through deserted country chiefly; but the other, seven, among people and plenty of provisions all the way.

It struck me after Sef had numbered up the losses that the Kilwa people sustained by death, in their endeavors to enslave people, similar losses on the part of those who go to "proclaim liberty to the captives, the opening of the prison to them that are bound"—to save and elevate, need not be made so very much of as they sometimes are.

Soon after our arrival we heard that a number of Mataka's Waiyau had, without his knowledge, gone to Nyassa, and in a foray carried off cattle and people; when they came home with the spoil, Mataka ordered all to be sent back whence they came. The chief came up to visit me soon after, and I told him that his decision was the best piece of news I had heard in the country: he was evidently pleased with my approbation, and, turning to his people, asked if they heard what I said. He repeated my remark, and said, "You silly fellows think me wrong in returning the captives, but all wise men will approve of it," and he then scolded them roundly.

I was accidentally spectator of this party going back, for on going out of the town I saw a meat-market opened, and people buying with maize and meal. On inquiring, I was told that the people and cattle there were the Nyassas, and they had slaughtered an ox, in order to exchange meat for grain as provisions on the journey. The women and children numbered fifty-four, and about a dozen boys were engaged in milking the cows. The cattle were from twenty-five to thirty head.

The change from hard and scanty fare caused illness in several of our party. I had tasted no animal food, except what turtle-doves and guinea-fowls could be shot, since we passed Matawa-tāwa—true, a fowl was given by Mtendé. The last march was remarkable for the scarcity of birds, so eight days were spent on porridge and rice without relish.

I gave Mataka a trinket, to be kept in remembrance of his having sent back the Nyassa people; he replied that he would always act in a similar manner. As it was a spontaneous act, it was all the more valuable.

The sepoys have become quite intolerable, and if I can not get rid of them we shall all starve before we accomplish what we wish. They dawdle behind, picking up wild fruits, and over our last march (which we accomplished on the morning of the eighth day) they took from fourteen to twenty-two days. Retaining their brutal feelings to the last, they killed the donkey which I lent to the havildar to carry his things, by striking it on the head when in boggy places into which they had senselessly driven it loaded; then the havildar came on (his men pretending they could go no farther from weakness), and killed the young buffalo and ate it, when they thought they could hatch up a plausible story. They said it had died, and tigers came and devoured it—they saw them. "Did you see the stripes of the tiger?" said I. All declared that they saw the stripes distinctly. This gave us an idea of their truthfulness, as there is no striped tiger in all Africa. All who resolved on skulking, or other bad behavior, invariably took up with the sepoys; their talk seemed to suit evil-doers, and they were such a disreputable-looking lot that I was quite ashamed of them. The havildar had no authority, and all bore the sulky, dogged look of people going where they were forced but hated to go. This hang-dog expression of countenance was so conspicuous, that I many a time have heard the country people remark, "These are the slaves of the party." They have neither spirit nor pluck as compared with the Africans, and if one saw a village he turned out of the way to beg in the most abject manner, or lay down and slept, the only excuse afterward being, "My legs were sore." Having allowed some of them to sleep at the fire in my house, they began a wholesale plunder of every thing they could sell, as cartridges, cloths, and meat; so I had to eject them. One of them then threatened to shoot my interpreter, Simon, if he got him in a quiet place away from the English power. As this threat had been uttered three times, and I suspect that something of the kind had prevented

the havildar exerting his authority, I resolved to get rid of them by sending them back to the coast by the first trader. It is likely that some sympathizers will take their part, but I strove to make them useful. They had but poor and scanty fare in a part of the way, but all of us suffered alike. They made themselves thoroughly disliked by their foul talk and abuse; and if any thing tended more than another to show me that theirs was a moral unfitness for travel, it was the briskness assumed when they knew they were going back to the coast. I felt inclined to force them on, but it would have been acting from revenge and to pay them out, so I forbore. I gave Mataka forty-eight yards of calico, and to the sepoy eighteen yards, and arranged that he should give them food till Suleiman, a respectable trader, should arrive. He was expected every day, and we passed him near the town. If they chose to go and get their luggage, it was of course all safe for them behind. The havildar begged still to go on with me, and I consented, though he is a drag on the party; but he will count in any difficulty.

Abraham recognized his uncle among the crowds who came to see us. On making himself known, he found that his mother and two sisters had been sold to the Arabs after he had been enslaved. The uncle pressed him to remain, and Mataka urged, and so did another uncle, but in vain. I added my voice, and could have given him goods to keep him afloat a good while, but he invariably replied, "How can I stop where I have no mother and no sister?" The affection seems to go to the maternal side. I suggested that he might come after he had married a wife; but I fear very much that, unless some European would settle, none of these Nassick boys will come to this country. It would be decidedly better if they were taught agriculture in the simplest form, as the Indian. Mataka would have liked to put his oxen to use, but Abraham could not help him with that. He is a smith, or rather a nothing, for unless he could smelt iron he would be entirely without materials to work with.

July 14th-28th.—One day, calling at Mataka's, I found as usual a large crowd of idlers, who always respond with a laugh to every thing he utters as wit. He asked, if he went to Bombay what ought he to take to secure some gold? I replied, "Ivory." He rejoined, "Would slaves not be a good speculation?" I replied that, "If he took slaves there for sale, they would put him in prison." The idea of the great Mataka in "chokee" made him wince, and the laugh turned, for once, against him. He said that as all the people from the coast crowd to him, they ought to give

him something handsome for being here to supply their wants. I replied, if he would fill the fine well-watered country we had passed over with people instead of sending them off to Kilwa, he would confer a benefit on visitors, but we had been starved on the way to him; and I then told him what the English would do in road-making in a fine country like this. This led us to talk of railways, ships, plowing with oxen—the last idea struck him most. I told him that I should have liked some of the Nassick boys to remain, and teach this and other things, but they might be afraid to venture lest they should be sold again. The men who listened never heard such decided protests against selling each other into slavery before!

The idea of guilt probably floated but vaguely in their minds, but the loss of life we have witnessed (in the guilt of which the sellers as well as the buyers participate) comes home very forcibly to their minds.

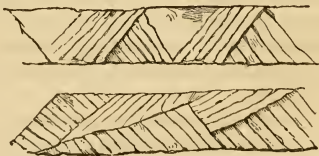
Mataka has been an active hand in slave wars himself, though now he wishes to settle down in quiet. The Waiyau generally are still the most active agents the slave-traders have. The caravan leaders from Kilwa arrive at a Waiyau village, show the goods they have brought, are treated liberally by the elders, and told to wait and enjoy themselves; slaves enough to purchase all will be procured: then a foray is made against the Manganja, who have few or no guns. The Waiyau who come against them are abundantly supplied with both by their coast guests. Several of the low-coast Arabs, who differ in nothing from the Waiyau, usually accompany the foray, and do business on their own account. This is the usual way in which a safari is furnished with slaves.

Makanjela, a Waiyau chief, about a third of the way from Mtendé's to Mataka, has lost the friendship of all his neighbors by kidnaping and selling their people; if any of Mataka's people are found in the district between Makanjela and Moembé, they are considered fair game, and sold. Makanjela's people can not pass Mataka to go to the Manganja, so they do what they can by kidnaping and plundering all who fall into their hands.

When I employed two of Mataka's people to go back on the 14th with food to the havildar and sepoy, they went a little way, and relieved some, but would not venture as far as the Luatizé, for fear of losing their liberty by Makanjela's people. I could not get the people of the country to go back; nor could I ask the Nassick boys, who had been threatened by the sepoy with assassination—and it was the same with the Johanna men, be-

cause, though Mohammedans, the sepoy had called them Caffirs, etc., and they all declared, "We are ready to do any thing for you, but we will do nothing for these Hindis." I sent back a sepoy, giving him provisions; he sat down in the first village, ate all the food, and returned.

An immense tract of country lies uninhabited. To the north-east of Moembé we have at least fifty miles of as fine land as can be seen anywhere, still bearing all the marks of having once supported a prodigious iron-smelting and grain-growing population. The clay pipes which are put on the nozzles of their bellows and inserted into the furnace are met with everywhere, often vitrified. Then the ridges on which they planted maize, beans, cassava, and sorghum, and which they find necessary to drain off the too-abundant moisture of the rains, still remain unleveled to attest the industry of the former inhabitants; the soil being clayey, resists for a long time the influence of the weather. These ridges are very regular, for in crossing the old fields, as the path often compels us to do, one foot treads regularly on the ridge, and the other in the hollow, for a considerable distance. Pieces of broken pots, with their rims ornamented with very good imitations of basket-work, attest that the lady potters of old followed the example given them by their still more ancient mothers. Their designs are rude, but better than we can make them without referring to the original.



Imitation of Basket-work in Pottery.

No want of water has here acted to drive the people away, as has been the case farther south. It is a perpetual succession of ridge and valley, with a running stream or oozing bog, where ridge is separated from ridge: the ridges become steeper and narrower as we approach Mataka's.

I counted fifteen running burns, of from one to ten yards wide, in one day's march of about six hours. Being in a hilly or rather mountainous region, they flow rapidly, and have plenty of water-power. In July any mere torrent ceases to flow; but these were brawling burns, with water too cold (61°) for us to bathe in whose

pores were all open by the relaxing regions nearer the coast. The sound, so un-African, of gushing water dashing over rocks was quite familiar to our ears.

This district, which rises up west of Mataka's to three thousand four hundred feet above the sea, catches a great deal of the moisture brought up by the easterly winds. Many of the trees are covered with lichens. While here, we had cold southerly breezes, and a sky so overcast every day after 10 A.M., that we could take no astronomical observations: even the latitude was too poor to be much depended on: $12^{\circ} 53'$ S. may have been a few miles from this.

The cattle, rather a small breed, black and white in patches, and brown, with humps, give milk which is duly prized by these Waiyau. The sheep are the large-tailed variety, and generally of a black color. Fowls and pigeons are the only other domestic animals we see, if we except the wretched village dogs, which our poodle had immense delight in chasing.

The Waiyau are far from a handsome race, but they are not the prognathous beings one sees on the West Coast either. Their heads are of a round shape; compact foreheads, but not particularly receding; the *alæ nasi* are flattened out; lips full, and with the women a small lip-ring just turns them up to give additional thickness. Their style of beauty is exactly that which was in fashion when the stone deities were made in the caves of Elephantá and Kenora, near Bombay. A favorite mode of dressing the hair into little knobs, which was in fashion there, is more common in some tribes than in this. The mouths of the women would not be so hideous with a small lip-ring if they did not file their teeth to points, but they seem strong, and able for the work which falls to their lot. The men are large, strong-boned fellows, and capable of enduring great fatigue; they undergo a rite which once distinguished the Jews about the age of puberty, and take a new name on the occasion; this was not introduced by the Arabs, whose advent is a recent event, and they speak of the time before they were inundated with European manufactures in exchange for slaves, as quite within their memory.

Young Mataka gave me a dish of pease, and usually brought something every time he made a visit; he seems a nice boy: and his father, in speaking of learning to read, said he and his companions could learn, but he himself was too old. The soil seems very fertile, for the sweet-potatoes become very large, and we bought two loads of them for three cubits and two needles; they quite exceeded one hundred-weight. The maize becomes

very large too; one cob had sixteen hundred seeds. The abundance of water, the richness of soil, the available labor for building square houses, the coolness of the climate, make this nearly as desirable a residence as Magomero; but, alas! instead of three weeks' easy sail up the Zambesi and Shiré, we have spent four weary months in getting here: I shall never cease bitterly to lament the abandonment of the Magomero mission.

Moaning seems a favorite way of spending the time with some sick folk. For the sake of the warmth, I allowed a Nassick boy to sleep in my house; he and I had the same complaint, dysentery, and I was certainly worse than he, but did not moan, while he played at it as often as he was awake. I told him that people moaned only when too ill to be sensible of what they were doing; the groaning ceased, though he became worse.

Three sepoys played at groaning very vigorously outside my door; they had nothing the matter with them, except perhaps fatigue, which we all felt alike. As these fellows prevented my sleeping, I told them quite civilly that, if so ill that they required to groan, they had better move off a little way, as I could not sleep; they preferred the veranda, and at once forbore.

The abundance of grain and other food is accompanied by great numbers of rats or large mice, which play all manner of pranks by night; white ants have always to be guarded against likewise. Any one who would find an antidote to drive them away would confer a blessing; the natural check is the driver ant, which when it visits a house is a great pest for a time, but it clears the others out.

CHAPTER IV.

Geology and Description of the Waiyau Land.—Leaves Mataka's.—The Nyumbo-plant.—Native Iron-foundry.—Blacksmiths.—Makes for the Lake Nyassa.—Delight at seeing the Lake once more.—The Manganja or Nyassa Tribe.—Arab Slave-crossing.—Unable to procure Passage across.—The Kungu Fly.—Fear of the English among Slavers.—Lake Shore.—Blue Ink.—Chitané changes Color.—The Nsaka Fish.—Makalaosé drinks Beer.—The Sanjika Fish.—London Antiquities.—Lake Rivers.—Mukaté's.—Lake Pamalombé.—Mponda's.—A Slave-gang.—Wikatani discovers his Relatives, and remains.

July 28th, 1866.—WE proposed to start to-day, but Mataka said that he was not ready yet: the flour had to be ground, and he had given us no meat. He had sent plenty of cooked food almost every day. He asked if we would slaughter the ox he would give here, or take it on; we preferred to kill it at once. He came on the 28th with a good lot of flour for us, and men to guide us to Nyassa, telling us that this was Moembé, and his district extended all the way to the Lake: he would not send us to Loséwa, as that place had lately been plundered and burned.

In general, the chiefs have shown an anxiety to promote our safety. The country is a mass of mountains. On leaving Mataka's, we ascended considerably; and about the end of the first day's march, near Magola's village, the barometer showed our greatest altitude, about three thousand four hundred feet above the sea. There were villages of these mountaineers everywhere, for the most part of one hundred houses or more each. The springs were made the most use of that they knew; the damp spots drained, and the water given a free channel for use in irrigation farther down: most of these springs showed the presence of iron by the oxide oozing out. A great many patches of pease are seen in full bearing and flower. The trees are small, except in the hollows: there is plenty of grass and flowers near streams and on the heights. The mountain-tops may rise two or three thousand feet above their flanks, along which we wind, going perpetually up and down the steep ridges of which the country is but a succession.

Looking at the geology of the district, the plateaux on each side of the Rovuma are masses of gray sandstone, capped with masses of ferruginous conglomerate; apparently an aqueous deposit. When we ascend the Rovuma about sixty miles, a great

many pieces and blocks of silicified wood appear on the surface of the soil at the bottom of the slope up the plateaux. This in Africa is a sure indication of the presence of coal beneath, but it was not observed cropping out; the plateaux are cut up in various directions by wadys well supplied with grass and trees on deep and somewhat sandy soil; but at the confluence of the Loendi highlands they appear in the far distance. In the sands of the Loendi pieces of coal are quite common.*

Before reaching the confluence of the Rovuma and Loendi, or say about ninety miles from the sea, the plateau is succeeded by a more level country, having detached granitic masses shooting up some five or seven hundred feet. The sandstone of the plateau has at first been hardened, then quite metamorphosed into a chocolate-colored schist. As at Chilolé hill, we have igneous rocks, apparently trap, capped with masses of beautiful white dolomite. We still ascend in altitude as we go westward, and come upon long tracts of gneiss with hornblende. The gneiss is often striated, all the striæ looking one way—sometimes north and south, and at other times east and west. These rocks look as if a stratified rock had been nearly melted, and the strata fused together by the heat. From these striated rocks have shot up great rounded masses of granite or syenite, whose smooth sides and crowns contain scarcely any trees, and are probably from three to four thousand feet above the sea. The elevated plains among these mountain masses show great patches of ferruginous conglomerate, which, when broken, look like yellow hematite with madreporé holes in it: this has made the soil of a red color.

On the water-shed we have still the rounded granitic hills jutting above the plains (if such they may be called), which are all ups and downs, and furrowed with innumerable running rills, the sources of the Rovuma and Loendi. The highest rock observed with mica schist was at an altitude of three thousand four hundred and forty feet. The same uneven country prevails as we proceed from the water-shed about forty miles down to the Lake, and a great deal of quartz in small fragments renders traveling very difficult. Near the Lake, and along its eastern shore, we have mica schist and gneiss foliated, with a great deal of hornblende; but the most remarkable feature of it is that the rocks are all tilted on edge, or slightly inclined to the Lake. The active agent in effecting this is not visible. It looks as if a sudden rent

* Coal was shown to a group of natives when first the *Pioneer* ascended the River Shiré. Members of numerous tribes were present, and all recognized it at once as makala, or coal.—Ed.

had been made, so as to form the Lake, and tilt all these rocks nearly over. On the east side of the lower part of the Lake we have two ranges of mountains, evidently granitic: the nearer one covered with small trees, and lower than the other; the other jagged and bare, or of the granitic forms. But in all this country no fossil-yielding rock was visible except the gray sandstone referred to at the beginning of this note. The rocks are chiefly the old crystalline forms.

One fine, straight, tall tree in the hollows seemed a species of fig: its fruit was just forming, but it was too high for me to ascertain its species. The natives do not eat the fruit, but they eat the large grubs which come out of it. The leaves were fifteen inches long by five broad: they call it Unguengo.

July 29th.—At Magola's village. Although we are now rid of the sepoy, we can not yet congratulate ourselves on being rid of the lazy habits of lying down in the path which they introduced. A strong scud comes up from the south, bringing much moisture with it: it blows so hard above, this may be a storm on the coast. Temperature in mornings, 55°.

July 30th.—A short march brought us to Pezimba's village, which consists of two hundred houses and huts. It is placed very nicely on a knoll between two burns, which, as usual, are made use of for irrigating pease in winter-time. The head man said that if we left now we had a good piece of jungle before us, and would sleep twice in it before reaching Mbanga. We therefore remained. An Arab party, hearing of our approach, took a circuitous route among the mountains to avoid coming in contact with us. In traveling to Pezimba's, we had commenced our western descent to the Lake, for we were now lower than Magola's by three hundred feet. We crossed many rivulets and the Lochesi, a good-sized stream. The water-shed parts some streams for Loendi and some for Rovuma. There is now a decided scantiness of trees. Many of the hill-tops are covered with grass or another plant; there is pleasure now in seeing them bare. Ferns, rhododendrons, and a foliaged tree, which looks in the distance like silver fir, are met with.

The mandaré root is here called nyumbo; when cooked, it has a slight degree of bitterness with it which cultivation may remove. Mica schist crowned some of the heights on the watershed, then gneiss, and now, as we descend farther, we have igneous rocks of more recent eruption, porphyry and gneiss, with hornblende. A good deal of ferruginous conglomerate, with holes in it, covers many spots; when broken, it looks like yellow hem-

atite, with black linings to the holes: this is probably the ore used in former times by the smiths, of whose existence we now find still more evidence than farther east.

July 31st.—I had presented Pezimba with a cloth, so he cooked for us handsomely last night, and this morning desired us to wait a little, as he had not yet sufficient meal made to present: we waited and got a generous present.

It was decidedly milder here than at Mataka's, and we had a clear sky. In our morning's march we passed the last of the population, and went on through a fine, well-watered, fruitful country, to sleep near a mountain called Mtéwire, by a stream called Msapo. A very large Arab slave-party was close by our encampment, and I wished to speak to them; but as soon as they knew of our being near they set off in a pathless course across country, and were six days in the wilderness.*

August 1st, 1866.—We saw the encampment of another Arab party. It consisted of ten pens, each of which, from the number of fires it contained, may have held from eighty to a hundred slaves. The people of the country magnified the numbers, saying that they would reach from this to Mataka's; but from all I can learn, I think that from three hundred to eight hundred slaves is the commoner gang. This second party went across country very early this morning. We saw the fire-sticks which the slaves had borne with them. The fear they feel is altogether the effect of the English name, for we have done nothing to cause their alarm.

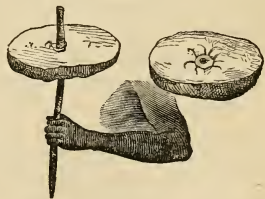
August 2d.—There was something very cheering to me in the sight at our encampment of yellow grass and trees dotted over it, as in the Bechuana country. The birds were singing merrily too, inspired by the cold, which was 47°, and by the vicinity of some population. Gum-copal-trees and bushes grow here as well as all over the country; but gum is never dug for, probably because the trees were never large enough to yield the fossil gum. Marks of smiths are very abundant, and some furnaces are still standing. Much cultivation must formerly have been where now all is jungle.

We arrived at Mbanga, a village embowered in trees, chiefly of the euphorbia, so common in the Manganja country farther south. Kandulo, the head man, had gone to drink beer at another village, but sent orders to give a hut and to cook for us. We remained next day. Took lunars.

* Dr. Livingstone heard this subsequently when at Casembé's.

We had now passed through, at the narrowest part, the hundred miles of depopulated country, of which about seventy are on the north-east of Mataka. The native accounts differ as to the cause. Some say slave wars, and assert that the Makoa from the vicinity of Mozambique played an important part in them; others say famine; others that the people have moved to and beyond Nyassa.* Certain it is, from the potsherds strewed over the country, and the still remaining ridges on which beans, sorghum, maize, and cassava were planted, that the departed population was prodigious. The Waiyau, who are now in the country, came from the other side of the Rovuma, and they probably supplanted the Manganja, an operation which we see going on at the present day.

August 4th.—An hour and a half brought us to Miulé, a village on the same level with Mbanga; and the chief pressing us to stay, on the plea of our sleeping two nights in the jungle, instead of one if we left early next morning, we consented. I asked him what had become of the very large iron-smelting population of this region; he said many had died of famine, others had fled to the west of Nyassa. The famine is the usual effect of slave wars, and much death is thereby caused—probably much more than by the journey to the coast. He had never heard any tradition of stone hatchets having been used, nor of stone spear-heads or arrow-heads of that material, nor had he heard of any being turned up by the women in hoeing. The Makondé, as we saw, use wooden spears where iron is scarce. I saw wooden hoes used for tilling the soil in the Bechuana and Bataka countries, but never stone ones. In 1841 I saw a Bushwoman in the Cape Colony with a round stone and a hole through it; on being asked, she showed me how it was used by inserting the top of a digging-stick into it, and digging a root. The stone was to give the stick weight.



Digging-stick weighted with Round Stone.

The stones still used as anvils and sledge-hammers by many of the African smiths, when considered from their point of view, show sounder sense than if they were burdened with the great weights we use. They are unacquainted with the process of

* The greater part were driven down into the Manganja country by war and famine combined, and eventually filled the slave-gangs of the Portuguese, whose agents went from Tette and Senna to procure them.—ED.

case-hardening, which, applied to certain parts of our anvils, gives them their usefulness; and an anvil of their soft iron would not do so well as a hard stone. It is true a small light one might be made, but let any one see how the hammers of their iron bevel over and round in the faces with a little work, and he will perceive that only a wild freak would induce any sensible native smith to make a mass equal to a sledge-hammer, and burden himself with a weight for what can be better performed by a stone. If people are settled, as on the coast, then they gladly use any mass of cast iron they may find, but never where, as in the interior, they have no certainty of remaining any length of time in one spot.

August 5th.—We left Miulé, and commenced our march toward Lake Nyassa, and slept at the last of the streams that flow to the Loendi. In Mataka's vicinity, north-east, there is a perfect brush of streams flowing to that river: one forms a lake in its course, and the sources of the Rovuma lie in the same region. After leaving Mataka's, we crossed a good-sized one flowing to Loendi, and, the day after leaving Pezimba's, another going to the Chiringa or Lochiringa, which is a tributary of the Rovuma.

August 6th.—We passed two cairns this morning at the beginning of the very sensible descent to the Lake. They are very common in all this Southern Africa in the passes of the mountains, and are meant to mark divisions of countries, perhaps burial-places; but the Waiyau who accompanied us thought that they were merely heaps of stone collected by some one making a garden. The cairns were placed just about the spot where the blue waters of Nyassa first came fairly into view.

We now came upon a stream, the Misinjé, flowing into the Lake, and we crossed it five times; it was about twenty yards wide, and thigh-deep. We made but short stages when we got on the lower plateau, for the people had great abundance of food, and gave large presents of it if we rested. One man gave four fowls, three large baskets of maize, pumpkins, eland's fat—a fine male, as seen by his horns—and pressed us to stay, that he might see our curiosities as well as others. He said that at one day's distance south of him all sorts of animals, as buffaloes, elands, elephants, hippopotami, and antelopes, could be shot.

August 8th.—We came to the Lake at the confluence of the Misinjé, and felt grateful to That Hand which had protected us thus far on our journey. It was as if I had come back to an old home I never expected again to see; and pleasant to bathe in the delicious waters again, hear the roar of the sea, and dash in

the rollers. Temperature, 71° at 8 A.M., while the air was 65° . I feel quite exhilarated.

The head man here, Mokalaosé, is a real Manganja, and he and all his people exhibit the greater darkness of color consequent on being in a warm, moist climate; he is very friendly, and presented millet, porridge, cassava, and hippopotamus-meat boiled, and asked if I liked milk, as he had some of Mataka's cattle here. His people bring sanjika, the best Lake fish, for sale; they are dried on stages over slow fires, and lose their fine flavor by it, but they are much prized inland. I bought fifty for a fathom of calico; when fresh, they taste exactly like the best herrings, *i. e.*, as we think, but voyagers' and travelers' appetites are often so whetted as to be incapable of giving a true verdict in matters of taste.

[It is necessary to explain that Livingstone knew of an Arab settlement on the western shore of the Lake, and that he hoped to induce the chief man, Jumbé, to give him a passage to the other side.]

August 10th.—I sent Syed Majid's letter up to Jumbé, but the messenger met some coast Arabs at the Loangwa, which may be seven miles from this, and they came back with him, haggling a deal about the fare, and then went off, saying that they would bring the dhow here for us. Finding that they did not come, I sent Musa, who brought back word that they had taken the dhow away over to Jumbé at Kotakota, or, as they pronounce it, Ngotagota. Very few of the coast Arabs can read; in words they are very polite, but truthfulness seems very little regarded. I am resting myself and people—working up journal, lunars, and altitudes—but will either move south or go to the Arabs toward the north soon.

Mokalaosé's fears of the Waiyau will make him welcome Jumbé here, and then the Arab will some day have an opportunity of scattering his people as he has done those at Kotakota. He has made Loséwa too hot for himself. When the people there were carried off by Mataka's people, Jumbé seized their stores of grain, and now has no post to which he can go there. The Loangwa Arabs give an awful account of Jumbé's murders and selling the people, but one can not take it all in; at the mildest it must have been bad. This is all they ever do; they can not form a state or independent kingdom: slavery and the slave-trade are insuperable obstacles to any permanence inland; slaves can escape so easily. All, therefore, that the Arabs do is to col-

lect as much money as they can by hook and by crook, and then leave the country.

We notice a bird called *namtambwé*, which sings very nicely with a strong voice after dark here at the *Misinjé* confluence.

August 11th.—Two head men came down country from villages where we slept, bringing us food, and asking how we are treated; they advise our going south to *Mukate's*, where the Lake is narrow.

August 12th-14th.—Map making; but my energies were sorely taxed by the lazy *sepoys*, and I was usually quite tired out at night. Some men have come down from *Mataka's*, and report the arrival of an Englishman with cattle for me. "He has two eyes behind as well as two in front:" this is enough of news for a while!

Mokalaosé has his little afflictions, and he tells me of them. A wife ran away; I asked how many he had; he told me twenty in all: I then thought he had nineteen too many. He answered with the usual reason, "But who would cook for strangers if I had but one?"

We saw clouds of "*kungu*" gnats on the Lake; they are not eaten here. An ungenerous traveler coming here with my statement in his hand, and finding the people denying all knowledge of how to catch and cook them, might say that I had been romancing in saying I had seen them made into cakes in the northern part of the Lake: when asking here about them, a stranger said, "They know how to use them in the north; we do not."

Mokalaosé thinks that the Arabs are afraid that I may take their dhows from them and go up to the north. He and the other head men think that the best way will be to go to *Mukaté's* in the south. All the Arabs flee from me, the English name being in their minds inseparably connected with recapturing slavers: they can not conceive that I have any other object in view; they can not read *Seyed Majid's* letter.

August 21st.—Started for the *Loangwa*, on the east side of the Lake; hilly all the way, about seven miles. This river may be twenty yards wide near its confluence; the *Misinjé* is double that: each has accumulated a promontory of deposit, and enters the Lake near its apex. We got a house from a *Waiyau* man on a bank about forty feet above the level of *Nyassa*, but I could not sleep for the manœuvres of a crowd of the minute ants which infested it. They chirrup distinctly; they would not allow the men to sleep either, though all were pretty tired by the rough road up.

August 22d.—We removed to the south side of the Loangwa, where there are none of these little pests.

August 23d.—Proposed to the Waiyau head man to send a canoe over to call Jumbé, as I did not believe in the assertions of the half-caste Arab here that he had sent for his. All the Waiyau had helped me, and why not he? He was pleased with this, but advised waiting till a man sent to Loséwa should return.

August 24th.—A leopard took a dog out of a house next to ours; he had bitten a man before, but not mortally.

August 29th.—News come that the two dhows have come over to Loséwa (Loséfa). The Mazitu had chased Jumbé up the hills: had they said, on to an island, I might have believed them.

August 30th.—The fear which the English have inspired in the Arab slave-traders is rather inconvenient. All flee from me as if I had the plague, and I can not in consequence transmit letters to the coast, or get across the Lake. They seem to think that if I get into a dhow I will be sure to burn it. As the two dhows on the Lake are used for nothing else but the slave-trade, their owners have no hope of my allowing them to escape; so, after we have listened to various lies as excuses, we resolve to go southward, and cross at the point of departure of the Shiré from the Lake. I took lunars several times on both sides of the moon, and have written a dispatch for Lord Clarendon, besides a number of private letters.

September 3d, 1866.—Went down to confluence of the Misinjé, and came to many of the eatable insect, "kungu:" they are caught by a quick motion of the hand, holding a basket. We got a cake of these same insects farther down; they make a buzz like a swarm of bees, and are probably the perfect state of some Lake insect.

I observed two beaches of the Lake: one about fifteen feet above the present high-water mark, and the other about forty above that; but between the two the process of disintegration, which results from the sudden cold and heat in these regions, has gone on so much that seldom is a well-rounded smoothed one seen; the lower beach is very well marked.

The strike of large masses of foliated gneiss is parallel with the major axis of the Lake, and all are tilted on edge. Some are a little inclined to the Lake, as if dipping to it westward, but others are as much inclined the opposite way, or twisted.

I made very good blue ink from the juice of a berry, the fruit of a creeper, which is the color of Port-wine when expressed. A little ferri carb. ammon. added to this is all that is required.

The poodle-dog Chitané is rapidly changing the color of its hair. All the parts corresponding to the ribs and neck are rapidly becoming red; the majority of country dogs are of this color.

The Manganja, or Wa-nyassa, are an aboriginal race; they have great masses of hair, and but little, if any, of the prognathous in the profile. Their bodies and limbs are very well made, and the countenance of the men is often very pleasant. The women are very plain and lumpy, but exceedingly industrious in their gardens from early morning till about 11 A.M., then from 3 P.M. till dark, or pounding corn and grinding it: the men make twine or nets by day, and are at their fisheries in the evenings and nights. They build the huts; the women plaster them.

A black fish, the Nsaka, makes a hole, with raised edges, which, with the depth from which they are taken, is from fifteen to eighteen inches, and from two to three feet broad. It is called by the natives their house. The pair live in it for some time, or until the female becomes large for spawning; this operation over, the house is left.

I gave Mokalaosé some pumpkin-seed and pease. He took me into his house, and presented a quantity of beer. I drank a little, and seeing me desist from taking more, he asked if I wished a servant-girl to "*pata mimba*." Not knowing what was meant, I offered the girl the calabash of beer, and told her to drink, but this was not the intention. He asked if I did not wish more; and then took the vessel, and as he drank the girl performed the operation on himself. Placing herself in front, she put both hands round his waist below the short ribs, and, pressing gradually, drew them round to his belly in front. He took several prolonged draughts, and at each she repeated the operation, as if to make the liquor go equally over the stomach. Our toppers do not seem to have discovered the need for this.

September 5th.—Our march is along the shore to Ngombo promontory, which approaches so near to Senga or Tsenga opposite, as to narrow the Lake to some sixteen or eighteen miles. It is a low sandy point, the edge fringed on the north-west and part of the south with a belt of papyrus and reeds; the central parts wooded. Part of the south side has high sandy dunes, blown up by the south wind, which strikes it at right angles there. One was blowing as we marched along the southern side eastward, and was very tiresome. We reached Panthunda's village by a brook called Lilolé. Another we crossed before coming to it is named Libesa: these brooks form the favorite spawn-

ing-grounds of the sanjika and mpasa, two of the best fishes of the Lake. The sanjika is very like our herring in shape and taste and size; the mpasa larger every way: both live on green herbage formed at the bottom of the Lake and rivers.

September 7th.—Chirumba's village being on the south side of a long lagoon, we preferred sleeping on the main-land, though they offered their cranky canoes to ferry us over. This lagoon is called Pansangwa.

September 8th.—In coming along the southern side of Ngombo promontory we look eastward, but when we leave it we turn southward, having a double range of lofty mountains on our left. These are granitic in form, the nearer range being generally the lowest, and covered with scraggy trees; the second, or more easterly, is some six thousand feet above the sea, bare and rugged, with jagged peaks shooting high into the air. This is probably the newest range. The oldest people have felt no earthquake, but some say that they have heard of such things from their elders.

We passed very many sites of old villages, which are easily known by the tree euphorbia planted round an umbelliferous one, and the sacred fig. One species here throws out strong buttresses in the manner of some mangroves instead of sending down twiners which take root, as is usually the case with the tropical fig. These, with millstones—stones for holding the pots in cooking—and upraised clay benches, which have been turned into brick by fire in the destruction of the huts, show what were once the "pleasant haunts of men." No stone implements ever appear. If they existed they could not escape notice, since the eyes, in walking, are almost always directed to the ground, to avoid stumbling on stones or stumps. In some parts of the world stone implements are so common they seem to have been often made and discarded as soon as formed, possibly by getting better tools; if, indeed, the manufacture is not as modern as that found by Mr. Waller. Passing some navvies in the City who were digging for the foundation of a house, he observed a very antique-looking vase, wet from the clay, standing on the bank. He gave ten shillings for it, and subsequently, by the aid of a scrubbing-brush and some water, detected the hieroglyphics, "Copeland late Spode," on the bottom of it!

Here the destruction is quite recent, and has been brought about by some who entertained us very hospitably on the Misinjé, before we came to the confluence. The woman chief, Ulenjelenjé, or Njelenjé, bore a part in it for the supply of Arab caravans.

It was the work of the Masininga, a Waiyau tribe, of which her people form a part. They almost depopulated the broad fertile tract, of some three or four miles, between the mountain range and the Lake, along which our course lay. It was wearisome to see the skulls and bones scattered about everywhere; one would fain not notice them, but they are so striking as one trudges along the sultry path, that it can not be avoided.

September 9th.—We spent Sunday at Kandango's village. The men killed a hippopotamus when it was sleeping on the shore—a full-grown female, ten feet nine inches from the snout to the insertion of the tail, and four feet four inches high at the withers. The bottom here and all along southward now is muddy. Many of the *Siluris Glanis* are caught equal in length to an eleven or a twelve pound salmon, but a great portion of head; slowly roasted on a stick stuck in the ground before the fire, they seemed to me much more savory than I ever tasted them before. With the mud we have many shells: north of Ngombo scarcely one can be seen, and there it is sandy or rocky.

September 10th.—In marching southward, we came close to the range (the Lake lies immediately on the other side of it), but we could not note the bays which it forms; we crossed two mountain torrents from sixty to eighty yards broad, and now only ankle-deep. In flood these bring down enormous trees, which are much battered and bruised among the rocks in their course; they spread over the plain, too, and would render traveling here in the rains impracticable. After spending the night at a very civil head man's chifu, we crossed the Lotendé, another of these torrents: each very lofty mass in the range seemed to give rise to one. Nothing of interest occurred as we trudged along. A very poor head man, Pamawawa, presented a roll of salt instead of food: this was grateful to us, as we have been without that luxury some time.

September 12th.—We crossed the rivulet Nguena, and then went on to another, with a large village by it; it is called Pantoza Pangone. The head man had been suffering from sore eyes for four months, and pressed me to stop and give him medicine, which I did.

September 13th.—We crossed a strong brook called Nkoré. My object in mentioning the brooks which were flowing at this time, and near the end of the dry season, is to give an idea of the sources of supply of evaporation. The men enumerate the following, north of the Misinjé. Those which are greater are marked thus +, and the lesser ones —.

1. Misinjé + has canoes.
2. Loangwa —,
3. Leséfa —,
4. Lelula —,
5. Nchamanjé —,
6. Musumba +,
7. Fubwé +,
8. Chia —,
9. Kisanga +,
10. Bweka —,
11. Chifumero + has canoes.
12. Loangwa —,
13. Mkofo —,
14. Mangwelo — at N. end of Lake.

Including the above, there are twenty or twenty-four perennial brooks and torrents which give a good supply of water in the dry season: in the wet season they are supplemented by a number of burns, which, though flowing now, have their mouths blocked up with bars of sand, and yield nothing except by percolation. The Lake rises at least four feet perpendicularly in the wet season, and has enough during the year from these perennial brooks to supply the Shiré's continual flow.

[It will be remembered that the beautiful river Shiré carries off the waters of Lake Nyassa and joins the Zambesi near Mount Morambala, about ninety miles from the sea. It is by this water-way that Livingstone always hoped to find an easy access to Central Africa. The only obstacles that exist are, first, the foolish policy of the Portuguese with regard to customs' duties at the mouth of the Zambesi; and secondly, a succession of cataracts on the Shiré, which impede navigation for seventy miles. The first hinderance may give way under more liberal views than those which prevail at present at the Court of Lisbon, and then the remaining difficulty—accepted as a fact—will be solved by the establishment of a boat service both above and below the cataracts. Had Livingstone survived, he would have been cheered by hearing that already several schemes are afoot to plant missions in the vicinity of Lake Nyassa; and we may with confidence look to the revival of the very enterprise which he presently so bitterly deploras as a thing of the past, for Bishop Steere has fully determined to re-occupy the district in which fell his predecessor, Bishop Mackenzie, and others attached to the Universities Mission.]

In the course of this day's march we were pushed close to the

Lake by Mount Gomé, and, being now within three miles of the end of the Lake, we could see the whole plainly. There we first saw the Shiré emerge, and there also we first gazed on the broad waters of Nyassa.

Many hopes have been disappointed here. Far down on the right bank of the Zambesi lies the dust of her whose death changed all my future prospects; and now, instead of a check being given to the slave-trade by lawful commerce on the Lake, slave-dhows prosper!

An Arab slave-party fled on hearing of us yesterday. It is impossible not to regret the loss of good Bishop Mackenzie, who sleeps far down the Shiré, and with him all hope of the Gospel being introduced into Central Africa. The silly abandonment of all the advantages of the Shiré route by the bishop's successor I shall ever bitterly deplore; but all will come right some day, though I may not live to participate in the joy, or even see the commencement of better times.

In the evening we reached the village of Cherekalongwa, on the brook Pamchololo, and were very jovially received by the head man with beer. He says that Mukaté,* Kabinga, and Mponda alone supply the slave-traders now by raids on the Manganja, but they go south-west to the Maravi, who, impoverished by a Mazitu raid, sell each other as well.

September 14th.—At Cherekalongwa's (who has a skin disease, believed by him to have been derived from eating fresh-water turtles), we were requested to remain one day, in order that he might see us. He had heard much about us; had been down the Shiré, and as far as Mozambique, but never had an Englishman in his town before. As the heat is great, we were glad of the rest and beer, with which he very freely supplied us.

I saw the skin of a Phenembe, a species of lizard which devours chickens; here it is named Salka. It had been flayed by a cut up the back—body, twelve inches; across belly, ten inches.

After nearly giving up the search for Dr. Roscher's point of reaching the Lake—because no one, either Arab or native, had the least idea of either Nusseewa or Makawa, the name given to the place—I discovered it in Lesséfa, the accentuated *é* being sounded as our *e* in *set*. This word would puzzle a German philologist, as being the origin of Nussewa; but the Waiyau pronounce it Loséwa, the Arabs Lusséwa, and Roscher's servant transformed the *L* and *é* into *N* and *ee*, hence Nusseewa. In

* Pronounced Mkata by the Waiyau.—Ed.

confirmation of this rivulet, Leséfa, which is opposite Kotakota, or, as the Arabs pronounce it, Nkotakota, the chief is Mangkaka (Makawa); or, as there is a confusion of names as to chief, it may be Mataka, whose town and district is called Moembé, the town Pamoembe = Mamemba.

I rest content with Kingomango so far verifying the place at which he arrived two months after we had discovered Lake Nyassa. He deserved all the credit due to finding the way thither, but he traveled as an Arab, and no one suspected him to be any thing else. Our visits have been known far and wide, and great curiosity excited; but Dr. Roscher merits the praise only of preserving his *incognito* at a distance from Kilwa: his is almost the only case known of successfully assuming the Arab guise—Burekhardt is the exception. When Mr. Palgrave came to Muscat, or a town in Oman where our political agent, Colonel Desborough, was stationed, he was introduced to that functionary by an interpreter as Hajee Ali, etc. Colonel Desborough replied, “You are no Hajee Ali, nor any thing else but Gifford Palgrave, with whom I was school-fellow at the Charter House.” Colonel Desborough said he knew him at once, from a peculiar way of holding his head, and Palgrave begged him not to disclose his real character to his interpreter, on whom and some others he had been imposing. I was told this by Mr. Dawes, a lieutenant in the Indian navy, who accompanied Colonel Pelly in his visit to the Nejed, Riad, etc., and took observations for him.

Tañgaré is the name of a rather handsome bean, which possesses intoxicating qualities. To extract these, it is boiled, then peeled, and new water supplied: after a second and third boiling, it is pounded, and the meal taken to the river and the water allowed to percolate through it several times. Twice cooking still leaves the intoxicating quality; but if eaten then, it does not cause death: it is curious that the natives do not use it expressly to produce intoxication. When planted near a tree, it grows all over it, and yields abundantly: the skin of the pod is velvety, like our broad beans.

Another bean, with a pretty white mark on it, grows freely, and is easily cooked, and good: it is called here *Gwingwiza*.

September 15th.—We were now a short distance south of the Lake, and might have gone west to Mosauka's (called by some Pasauka's) to cross the Shiré there, but I thought that my visit to Mukaté's, a Waiyau chief still farther south, might do good. He, Mponda, and Kabinga are the only three chiefs who still carry on raids against the Manganja at the instigation of the

coast Arabs, and they are now sending periodical marauding-parties to the Maravi (here named Malola) to supply the Kilwa slave-traders. We marched three hours southward, then up the hills of the range which flanks all the lower part of the Lake. The altitude of the town is about eight hundred feet above the Lake. The population near the chief is large, and all the heights as far as the eye can reach are crowned with villages. The second range lies a few miles off, and is covered with trees as well as the first; the nearest high mass is Mañgoché. The people live amidst plenty. All the chiefs visited by the Arabs have good substantial square houses built for their accommodation. Mukaté never saw a European before, and every thing about us is an immense curiosity to him and to his people. We had long visits from him. He tries to extract a laugh out of every remark. He is darker than the generality of Waiyau, with a full beard trained on the chin, as all the people hereabouts have—Arab fashion. The courts of his women cover a large space, our house being on one side of them. I tried to go out that way, but wandered; so the ladies sent a servant to conduct me out in the direction I wished to go, and we found egress by passing through some huts with two doors in them.

September 16th.—At Mukaté's. The Prayer-book does not give ignorant persons any idea of an unseen Being addressed; it looks more like reading or speaking to the book: kneeling and praying with eyes shut is better than our usual way of holding Divine service.

We had a long discussion about the slave-trade. The Arabs have told the chief that our object in capturing slaves is to get them into our own possession, and make them of our own religion. The evils which we have seen—the skulls, the ruined villages, the numbers who perish on the way to the coast and on the sea, the wholesale murders committed by the Waiyau to build up Arab villages elsewhere—these things Mukaté often tried to turn off with a laugh, but our remarks are safely lodged in many hearts. Next day, as we went along, our guide spontaneously delivered their substance to the different villages along our route. Before we reached him, a head man, in convoying me a mile or two, whispered to me, "Speak to Mukaté to give his forays up."

It is but little we can do; but we lodge a protest in the heart against a vile system, and time may ripen it. Their great argument is, "What could we do without Arab cloth?" My answer is, "Do what you did before the Arabs came into the country."

At the present rate of destruction of population, the whole country will soon be a desert.

An earthquake happened here last year, that is, about the end of it, or beginning of this (the crater on the Grand Comoro Island smoked for three months about that time); it shook all the houses and every thing, but they observed no other effects.* No hot springs are known here.

September 17th.—We marched down from Mukaté's and to about the middle of the lakelet Pamalombé. Mukaté had no people with canoes near the usual crossing-place, and he sent a messenger to see that we were fairly served. Here we got the Manganja head men to confess that an earthquake had happened; all the others we have inquired of have denied it; why, I can not conceive. The old men said that they had felt earthquakes twice: once near sunset, and the next time at night—they shook every thing, and were accompanied with noise, and all the fowls cackled; there was no effect on the Lake observed. They profess ignorance of any tradition of the water having stood higher. Their traditions say that they came originally from the west, or west-north-west, which they call "Maravi;" and that their forefathers taught them to make nets and kill fish. They have no trace of any teaching by a higher instructor; no carvings or writing on the rocks; and they never heard of a book until we came among them. Their forefathers never told them that after, or at death, they went to God, but they had heard it said of such a one who died, "God took him."

September 18th.—We embarked the whole party in eight canoes, and went up the Lake to the point of junction between it and the prolongation of Nyassa above it, called Massangano ("meetings"), which took us two hours. A fishing-party there fled on seeing us, though we shouted that we were a traveling-party (or "Olendo").

Mukaté's people here left us, and I walked up to the village of the fugitives with one attendant only. Their suspicions were so thoroughly aroused that they would do nothing. The head man (Pima) was said to be absent; they could not lend us a hut,

* Earthquakes are by no means uncommon. A slight shock was felt in 1861 at Magomero; on asking the natives if they knew the cause of it, they replied that on one occasion, after a very severe earthquake which shook boulders off the mountains, all the wise men of the country assembled to talk about it, and came to the following conclusion: that a star had fallen from heaven into the sea, and that the bubbling caused the whole earth to rock. They said the effect was the same as that caused by throwing a red-hot stone into a pot of water.—ED.

but desired us to go on to Mponda's. We put up a shed for ourselves, and next morning, though we pressed them for a guide, no one would come.

From Pima's village we had a fine view of Pamalombé and the range of hills on its western edge, the range which flanks the lower part of Nyassa—on part of which Mukaté lives—the gap of low land south of it behind which Shirwa Lake lies, and Chikala and Zomba nearly due south from us. People say hippopotami come from Lake Shirwa into Lake Nyassa. There is a great deal of vegetation in Pamalombé, gigantic rushes, duckweed, and great quantities of aquatic plants on the bottom; one slimy translucent plant is washed ashore in abundance. Fish become very fat on these plants; one called “kadiakola” I eat much of; it has a good mass of flesh on it.

It is probable that the people of Lake Tanganyika and Nyassa, and those on the rivers Shiré and Zambesi, are all of one stock, for the dialects vary very little.* I took observations on this point. An Arab slave-party, hearing of us, decamped.

September 19th.—When we had proceeded a mile this morning we came to three or four hundred people making salt on a plain impregnated with it. They lixiviate the soil and boil the water, which has filtered through a bunch of grass in a hole in the bottom of a pot, till all is evaporated and a mass of salt left. We held along the plain till we came to Mponda's, a large village, with a stream running past. The plain at the village is very fertile, and has many large trees on it. The cattle of Mponda are like fatted Madagascar beasts, and the hump seems as if it would weigh one hundred pounds.† The size of body is so enormous that their legs, as remarked by our men, seemed very small. Mponda is a blustering sort of person, but immensely interested in every thing European. He says that he would like to go with me. “Would not care though he were away ten years.”—I say that he may die in the journey.—“He will die here as well as there, but he will see all the wonderful doings of our country.” He knew me, having come to the boat to take a look *incognito* when we were here formerly.

We found an Arab slave-party here, and went to look at the slaves; seeing this, Mponda was alarmed lest we should proceed to violence in his town, but I said to him that we went to look

* The Waiyau language differs very much from the Nyassa, and is exceedingly difficult to master: it holds good from the coast to Nyassa, but to the west of the Lake the Nyassa tongue is spoken over a vast tract.—Ed.

† We shall see that more to the north the hump entirely disappears.

only. Eighty-five slaves were in a pen formed of dura stalks (*Holcus sorghum*). The majority were boys of about eight or ten years of age; others were grown men and women. Nearly all were in the taming-stick; a few of the younger ones were in thongs, the thong passing round the neck of each. Several pots were on the fires cooking dura and beans. A crowd went with us, expecting a scene; but I sat down, and asked a few questions about the journey, in front. The slave-party consisted of five or six half-caste coast Arabs, who said that they came from Zanzibar; but the crowd made such a noise that we could not hear ourselves speak. I asked if they had any objections to my looking at the slaves; the owners pointed out the different slaves, and said that after feeding them, and accounting for the losses in the way to the coast, they made little by the trip. I suspect that the gain is made by those who ship them to the ports of Arabia, for at Zanzibar most of the younger slaves we saw went at about seven dollars a head. I said to them it was a bad business altogether. They presented fowls to me in the evening.

September 20th.—The chief begged so hard that I would stay another day and give medicine to a sick child, that I consented. He promised plenty of food, and, as an earnest of his sincerity, sent an immense pot of beer in the evening. The child had been benefited by the medicine given yesterday. He offered more food than we chose to take.

The agricultural class does not seem to be a servile one: all cultivate, and the work is esteemed. The chief was out at his garden when we arrived, and no disgrace is attached to the field laborer. The slaves very likely do the chief part of the work, but all engage in it, and are proud of their skill. Here a great deal of grain is raised, though nearly all the people are Waiyau or Machinga. This is remarkable, as they have till lately been marauding and moving from place to place. The Manganja possessed the large breed of humped cattle which fell into the hands of the Waiyau, and knew how to milk them. Their present owners never milk them, and they have dwindled into a few instead of the thousands of former times.*

A lion killed a woman early yesterday morning, and ate most of her undisturbed.

It is getting very hot; the ground to the feet of the men "burns

* It is very singular to witness the disgust with which the idea of drinking milk is received by most of these tribes when we remember that the Caffre nations on the south, and again, tribes more to the north, subsist principally on it. A lad will undergo punishment rather than milk a goat. Eggs are likewise steadily eschewed.—ED.

like fire" after noon, so we are now obliged to make short marches, and early in the morning chiefly.

Wikatani—Bishop Mackenzie's favorite boy—met a brother here, and he finds that he has an elder brother and a sister at Kabinga's. The father who sold him into slavery is dead. He wishes to stop with his relatives, and it will be well if he does. Though he has not much to say, what he does advance against the slave-trade will have its weight, and it will all be in the way of preparation for better times and more light.

The elder brother was sent for, but had not arrived when it was necessary for us to leave Mponda's on the rivulet Nteman-gokwé. I therefore gave Wikatani some cloth, a flint-gun instead of the percussion one he carried, some flints, paper to write upon, and commended him to Mponda's care till his relatives arrived. He has lately shown a good deal of levity, and perhaps it is best that he should have a touch of what the world is in reality.

[In a letter written about this time Dr. Livingstone, in speaking of Wikatani, says, "He met with a brother, and found that he had two brothers and one or two sisters living down at the western shore of Lake Pamalombé under Kabinga. He thought that his relatives would not again sell him. I had asked him if he wished to remain, and he at once said yes, so I did not attempt to dissuade him: his excessive levity will perhaps be cooled by marriage. I think he may do good by telling some of what he has seen and heard. I asked him if he would obey an order from his chief to hunt the Manganja, and he said, 'No.' I hope he will not. In the event of any mission coming into the country of Mataka, he will go there. I gave him paper to write to you,* and, commending him to the chiefs, bade the poor boy farewell. I was sorry to part with him, but the Arabs tell the Waiyau chiefs that our object in liberating slaves is to make them our own, and turn them to our religion. I had declared to them through Wikatani as interpreter, that they never became our slaves, and were at liberty to go back to their relatives if they liked; and now it was impossible to object to Wikatani going without stultifying my own statements." It is only necessary to repeat that Wikatani and Chuma had been liberated from the slavers by Dr. Livingstone and Bishop Mackenzie in 1861: they were mere children when set free.

We must not forget to record the fact that when Mr. Young reached Maconda, two years afterward, to ascertain whether the Doctor really had been murdered, as Musa declared, he was most

* To myself.—Ed.

hospitably received by the chief, who had by this time a great appreciation of every thing English.]

The lines of tattoo of the different tribes serve for ornaments, and are resorted to most by the women: it is a sort of heraldry closely resembling the Highland tartans.



Manganja and Machinga Women (from a Drawing by the late Dr. Meller).

CHAPTER V.

Crosses Cape Maclear.—The Havildar demoralized.—The discomfited Chief.—Reaches Marenga's Town.—The Earth-sponge.—Description of Marenga's Town.—Rumors of Mazitu.—Musa and the Johanna Men desert.—Reaches Kimsusa's.—His Delight at seeing the Doctor once more.—The fat Ram.—Kimsusa relates his Experience of Livingstone's Advice.—Chuma finds Relatives.—Kimsusa solves the Transport Difficulty nobly.—Another old fishing Acquaintance.—Description of the People and Country on the west of the Lake.—The Kanthundas.—Kauma.—Iron-smelting.—An African Sir Colin Campbell.—Milandos.

September 21st, 1866.—WE marched westward, making across the base of Cape Maclear. Two men employed as guides and carriers, went along grumbling that their dignity was so outraged by working: "Only fancy Waiyau carrying like slaves!" They went but a short distance, and took advantage of my being in front to lay down the loads, one of which consisted of the havildar's bed and cooking things; here they opened the other bundle and paid themselves—the gallant havildar sitting and looking on. He has never been of the smallest use, and lately has pretended to mysterious pains in his feet; no swelling or other symptom accompanied this complaint. On coming to Pima's village he ate a whole fowl and some fish for supper, slept soundly till day-break, then, on awaking, commenced a furious groaning: "His feet were so bad." I told him that people usually moaned when insensible, but he had kept quiet till he awaked; he sulked at this, and remained all day, though I sent a man to carry his kit for him, and when he came up he had changed the seat of his complaint from his feet to any part of his abdomen. He gave off his gun-belt and pouch to the carrier. This was a blind to me, for I examined and found that he had already been stealing and selling his ammunition: this is all preparatory to returning to the coast with some slave-trader. Nothing can exceed the ease and grace with which sepoys can glide from a swagger into the most abject begging of food from the villagers. He has remained behind.

September 22d.—The hills we crossed were about seven hundred feet above Nyassa, generally covered with trees; no people were seen. We slept by the brook Sikoché. Rocks of hardened sandstone rested on mica schist, which had an efflorescence of alum on it; above this was dolomite; the hills often capped with

it and oak-spar, giving a snowy appearance. We had a Waiyau party with us—six handsomely-attired women carried huge pots of beer for their husbands, who very liberally invited us to partake. After seven hours' hard traveling we came to the village, where we spent Sunday by the torrent Usangazi, and near a remarkable mountain, Namasi. The chief, a one-eyed man, was rather coy—coming *incognito* to visit us; and, as I suspected that he was present, I asked if the chief were an old woman, afraid to look at and welcome a stranger? All burst into a laugh, and looked at him, when he felt forced to join in it, and asked what sort of food we liked best. Chuma put this clear enough by saying, "He eats every thing eaten by the Waiyau." This tribe, or rather the Machinga, now supersede the Manganja. We passed one village of the latter near this, a sad, tumble-down affair, while the Waiyau villages are very neat, with handsome straw or reed fences all around their huts.

September 24th.—We went only two and a half miles to the village of Marenga, a very large one, situated at the eastern edge of the bottom of the heel of the Lake. The chief is ill of a loathsome disease derived direct from the Arabs. Raised patches of scab of circular form disfigure the face and neck as well as other parts. His brother begged me to see him and administer some remedy for the same complaint. He is at a village a little way off, and though sent for, was too ill to come or to be carried. The tribe is of Babisa origin. Many of these people had gone to the coast as traders, and, returning with arms and ammunition, joined the Waiyau in their forays on the Manganja, and eventually set themselves up as an independent tribe. The women do not wear the lip-ring; though the majority of them are Waiyau. They cultivate largely, and have plenty to eat. They have cattle, but do not milk them.

The bogs, or earthen sponges,* of this country occupy a most important part in its physical geography, and probably explain the annual inundations of most of the rivers. Wherever a plain sloping toward a narrow opening in hills or higher ground exists, there we have the conditions requisite for the formation of an African sponge. The vegetation, not being of a heathy or peat-forming kind, falls down, rots, and then forms rich black loam. In many cases a mass of this loam, two or three feet thick, rests on a bed of pure river sand, which is revealed by crabs and

* Dr. Livingstone's description of the "Sponge" will stand the reader in good stead when he comes to the constant mention of these obstructions in the later travels toward the north.—ED.

other aquatic animals bringing it to the surface. At present, in the dry season, the black loam is cracked in all directions, and the cracks are often as much as three inches wide, and very deep. The whole surface has now fallen down, and rests on the sand, but when the rains come, the first supply is nearly all absorbed in the sand. The black loam forms soft slush, and floats on the sand. The narrow opening prevents it from moving off in a landslide, but an oozing spring rises at that spot. All the pools in the lower portion of this spring-course are filled by the first rains, which happen south of the equator when the sun goes vertically over any spot. The second, or greater rains, happen in his course north again, when all the bogs and river-courses being wet, the supply runs off, and forms the inundation: this was certainly the case as observed on the Zambesi and Shiré, and, taking the different times for the sun's passage north of the equator, it explains the inundation of the Nile.

September 25th.—Marenga's town on the west shore of Lake Nyassa is very large, and his people collected in great numbers to gaze at the stranger. The chief's brother asked a few questions, and I took the occasion to be a good one for telling him something about the Bible and the future state. The men said that their fathers had never told them aught about the soul, but they thought that the whole man rotted and came to nothing. What I said was very nicely put by a volunteer spokesman, who seemed to have a gift that way, for all listened most attentively, and especially when told that our Father in heaven loved all, and heard prayers addressed to him.

Marenga came dressed in a red-figured silk shawl, and attended by about ten court beauties, who spread a mat for him, then a cloth above, and sat down as if to support him. He asked me to examine his case inside a hut. He exhibited his loathsome skin disease, and being blacker than his wives, the blotches with which he was covered made him appear very ugly. He thought that the disease was in the country before Arabs came. Another new disease acquired from them was the small-pox.

September 26th.—An Arab passed us yesterday, his slaves going by another route across the base of Cape Maclear. He told Musa that all the country in front was full of Mazitu; that forty-four Arabs and their followers had been killed by them at Kasungo, and he only escaped. Musa and all the Johanna men now declared that they would go no farther. Musa said, "No good country that; I want to go back to Johanna to see my father and mother and son." I took him to Marenga, and asked the

chief about the Mazitu. He explained that the disturbance was caused by the Manganja finding that Jumbé brought Arabs and ammunition into the country every year, and they resented it in consequence; they would not allow more to come, because they were the sufferers, and their nation was getting destroyed.

I explained to Musa that we should avoid the Mazitu: Maren-ga added, "There are no Mazitu near where you are going;" but Musa's eyes *stood out* with terror, and he said, "I no can believe that man." But I inquired, "How can you believe the Arab so easily?" Musa answered, "I ask him to tell me true, and he say true, true," etc.

When we started, all the Johanna men walked off, leaving the goods on the ground. They have been such inveterate thieves that I am not sorry to get rid of them; for though my party is now inconveniently small, I could not trust them with flints in their guns, nor allow them to remain behind, for their object was invariably to plunder their loads.

[Here, then, we have Livingstone's account of the origin of that well-told story, which at first seemed too true. How Mr. Edward Young, R. N., declared it to be false, and subsequently proved it untrue, is already well known. This officer's quick voyage to Lake Nyassa reflected the greatest credit on him, and all hearts were filled with joy when he returned and reported the tale of Livingstone's murder to be merely an invention of Musa and his comrades.]

I ought to mention that the stealing by the Johanna men was not the effect of hunger; it attained its height when we had plenty. If one remained behind, we knew his object in delaying was stealing. He gave what he filched to the others, and Musa shared the dainties they bought with the stolen property. When spoken to he would say, "I every day tell Johanna men no steal Doctor's things." As he came away and left them in the march, I insisted on his bringing up all his men; this he did not relish, and the amount stolen was not small. One stole fifteen pounds of fine powder, another seven, another left six table-cloths out of about twenty-four; another called out to a man to bring a fish, and he would buy it with beads, the beads being stolen, and Musa knew it all and connived at it; but it was terror that drove him away at last.

With our goods in canoes we went round the bottom of the heel of Nyassa, slept among reeds, and next morning (27th) landed at Msangwa, which is nearly opposite Kimsusa's, or Katosa's, as the Makololo called him. A man had been taken off by a

crocodile last night; he had been drinking beer, and went down to the water to cool himself, where he lay down, and the brute seized him. The water was very muddy, being stirred up by an east wind, which lashed the waves into our canoes, and wetted our things. The loud wail of the women is very painful to hear; it sounds so dolefully.

September 28th.—We reached Kimsusa's, below Mount Mulundini, of Kirk's range.* The chief was absent, but he was sent for immediately: his town has much increased since I saw it last.

September 29th.—Another Arab passed last night with the tale that his slaves had all been taken from him by the Mazitu. It is more respectable to be robbed by them than by the Manganja, who are much despised, and counted nobodies. I propose to go west of this among the Maravi until quite away beyond the disturbances, whether of Mazitu or Manganja.

September 30th.—We enjoy our Sunday here. We have abundance of food from Kimsusa's wife. The chief wished me to go alone and enjoy his drinking bout, and then we could return to this place together; but this was not to my taste.

October 1st, 1866.—Kimsusa, or Mchusa, came this morning, and seemed very glad again to see his old friend. He sent off at once to bring an enormous ram, which had either killed or seriously injured a man. The animal came tied to a pole to keep him off the man who held it, while a lot more carried him. He was prodigiously fat; † this is a true African way of showing love—plenty of fat and beer. Accordingly the chief brought a huge basket of "pombe," the native beer, and another of "nsima," or porridge, and a pot of cooked meat; to these were added a large basket of maize. So much food had been brought to us that we had at last to explain that we could not carry it.

[The Doctor states a fact in the next few lines which shows that the Africans readily profit by advice which appeals to their common sense, and we make this observation in full knowledge of similar instances.]

Kimsusa says that they felt earthquakes at the place Mponda now occupies, but none where he is now. He confirms the tra-

* So named when Dr. Livingstone, Dr. Kirk, and Mr. Charles Livingstone discovered Lake Nyassa together.

† The sheep are of the black-haired variety: their tails grow to an enormous size. A ram which came from Nunkajowa, a Waiyan chief, on a former occasion, was found to have a tail weighing eleven pounds; but for the journey, and two or three days' short commons, an extra two or three pounds of fat would have been on it.—ED.

dition that the Manganja came from the west or west-north-west. He speaks more rationally about the Deity than some have done, and adds, that it was by following the advice which I gave him the last time I saw him, and not selling his people, that his village is now three times its former size. He has another village besides, and he was desirous that I should see that too; that was the reason he invited me to come, but the people would come and visit me.

October 2d.—Kimsusa made his appearance early with a huge basket of beer, eighteen inches high and fifteen inches in diameter. He served it out for a time, taking deep draughts himself, becoming extremely loquacious in consequence. He took us to a dense thicket behind his town, among numbers of lofty trees, many of which I have seen nowhere else; that under which we sat bears a fruit in clusters, which is eatable, and called "Mbedwa." A space had been cleared, and we were taken to this shady spot as the one in which business of importance and secrecy is transacted. Another enormous basket of beer was brought here by his wives, but there was little need for it, for Kimsusa talked incessantly, and no business was done.

October 3d.—The chief came early, and sober. I rallied him on his previous loquacity, and said one ought to find time in the morning if business was to be done: he took it in good part, and one of his wives joined in bantering him. She is *the* wife, and the mother of the sons in whom he delights, and who will succeed him. I proposed to him to send men with me to the Babisa country, and I would pay them there, where they could buy ivory for him with the pay, and, bringing it back, he would be able to purchase clothing without selling his people. He says that his people would not bring the pay or any thing else back. When he sends to purchase ivory he gives the price to Arabs or Babisa, and they buy for him and conduct his business honestly; but his people, the Manganja, can not be trusted: this shows a remarkable state of distrust, and, from previous information, it is probably true.

A party of the Arab Khamburi's people went up lately to the Maravi country above this, and immediately west of Kirk's range, to purchase slaves; but they were attacked by the Maravi, and dispersed with slaughter: this makes Kimsusa's people afraid to venture there. They had some quarrel with the Maravi also of their own, and no intercourse now took place. A path farther south was followed by Mponda lately, and great damage done, so it would not be wise to go on his footsteps. Kimsusa said he would give me carriers to go up to the Maravi, but he wished to

be prepaid: to this I agreed, but even then he could not prevail on any one to go. He then sent for an old Mobisa man, who has a village under him, and acknowledges Kimsusa's power. He says that he fears that, should he force his Manganja to go, they would leave us on the road, or run away on the first appearance of danger; but this Mobisa man would be going to his own country, and would stick by us. Meanwhile the chief overstocks us with beer and other food.

October 4th.—The Mobisa man sent for came, but was so ignorant of his own country, not knowing the names of the chief Babisa town or any of the rivers, that I declined his guidance. He would only have been a clog on us; and any thing about the places in front of us we could ascertain at the villages where we touch by inquiry as well as he could.

A woman turned up here, and persuaded Chuma that she was his aunt. He wanted to give her at once a fathom of calico and beads, and wished me to cut his pay down for the purpose. I persuaded him to be content with a few beads for her. He gave her his spoon and some other valuables, fully persuaded that she was a relative, though he was interrogated first as to his father's name, and tribe, etc., before she declared herself.

It shows a most forgiving disposition on the part of these boys to make presents to those who, if genuine relations, actually sold them. But those who have been caught young know nothing of the evils of slavery, and do not believe in its ills. Chuma, for instance, believes now that he was caught and sold by the Manganja, and not by his own Waiyau, though it was just in the opposite way that he became a slave, and he asserted and believes that no Waiyau ever sold his own child. When reminded that Wikatani was sold by his own father, he denied it; then that the father of Chimwala, another boy, sold him, his mother, and sister, he replied, "These are Machinga." This is another tribe of Waiyau; but this showed that he was determined to justify his countrymen at any rate. I mention this matter, because though the Oxford and Cambridge Mission have an advantage in the instruction of boys taken quite young from slavers, yet these same boys forget the evils to which they were exposed and from which they were rescued, and it is even likely that they will, like Chuma, deny that any benefit was conferred upon them by their deliverance. This was not stated broadly by Chuma, but his tone led one to believe that he was quite ready to return to the former state.

October 5th.—The chief came early with an immense basket of

beer, as usual. We were ready to start: he did not relish this; but I told him it was clear that his people set very light by his authority. He declared that he would force them or go himself, with his wives as carriers. This dawdling and guzzling had a bad effect on my remaining people. Simon, a Nassiek lad, for instance, overheard two words which he understood; these were "Mazitu" and "lipululu," or desert; and from these he conjured up a picture of Mazitu rushing out upon us from the jungle, and killing all without giving us time to say a word! To this he added seraps of distorted information: Khamburi was a very bad chief in front, etc., all showing egregious cowardice; yet he came to give me advice. On asking what he knew (as he could not speak the language), he replied that he heard the above two words, and that Chuma could not translate them, but he had caught them, and came to warn me.

The chief asked me to stay over to-day, and he would go with his wives to-morrow; I was his friend, and he would not see me in difficulties without doing his utmost. He says that there is no danger of our not finding people for carrying loads. It is probable that Khamburi's people went as marauders, and were beaten off in consequence.

October 6th.—We marched about seven miles to the north to a village opposite the pass Tapiri, and on a rivulet, Godedza. It was very hot. Kimsusa behaves like a king: his strapping wives came to carry loads, and shame his people. Many of the young men turned out and took the loads, but it was evident that they feared retaliation if they ventured up the pass. One wife carried beer, another meal; and as soon as we arrived, cooking commenced: porridge and roasted goat's flesh made a decent meal. A preparation of meal called "toku" is very refreshing, and brings out all the sugary matter in the grain: he gave me some in the way, and, seeing I liked it, a calabashful was prepared for me in the evening. Kimsusa delights in showing me to his people as his friend. If I could have used his pombe, or beer, it would have put some fat on my bones, but it requires a strong digestion; many of the chiefs and their wives live on it almost entirely. A little flesh is necessary to relieve the acidity it causes; and they keep all flesh very carefully, no matter how high it may become: drying it on a stage over a fire prevents entire putridity.

October 7th.—I heard hooping-cough* in the village. We

* This complaint has not been reported as an African disease before; it probably clings to the higher levels.—ED.

found our visitors so disagreeable that I was glad to march; they were Waiyau, and very impudent, demanding gun or game medicine to enable them to shoot well: they came into the hut uninvited, and would take no denial. It is probable that the Arabs drive a trade in gun medicine: it is inserted in cuts made above the thumb, and on the fore-arm. Their superciliousness shows that they feel themselves to be the dominant race. The Manganja trust to their old bows and arrows; they are much more civil than Ajawa or Waiyau.

[The difference between these two great races is here well worthy of the further notice which Livingstone no doubt would have given it. As a rule, the Manganja are extremely clever in all the savage arts and manufactures. Their looms turn out a strong serviceable cotton cloth; their iron weapons and implements show a taste for design which is not reached by the neighboring tribes, and in all matters that relate to husbandry they excel; but in dash and courage they are deficient. The Waiyau, on the contrary, have round apple-shaped heads, as distinguished from the long well-shaped heads of the poor Manganja; they are jocular and merry, given to traveling, and bold in war. These are qualities which serve them well, as they are driven from pillar to post through slave wars and internal dissension, but they have not the brains of the Manganja, nor the talent to make their mark in any direction where brains are wanted.]

A Manganja man, who formerly presented us with the whole haul of his net, came and gave me four fowls: some really delight in showing kindness. When we came near the bottom of the pass Tapiri, Kimsusa's men became loud against his venturing farther; he listened, then burst away from them; he listened again, then did the same; and as he had now got men for us, I thought it better to let him go.

In three hours and a quarter we had made a clear ascent of twenty-two hundred feet above the Lake. The first persons we met were two men and a boy, who were out hunting with a dog and basket-trap. This is laid down in the run of some small animal; the dog chases it, and it goes into the basket, which is made of split bamboo, and has prongs looking inward, which prevent its egress: mouse-traps are made in the same fashion. I suspected that the younger of the men had other game in view, and meant, if fit opportunity offered, to insert an arrow in a Waiyau, who was taking away his wife as a slave. He told me before we had gained the top of the ascent that some Waiyau came to a village, separated from his by a small valley, picked a quarrel with

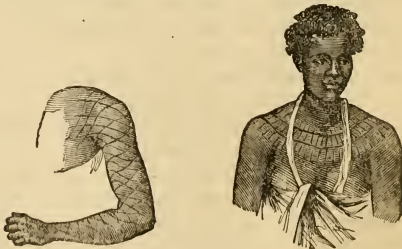
the inhabitants, and then went and took the wife and child of a poorer countryman to pay these pretended offenses.

October 8th.—At the first village we found that the people up here and those down below were mutually afraid of each other. Kimsusa came to the bottom of the range, his last act being the offer of a pot of beer, and a calabash of toku, which latter was accepted. I paid his wives for carrying our things: they had done well, and after we gained the village where we slept, sang and clapped their hands vigorously till one o'clock in the morning, when I advised them to go to sleep. The men he at last provided were very faithful and easily satisfied. Here we found the head man, Kawa, of Mpalapala, quite as hospitable. In addition to providing a supper, it is the custom to give breakfast before starting. Resting on the 8th to make up for the loss of rest on Sunday, we marched on Tuesday (the 9th), but were soon brought to a stand by Gombwa, whose village, Tamiala, stands on another ridge.

Gombwa, a laughing, good-natured man, said that he had sent for all his people to see me; and I ought to sleep, to enable them to look on one the like of whom had never come their way before. Intending to go on, I explained some of my objects in coming through the country, advising the people to refrain from selling each other, as it ends in war and depopulation. He was cunning, and said, "Well, you must sleep here, and all my people will come and hear those words of peace." I explained that I had employed carriers, who expected to be paid though I had gone but a small part of a day; he replied, "But they will go home and come again to-morrow, and it will count but one day." I was thus constrained to remain.

October 9th.—Both barometer and boiling-point showed an altitude of upward of four thousand feet above the sea. This is the hottest month, but the air is delightfully clear and delicious. The country is very fine, lying in long slopes, with mountains rising all around, from two thousand to three thousand feet above this upland. They are mostly jagged and rough (not rounded like those near to Mataka's): the long slopes are nearly denuded of trees, and the patches of cultivation are so large and often squarish in form, that but little imagination is requisite to transform the whole into the cultivated fields of England; but no hedges exist. The trees are in clumps on the tops of the ridges, or at the villages, or at the places of sepulture. Just now the young leaves are out, but are not yet green. In some lights they look brown, but with transmitted light, or, when one is near them,

crimson prevails. A yellowish-green is met sometimes in the young leaves, and brown, pink, and orange-red. The soil is rich, but the grass is only excessively rank in spots; in general it is short. A kind of trenching of the ground is resorted to; they hoe deep, and draw it well to themselves: this exposes the other earth to the hoe. The soil is burned too: the grass and weeds are placed in flat heaps, and soil placed over them: the burning is slow, and most of the products of combustion are retained to fatten the field; in this way the people raise large crops. Men and women and children engage in field-labor, but at present many of the men are engaged in spinning buazé* and cotton. The former is made into a coarse sacking-looking stuff, immensely strong, which seems to be worn by the women alone; the men are clad in uncomfortable goat-skins. No wild animals seem to be in the country, and indeed the population is so large they would have very unsettled times of it. At every turning we meet people, or see their villages; all armed with bows and arrows. The bows are unusually long: I measured one made of bamboo, and found that along the bowstring it measured six feet four inches. Many carry large knives of fine iron; and indeed the metal is abundant. Young men and women wear the hair long, a mass of small ringlets comes down and rests on the shoulders, giving them the appearance of the ancient Egyptians. One side is often cultivated, and the mass hangs jauntily on that side; some few have a solid cap of it. Not many women wear the lip-ring: the example of the Waiyau has prevailed so far; but



Tattoo on Women.

some of the young women have raised lines crossing each other on the arms, which must have cost great pain: they have also small cuts, covering in some cases the whole body. The Maravi

* A fine fibre derived from the shoots of a shrub (*Securidaca longipedunculata*).

or Manganja here may be said to be in their primitive state. We find them very liberal with their food: we give a cloth to the head man of the village where we pass the night, and he gives a goat, or at least cooked fowls and porridge, at night and morning.

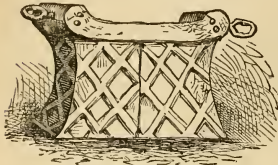
We were invited by Gombwa in the afternoon to speak the same words to his people that we used to himself in the morning. He nudged a boy to respond, which is considered polite, though he did it only with a rough hem! at the end of each sentence. As for our general discourse we mention our relationship to our Father: his love to all his children—the guilt of selling any of his children—the consequence; *e. g.*, it begets war, for they do not like to sell their own, and steal from other villagers, who retaliate. Arabs and Waiyau invited into the country by their selling, foster feuds, and war and depopulation ensue. We mention the Bible—future state—prayer; advise union, that they should unite as one family to expel enemies, who came first as slave-traders, and ended by leaving the country a wilderness. In reference to union, we showed that they ought to have seen justice done to the man who lost his wife and child at their very doors; but this want of cohesion is the bane of the Manganja. If the evil does not affect themselves they do not care whom it injures; and Gombwa confirmed this, by saying that when he routed Khamburi's people, the villagers west of him fled instead of coming to his aid.

We hear that many of the Manganja up here are fugitives from Nyassa.

October 10th.—Kawa and his people were with us early this morning, and we started from Tamiala with them. The weather is lovely, and the scenery, though at present tinged with yellow from the grass, might be called glorious. The bright sun and delicious air are quite exhilarating. We passed a fine flowing rivulet, called Levizé, going into the Lake, and many smaller runnels of delicious cold water. On resting by a dark sepulchral grove, a tree attracted the attention, as nowhere else seen: it is called Bokonto, and said to bear eatable fruit. Many fine flowers were just bursting into full blossom. After about four hours' march, we put up at Chitimba, the village of Kañgomba, and were introduced by Kawa, who came all the way for the purpose.

October 11th.—A very cold morning, with a great bank of black clouds in the east, whence the wind came. Thermometer, 59°; in hut, 69°. The huts are built very well. The roof, with the lower part plastered, is formed so as not to admit a ray of light,

and the only visible mode of ingress for it is by the door. This case shows that winter is cold. On proposing to start, breakfast was not ready: then a plan was formed to keep me another day at a village close by, belonging to one Kulu, a man of Kauma, to



Curiously cut-out Stool, made of one Block of Wood hollowed out.

whom we go next. It was effectual, and here we are detained another day. A curiously cut-out stool is in my hut, made by the Mkwisa, who are south-west of this: it is of one block, but hollowed out, and all the spaces indicated are hollow too: about two and a half feet long by one and a half feet high.

October 12th.—We march westerly, with a good deal of southing. Kulu gave us a goat, and cooked liberally for us all. He set off with us as if to go to Kauma's in our company, but after we had gone a couple of miles he slipped behind, and ran away. Some are naturally mean, and some naturally noble: the mean can not help showing their nature, nor can the noble; but the noble-hearted must enjoy life most. Kulu got a cloth, and he gave us at least its value; but he thought he had got more than he gave, and so by running away that he had done us nicely, without troubling himself to go and introduce us to Kauma. I usually request a head man of a village to go with us. They give a good report of us, if for no other reason than for their own credit, because no one likes to be thought giving his countenance to people other than respectable, and it costs little.

We came close to the foot of several squarish mountains, having perpendicular sides. One, called "Ulazo pa Malungo," is used by the people, whose villages cluster round its base as a store-house for grain. Large granaries stand on its top, containing food to be used in case of war. A large cow is kept up there, which is supposed capable of knowing and letting the owners know when war is coming.* There is a path up, but it was not visible to us. The people are all Kanthunda, or climbers, not Maravi. Kimsusa said that he was the only Maravi chief, but this I took to be an ebullition of beer bragging: the natives up here, however, confirm this, and assert that they are not Maravi, who are known by having markings down the side of the face.

* Several superstitions of this nature seem to point to a remnant of the old heathen ritual, and the worship of gods in mountain groves.

We spent the night at a Kanthunda village, on the western side of a mountain called Phunzé (the *h* being an aspirate only). Many villages are planted round its base, but in front, that is, westward, we have plains, and there the villages are as numerous: mostly they are within half a mile of each other, and few are a mile from other hamlets. Each village has a clump of trees around it: this is partly for shade and partly for privacy from motives of decency. The heat of the sun causes the effluvia to exhale quickly, so they are seldom offensive. The rest of the country, where not cultivated, is covered with grass, the seed-stalks about knee-deep. It is gently undulating, lying in low waves, stretching north-east and south-west. The space between each wave is usually occupied by a boggy spot or water-course, which in some cases is filled with pools with trickling rills between. All the people are engaged at present in making mounds six or eight feet square, and from two to three feet high. The sods in places not before hoed are separated from the soil beneath and collected into flattened heaps, the grass undermost; when dried, fire is applied and slow combustion goes on; most of the products of the burning being retained in the ground, much of the soil is incinerated. The final preparation is effected by the men digging up the subsoil round the mound, passing each hoeful into the left hand, where it pulverizes, and is then thrown on to the heap. It is thus virgin soil on the top of the ashes and burned ground of the original heap, very clear of weeds. At present many mounds have beans and maize about four inches high. Holes, a foot in diameter and a few inches deep, are made irregularly over the surface of the mound, and about eight or ten grains put into each: these are watered by hand and calabash, and kept growing till the rains set in, when a very early crop is secured.

October 13th.—After leaving Phunzé, we crossed the Leviñgé, a rivulet which flows northward, and then into Lake Nyassa; the lines of gentle undulation tend in that direction. Some hills appear on the plains, but after the mountains which we have left behind they are mere mounds. We are over three thousand feet above the sea, and the air is delicious; but we often pass spots covered with a plant which grows in marshy places, and its heavy smell always puts me in mind that at other seasons this may not be so pleasant a residence. The fact of even maize being planted on mounds where the ground is naturally quite dry, tells a tale of abundant humidity of climate.

Kauma, a fine, tall man, with a bald head and pleasant manners, told us that some of his people had lately returned from the

Chibisa or Babisa country, whither they had gone to buy ivory, and they would give me information about the path. He took a fancy to one of the boys' blankets; offering a native cloth, much larger, in exchange, and even a sheep to boot; but the owner being unwilling to part with his covering, Kauma told me that he had not sent for his Babisa travelers on account of my boy refusing to deal with him. A little childish this, but otherwise he was very hospitable; he gave me a fine goat, which, unfortunately, my people left behind.

The chief said that no Arabs ever came his way, nor Portuguese native traders. When advising them to avoid the first attempts to begin the slave-trade, as it would inevitably lead to war and depopulation, Kauma replied that the chiefs had resolved to unite against the Waiyau of Mpondé, should he come again on a foray up to the highlands; but they are like a rope of sand—there is no cohesion among them, and each village is nearly independent of every other: they mutually distrust each other.

October 14th.—Spent Sunday here. Kauma says that his people are partly Kanthunda and partly Chipéta. The first are the mountaineers, the second dwellers on the plains. The Chipéta have many lines of marking: they are all only divisions of the great Manganja tribe, and their dialects differ very slightly from that spoken by the same people on the Shiré. The population is very great and very ceremonious. When we meet any one he turns aside and sits down: we clap the hand on the chest and say, "Re peta—re peta," that is, "we pass," or "let us pass:" this is responded to at once by a clapping of the hands together. When a person is called at a distance he gives two loud claps of assent; or if he rises from near a superior he does the same thing, which is a sort of leave-taking.

We have to ask who are the principal chiefs in the direction which we wish to take, and decide accordingly. Zomba was pointed out as a chief on a range of hills on our west: beyond him lies Undi m Senga. I had to take this route, as my people have a very vivid idea of the danger of going northward toward the Mazitu. We made more southing than we wished. One day beyond Zomba and west-south-west is the part called Chindando, where the Portuguese formerly went for gold. They do not seem to have felt it worth while to come here, as neither ivory nor gold could be obtained if they did. The country is too full of people to allow any wild animals elbow-room: even the smaller animals are hunted down by means of nets and dogs.

We rested at Pachoma; the head man offering a goat and

beer, but I declined, and went on to Molomba. Here Kauma's carriers turned, because a woman had died that morning as we left the village. They asserted that had she died before we started not a man would have left: this shows a reverence for death, for the woman was no relative of any of them. The head man of Molomba was very poor but very liberal, cooking for us and presenting a goat: another head man from a neighboring village, a laughing, good-natured old man, named Chikala, brought beer and a fowl in the morning. I asked him to go on with us to Mironga, it being important, as above-mentioned, to have the like of his kind in our company, and he consented. We saw Mount Ngala in the distance, like a large sugar-loaf shot up in the air: in our former route to Kasungu we passed north of it.

October 16th.—Crossed the rivulet Chikuyo going north for the Lake, and Mironga being but one and a half hours off, we went on to Chipanga: this is the proper name of what on the Zambesi is corrupted into Shupanga. The head man, a miserable hemp-consuming* leper, fled from us. We were offered a miserable hut, which we refused. Chikala meanwhile went through the whole village seeking a better, which we ultimately found: it was not in this chief to be generous, though Chikala did what he could in trying to indoctrinate him: when I gave him a present he immediately proposed to *sell* a goat! We get on pretty well, however.

Zomba is in a range of hills to our west, called Dzala Nyama. The Portuguese, in going to Casembe, went still farther west than this.

Passing on, we came to a smithy, and watched the founder at work drawing off slag from the bottom of his furnace. He broke through the hardened slag by striking it with an iron instrument inserted in the end of a pole, when the material flowed out of the small hole left for the purpose in the bottom of the furnace. The ore (probably the black oxide) was like sand, and was put in at the top of the furnace, mixed with charcoal. Only one bellows was at work, formed out of a goat-skin, and the blast was very poor. Many of these furnaces, or their remains, are met with on knolls; those at work have a peculiarly tall hut built over them.

On the eastern edge of a valley lying north and south, with the Diampwé stream flowing along it, and the Dzala nyama range on the western side, are two villages screened by fine specimens of the *Ficus Indica*. One of these is owned by the head man

* Hemp (bangé) is smoked throughout Central Africa, and if used in excess produces partial imbecility.—ED.

Theresa, and there we spent the night. We made very short marches, for the sun is very powerful, and the soil, baked hard, is sore on the feet: no want of water, however, is felt, for we come to supplies every mile or two.

The people look very poor, having few or no beads; the ornaments being lines and cuttings on the skin. They trust more to buazé than cotton. I noticed but two cotton patches. The women are decidedly plain, but monopolize all the buazé cloth. Theresa was excessively liberal, and having informed us that Zomba lived some distance up the range and was not the principal man in these parts, we, to avoid climbing the hills, turned away to the north, in the direction of the paramount chief, Chisumpi, whom we found to be only traditionally great.

October 20th, 1866.—In passing along we came to a village embowered in fine trees; the head man is Kaveta, a really fine specimen of the Kanthunda, tall, well-made, with a fine forehead and Assyrian nose. He proposed to us to remain overnight with him, and I unluckily declined.

Convoying us out a mile, we parted with this gentleman, and then came to a smith's village, where the same invitation was given and refused. A sort of infatuation drove us on, and after a long hot march we found the great Chisumpi, the fac-simile in black of Sir Colin Campbell; his nose, mouth, and the numerous wrinkles on his face were identical with those of the great general, but here all resemblance ceased. Two men had preceded us to give information, and when I followed I saw that his village was one of squalid misery, the only fine things about being the lofty trees in which it lay. Chisumpi begged me to sleep at a village about half a mile behind: his son was browbeating him on some domestic affair, and the older man implored me to go. Next morning he came early to that village, and arranged for our departure, offering nothing, and apparently not wishing to see us at all. I suspect that though paramount chief, he is weak-minded, and has lost thereby all his influence, but in the people's eyes he is still a great one.

Several of my men exhibiting symptoms of distress, I inquired for a village in which we could rest Saturday and Sunday, and at a distance from Chisumpi. A head man volunteered to lead us to one west of this. In passing the sepulchral grove of Chisumpi our guide remarked, "Chisumpi's forefathers sleep there." This was the first time I have heard the word "sleep" applied to death in these parts. The trees in these groves, and around many of the villages, are very large, and show what the country would become if depopulated.

We crossed the Diampwé or Adiampwé, from five to fifteen yards wide, and well supplied with water even now. It rises near the Ndomo mountains, and flows northward into the Lintipé and Lake. We found Chitikola's village, called Paritala, a pleasant one, on the east side of the Adiampwé Valley. Many elephants and other animals feed in the valley, and we saw the Bechuana hopo* again after many years.

Note. — The Ambarré, otherwise Nyumbo plant, has a pea-shaped, or rather papilionaceous flower, with a fine scent. It seems to grow quite wild; its flowers are yellow.

Chaola is the poison used by the Maravi for their arrows; it is said to cause mortification.

One of the wonders usually told of us in this upland region is that we sleep without fire. The boys' blankets suffice for warmth during the night, when the thermometer sinks to 64° – 60° , but no one else has covering sufficient; some huts in process of building here show that a thick coating of plaster is put on outside the roof before the grass thatch is applied; not a chink is left for the admission of air.

Chitikola was absent from Paritala when we arrived on some *milando* or other. These *milandos* are the business of their lives. They are like petty lawsuits: if one trespasses on his neighbor's rights in any way, it is a *milando*, and the head men of all the villages about are called on to settle it. Women are a fruitful source of *milando*. A few ears of Indian corn had been taken by a person, and Chitikola had been called a full day's journey off to settle this *milando*. He administered muavé,† and the person vomited; therefore innocence was clearly established! He came in the evening of the 21st, foot-sore and tired, and at once gave us some beer. This perpetual reference to food and drink is natural, inasmuch as it is the most important point in our intercourse. While the chief was absent we got nothing; the queen even begged a little meat for her child, who was recovering from an attack of small-pox. There being no shops, we had to sit still without food. I took observations for longitude, and whiled away the time by calculating the lunars. Next day the chief gave us a goat cooked whole, and plenty of porridge: I noticed that he too had the Assyrian type of face.

* The hopo is a funnel-shaped fence which incloses a considerable tract of country: a "drive" is organized, and animals of all descriptions are urged on till they become jammed together in the neck of the hopo, where they are speared to death, or else destroyed in a number of pitfalls placed there for the purpose.

† The ordeal poison.

CHAPTER VI.

Progress northward.—An African Forest.—Destruction by Mazitu.—Native Salutations.—A disagreeable Chief.—On the Water-shed between the Lake and the Loangwa River.—Extensive Iron-workings.—An old Nimrod.—The Bua River.—Lovely Scenery.—Difficulties of Transport.—Chilobé.—An African Pythoness.—Enlists two Waiyau Bearers.—Ill.—The Chitella Bean.—Rains set in.—Arrives at the Loangwa.

WE started, with Chitikola as our guide, on the 22d of October, and he led us away westward across the Lilongwé River, then turned north till we came to a village called Mashumba, the head man of which was the only chief who begged any thing except medicine, and he got less than we were in the habit of giving in consequence: we give a cloth usually, and, clothing being very scarce, this is considered munificent.*

We had the Zalanyama range on our left, and our course was generally north, but we had to go in the direction of the villages which were on friendly terms with our guides, and sometimes we went but a little way, as they studied to make the days as short as possible. The head man of the last village, Chitoku, was with us, and he took us to a village of smiths, four furnaces and one smithy being at work. We crossed the Chiniambo, a strong river coming from Zalanyama, and flowing into the Mirongwé, which again goes into Lintipé. The country near the hills becomes covered with forest, the trees are chiefly Masuko Mochenga (the gum-copal-tree), the bark-cloth-tree, and rhododendrons. The heath known at the Cape as *Rhinoster bosch* occurs frequently, and occasionally we have thorny acacias. The grass is short, but there is plenty of it.

October 24th.—Our guide, Mpanda, led us through the forest by what he meant to be a short cut to Pachimuna's. We came on a herd of about fifteen elephants, and many trees laid down by these animals: they seem to relish the roots of some kinds, and spend a good deal of time digging them up; they chew woody roots and branches as thick as the handle of a spade. Many buffaloes feed here, and we viewed a herd of elands; they kept out of bow-shot only. A herd of the baama, or hartebeest, stood at two hundred paces, and one was shot.

* A cloth means two yards of unbleached calico.

While all were rejoicing over the meat we got news, from the inhabitants of a large village in full flight, that the Mazitu were out on a foray. While roasting and eating meat, I went forward with Mpanda to get men from Pachimuna to carry the rest, but was soon recalled. Another crowd were also in full retreat; the people were running straight to the Zalanyama range regardless of their feet, making a path for themselves through the forest; they had escaped from the Mazitu that morning: "They saw them!" Mpanda's people wished to leave and go to look after their own village, but we persuaded them, on pain of a *milando*, to take us to the nearest village, that was at the bottom of Zalanyama proper, and we took the spoor of the fugitives. The hard grass, with stalks nearly as thick as quills, must have hurt their feet sorely, but what of that in comparison with dear life! We meant to take our stand on the hill and defend our property in case of the Mazitu coming near; and we should, in the event of being successful, be a defense to the fugitives who crowded up its rocky sides, but next morning we heard that the enemy had gone to the south. Had we gone forward, as we intended, to search for men to carry the meat, we should have met the marauders, for the men of the second party of villages had remained behind guarding their village till the Mazitu arrived, and they told us what a near escape I had had from walking into their power.

October 25th.—Came along northward to Pachimuna's town, a large one of Chipéta, with many villages around. Our path led through the forest, and as we emerged into the open strath in which the villages lie, we saw the large ant-hills, each the size of the end of a one-storied cottage, covered with men on guard watching for the Mazitu.

A long line of villagers were just arriving from the south, and we could see at some low hills in that direction the smoke arising from the burning settlements. None but men were present; the women and the chief were at the mountain called Pambé; all were fully armed with their long bows, some flat in the bow, others round, and it was common to have the quiver on the back, and a bunch of feathers stuck in the hair like those in our Lancers' shakos. But they remained not to fight, but to watch their homes and stores of grain from robbers among their own people in case no Mazitu came! They gave a good hut, and sent off at once to let the chief of Pambé know of our arrival. We heard the cocks crowing up there in the mountain as we passed in the morning. Chimuna came in the evening, and begged me to re-

main a day in his village, Pamaloo, as he was the greatest chief the Chipéta had. I told him all wished the same thing, and if I listened to each chief we should never get on, and the rains were near; but we had to stay over with him.

October 26th.—All the people came down to-day from Pambé, and crowded to see the strangers. They know very little beyond their own affairs, though these require a good deal of knowledge, and we should be sorely put about if, without their skill, we had to maintain an existence here. Their furnaces are rather bottle-shaped, and about seven feet high by three broad. One toothless patriarch had heard of books and umbrellas, but had never seen either. The oldest inhabitant had never traveled far from the spot in which he was born, yet he has a good knowledge of soils and agriculture, hut-building, basket-making, pottery, and the manufacture of bark-cloth and skins for clothing, as also making of nets, traps, and cordage.

Chimuna had a most ungainly countenance, yet did well enough: he was very thankful for a blister on his loins to ease rheumatic pains, and presented a huge basket of porridge before starting, with a fowl, and asked me to fire a gun, that the Mazitu might hear and know that armed men were here. They all say that these marauders flee from fire-arms, so I think that they are not Zulus at all, though adopting some of their ways.

In going on to Mapuio's, we passed several large villages, each surrounded by the usual euphorbia hedge, and having large trees for shade. We are on a level, or rather gently undulating country, rather bare of trees. At the junctions of these earthen waves we have always an oozing bog; this often occurs in the slope down the trough of this terrestrial sea; bushes are common, and of the kind which were cut down as trees. Yellow hematite is very abundant, but the other rocks scarcely appear in the distance: we have mountains both on the east and west.

On arriving at Mapuio's village, he was, as often happens, invisible, but he sent us a calabash of fresh-made beer, which is very refreshing, gave us a hut, and promised to cook for us in the evening. We have to employ five or six carriers, and they rule the length of the day's march. Those from Chimuna's village growled at the cubit of calico with which we paid them, but a few beads pleased them perfectly, and we parted good friends. It is not likely I shall ever see them again, but I always like to please them, because it is right to consider their desires. Is that not what is meant in "Blessed is he that considereth the poor?" There is a great deal of good in these poor people. In cases of

milando, they rely on the most distant relations and connections to plead their cause, and seldom are they disappointed, though time at certain seasons, as, for instance, at present, is felt by all to be precious. Every man appears with hoe or axe on shoulder, and the people often only sit down as we pass and gaze at us till we are out of sight.

Many of the men have large slits in the lobe of the ear, and they have their distinctive tribal tattoo. The women indulge in this painful luxury more than the men, probably because they have very few ornaments. The two central front teeth are hollowed at the cutting edge. Many have quite the Grecian facial angle. Mapuio has thin legs, and quite a European face. Delicate features and limbs are common, and the spur heel is as scarce as among Europeans; small feet and hands are the rule.



Women's Teeth hollowed.

Clapping the hands in various ways is the polite way of saying "Allow me," "I beg pardon," "Permit me to pass," "Thanks;" it is resorted to in respectful introduction and leave-taking, and also is equivalent to "Hear, hear." When inferiors are called, they respond by two brisk claps of the hands, meaning "I am coming." They are very punctilious among each other. A large ivory bracelet marks the head man of a village; there is nothing else to show differences of rank.

October 28th.—We spent Sunday at Mapuio's, and had a long talk with him: his country is in a poor state from the continual incursions of the Mazitu, who are wholly unchecked.

October 29th.—We marched westward to Makosa's village, and could not go farther, as the next stage is long and through an ill-peopled country. The morning was lovely, the whole country bathed in bright sunlight, and not a breath of air disturbed the smoke as it slowly curled up from the heaps of burning weeds, which the native agriculturist wisely destroys. The people generally were busy hoeing in the cool of the day. One old man in a village where we rested had trained the little hair he had left into a tail, which, well plastered with fat, he had bent on itself and laid flat on his crown; another was carefully paring a stick for stirring the porridge, and others were enjoying the cool shade of the wild fig-trees which are always planted at villages. It is a sacred tree all over Africa and India, and the tender roots which drop down toward the ground are used as medicine—a universal remedy. Can it be a tradition of its being like the tree of life, which Archbishop Whately conjectures may have been

used in Paradise to render man immortal? One kind of fig-tree is often seen hacked all over to get the sap, which is used as bird-lime; bark-cloth is made of it too. I like to see the men weaving or spinning, or reclining under these glorious canopies, as much as I love to see our more civilized people lolling on their sofas or ottomans.

The first rain—a thunder-shower—fell in the afternoon: air in shade before it, 92°; wet bulb, 74°. At noon the soil in the sun was 140°, perhaps more, but I was afraid of bursting the thermometer, as it was graduated only a few degrees above that. This rain happened at the same time that the sun was directly overhead on his way south; it was but a quarter of an inch, but its effect was to deprive us of all chance of getting the five carriers we needed: all were off to their gardens to commit the precious seed to the soil. We got three, but no one else would come, so we have to remain here over to-day, October 30th.

October 30th.—The black traders come from Tette to this country to buy slaves, and as a consequence here we come to bugs again, which we left when we passed the Arab slave-traders' beat.

October 31st.—We proceed westward, and a little south through a country covered with forest-trees, thickly planted, but small, generally of bark-cloth and gum-copal-trees, masukos, rhododendrons, and a few acacias. At one place we saw ten wild hogs in a group, but no other animal, though marks of elephants, buffaloes, and other animals having been about in the wet season were very abundant. The first few miles were rather more scant of water than usual, but we came to the Leuú, a fine little stream with plenty of water, and from twenty to thirty yards wide; it is said by the people to flow away westward into the Loangwa.

November 1st, 1866.—In the evening we made the Chigumokiré, a nice rivulet, where we slept, and the next morning we proceeded to Kangené, whose village is situated on a mass of mountains, and to reach which we made more southing than we wished. Our appearance on the ascent of the hill caused alarm, and we were desired to wait till our spokesman had explained the unusual phenomenon of a white man.

This kept us waiting in the hot sun among heated rocks, and the chief, being a great ugly, public-house-keeper-looking person, excused his incivility by saying that his brother had been killed by the Mazitu, and he was afraid that we were of the same tribe. On asking if Mazitu wore clothes like us, he told some untruths,

and, what has been an unusual thing, began to beg powder and other things. I told him how other chiefs had treated us, which made him ashamed. He represented the country in front to the north-west to be quite impassable from want of food: the Mazitu had stripped it of all provisions, and the people were living on what wild fruits they could pick up.

November 2d.—Kangené is very disagreeable naturally, and as we have to employ five men as carriers, we are in his power.

We can scarcely enter into the feelings of those who are harried by marauders. Like Scotland in the twelfth and thirteenth centuries, harassed by Highland Celts on one side, and by English Marchmen on the other, and thus kept in the rearward of civilization, these people have rest neither for many days nor for few. When they fill their garner they can seldom reckon on eating the grain, for the Mazitu come when the harvest is over, and catch as many able-bodied young persons as they can to carry away the corn. Thus it was in Scotland, so far as security for life and property was concerned; but the Scotch were apt pupils of more fortunate nations. To change of country they were as indifferent as the Romans of the olden times; they were always welcome in France, either as pilgrims, scholars, merchants, or soldiers; but the African is different. If let alone, the African's mode of life is rather enjoyable; he loves agriculture, and land is to be had anywhere. He knows nothing of other countries, but he has imbibed the idea of property in man. This Kangené told me that he would like to give me a slave to look after my goats: I believe he would rather give a slave than a goat!

We were detained by the illness of Simon for four days. When he recovered, we proposed to the head man to start with five of his men, and he agreed to let us have them; but having called them together, such an enormous demand was made for wages, and in advance, that on the 7th of November we took seven loads forward through a level uninhabited country, generally covered with small trees, slept there, and on the morning of the 8th, after leaving two men at our *dépôt*, came back and took the remaining five loads.

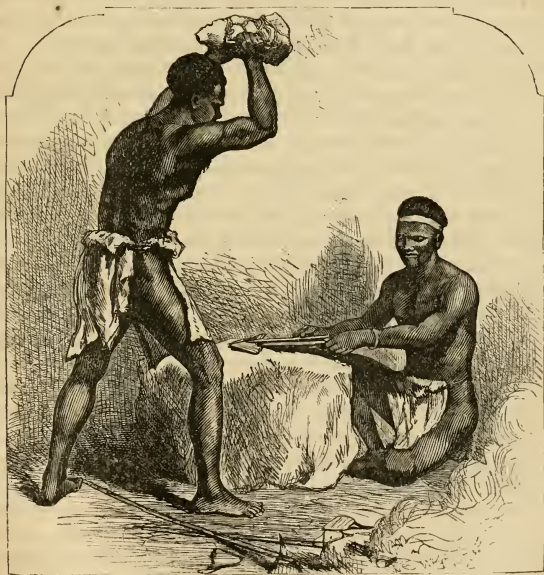
Kangené was disagreeable to the last. He asked where we had gone, and, having described the turning-point as near the hill Chimbimbé, he complimented us on going so far, and then sent an offer of three men; but I preferred not to have those who would have been spies unless he could give five and take on all the loads. He said that he would find the number, and, after detaining us some hours, brought two, one of whom, primed with

beer, babbled out that he was afraid of being killed by us in front. I asked whom we had killed behind, and moved off. The head man is very childish, does women's work—cooking and pounding; and in all cases of that kind the people take after their leader. The chiefs have scarcely any power unless they are men of energy; they have to court the people rather than be courted. We came much farther back on our way from Mapuio's than we liked; in fact, our course is like that of a vessel baffled with foul winds: this is mainly owing to being obliged to avoid places stripped of provisions or suffering this spoliation. The people, too, can give no information about others at a distance from their own abodes. Even the smiths, who are a most plodding set of workers, are as ignorant as the others: they supply the surrounding villages with hoes and knives, and, combining agriculture with handicraft, pass through life. An intelligent smith came as our guide from Chimbimbé hill on the 7th, and did not know a range of mountains about twenty miles off: "It was too far off for him to know the name."

November 9th.—The country over which we actually travel is level and elevated, but there are mountains all about, which when put on the map make it appear to be a mountainous region. We are on the water-shed, apparently between the Loangwa of Zumbo on the west, and the Lake on the east. The Lené, or Lenia, is said by the people to flow into the Loangwa. The Chigumokiré coming from the north in front, eastward of Irongwé (the same mountains on which Kangené skulks out of sight of Mazitu), flows into the Leué, and north of that we have the Mando, a little stream flowing into the Bua. The rivulets on the west flow in deep defiles, and the elevation on which we travel makes it certain that no water can come from the lower lands on the west. It seems that the Portuguese in traveling to Casembe did not inquire of the people where the streams they crossed went, for they are often wrongly put, and indicate the direction only in which they appeared to be flowing at their crossing-places. The natives have a good idea generally of the rivers into which the streams flow, though they are very deficient in information as to the condition of the people that live on their banks. Some of the Portuguese questions must have been asked through slaves, who would show no hesitation in answering. Maxinga, or Machinga, means "mountains" only; once or twice it is put down Saxa de Maxinga, or Machinga, or Mcanga, which, translated from the native tongue, means "rocks of mountains, or mountains of rocks."

November 10th.—We found the people on the Mando to be Chawa or Ajawa, but not of the Waiyau race: they are Manganja, and this is a village of smiths. We got five men readily to go back and bring up our loads; and the sound of the hammer is constant, showing a great deal of industry. They combine agriculture, and hunting with nets, with their handicraft.

A herd of buffaloes came near the village, and I went and shot one, thus procuring a supply of meat for the whole party and villagers too. The hammer which we hear from dawn till sunset is a large stone, bound with the strong inner bark of a tree, and loops left which form handles. Two pieces of bark form the tongs, and a big stone sunk into the ground the anvil.



Forging Hoes.

They make several hoes in a day, and the metal is very good; it is all from yellow hematite, which abounds all over this part of the country: the bellows consist of two goat-skins with sticks at the open ends, which are opened and shut at every blast.

November 13th.—A lion came last night and gave a growl or

two on finding he could not get our meat: a man had lent us a hunting-net to protect it and us from intruders of this sort. The people kept up a shouting for hours afterward, in order to keep him away by the human voice.

We might have gone on, but I had a galled heel from new shoes. Wild figs are rather nice when quite ripe.

November 14th.—We marched northward round the end of Chisia Hill, and remained for the night at a blacksmith's, or rather founder's village. The two occupations of founder and smith are always united, and boys taught to be smiths in Europe or India would find themselves useless if unable to smelt the ore. A good portion of the trees of the country have been cut down for charcoal, and those which now spring up are small; certain fruit-trees alone are left. The long slopes on the undulating country, clothed with fresh foliage, look very beautiful. The young trees alternate with patches of yellow grass not yet burned; the hills are covered with a thick mantle of small green trees, with, as usual, large ones at intervals. The people at Kalumbi, on the Mando (where we spent four days), had once a stockade of wild fig (*Ficus Indica*) and euphorbia round their village, which has a running rill on each side of it; but the trees which enabled them to withstand a siege by Mazitu fell before elephants and buffaloes during a temporary absence of the villagers: the remains of the stockade are all around it yet. Lions sometimes enter huts by breaking through the roof: elephants certainly do, for we saw a roof destroyed by one. The only chance for the inmates is to drive a spear into the belly of the beast while so engaged.

A man came and reported the Mazitu to be at Chanyandula's village, where we are going. The head man advised remaining at his village till we saw whether they came this way or went by another path. The women were sent away, but the men went on with their employments; two proceeded with the building of a furnace on an ant-hill, where they are almost always placed, and they keep a lookout while working. We have the protection of an all-embracing Providence, and trust that he whose care of his people exceeds all that our utmost self-love can attain, will shield us and make our way prosperous.

November 16th.—An elephant came near enough last night to scream at us, but passed on, warned, perhaps, by the shouting of the villagers not to meddle with man. No Mazitu having come, we marched on and crossed the Bua, eight yards wide, and knee-deep. It rises in the northern hills a little beyond Kanyindula's

village, winds round his mountains, and away to the east. The scenery among the mountains is very lovely: they are covered with a close mantle of green, with here and there red and light-colored patches, showing where grass has been burned off recently and the red-clay soil is exposed: the lighter portions are unburned grass or rocks. Large trees are here more numerous, and give an agreeable change of contour to the valleys and ridges of the hills; the boughs of many still retain a tinge of red from young leaves. We came to the Bau again before reaching Kanyenjé, as Kanyindula's place is called. The iron trade must have been carried on for an immense time in the country, for one can not go a quarter of a mile without meeting pieces of slag and broken pots, calcined pipes, and fragments of the furnaces, which are converted by the fire into brick. It is curious that the large stone sledge-hammers now in use are not called by the name stone-hammers, but by a distinct word, "kama:" nyundo is one made of iron.

When we arrived at Kanyenjé, Kanyindula was out collecting charcoal: he sent a party of men to ask if we should remain next day. An old, unintellectual-looking man was among the number sent, who had twenty-seven rings of elephant's skin on his arm, all killed by himself by the spear alone. He had given up fighting elephants since the Mazitu came, whom we heard had passed away to the south-east of this place, taking all the crops of last year, and the chief alone has food. He gave us some, which was very acceptable, as we got none at the two villages south of this. Kanyindula came himself in the evening, an active, stern-looking man, but we got on very well with him.

The people say that they were taught to smelt iron by Chisumpi, which is the name of Mulungu (God), and that they came from Lake Nyassa originally; if so, they are greatly inferior to the Manganja on the Lake in pottery, for the fragments, as well as modern whole vessels, are very coarse; the ornamentation is omitted, or merely dots. They never heard of aerolites, but know hail.

I notice here that the tree Mfu, or Mö, having sweet-scented leaves, yields an edible plum in clusters. Bua-bwa is another edible fruit-tree, with palmated leaves.

Mbéu is a climbing, arboraceous plant, and yields a very pleasant fruit, which tastes like gooseberries: its seeds are very minute.

November 18th, 19th.—Rain fell heavily yesterday afternoon, and was very threatening to-day. We remain to sew a calico tent.

November 20th.—Kanyindula came with three carriers this morning instead of five, and joined them in demanding prepayment. It was natural for him to side with them, as they have more power than he has; in fact, the chiefs in these parts all court their people, and he could feel more interest in them than in an entire stranger whom he might never see again: however, we came on without his people, leaving two to guard the loads.

About four miles up the valley we came to a village named Kanyenjeré Mponda, at the fountain-eye of the Bua, and thence sent men back for the loads, while we had the shelter of good huts during a heavy thunder-shower, and made us willing to remain all night. The valley is lovely in the extreme. The mountains on each side are gently rounded, and, as usual, covered over with tree foliage, except where the red soil is exposed by recent grass-burnings. Quartz rocks jut out, and much drift of that material has been carried down by the gullies into the bottom. These gullies being in compact clay, the water has but little power of erosion, so they are worn deep but narrow. Some fragments of titaniferous iron ore, with hematite changed by heat, and magnetic, lay in the gully, which had worn itself a channel on the north side of the village. The Bua, like most African streams whose sources I have seen, rises in an oozing boggy spot. Another stream, the Tembwe, rises near the same spot, and flows north-west into the Loangwa. We saw Shuaré palms in its bed.

November 21st.—We left Bua fountain, lat. $13^{\circ} 40'$ S., and made a short march to Mokatoba, a stockaded village, where the people refused to admit us till the head man came. They have a little food here, and sold us some. We have been on rather short commons for some time, and this made our detention agreeable. We rose a little in altitude after leaving this morning, then, though in the same valley, made a little descent toward the north-north-west. High winds came driving over the eastern range, which is called Mehinjé, and bring large masses of clouds, which are the rain-givers. They seem to come from the south-east. The scenery of the valley is lovely and rich in the extreme. All the foliage is fresh washed and clean; young herbage is bursting through the ground; the air is deliciously cool, and the birds are singing joyfully: one, called Mzié, is a good songster, with a loud melodious voice. Large game abounds, but we do not meet with it.

We are making our way slowly to the north, where food is said to be abundant. I divided about fifty pounds of powder among the people of my following to shoot with, and buy goats or other food as we could. This reduces our extra loads to three

—four just now, Simon being sick again. He rubbed goats'-fat on a blistered surface, and caused an eruption of pimples.

Mem.—The people assent by lifting up the head instead of nodding it down as we do; deaf mutes are said to do the same.

November 22d.—Leaving Mokatoba village, and proceeding down the valley, which on the north is shut up apparently by a mountain called Kokwé, we crossed the Kasamba, about two miles from Mokatoba, and yet found it, though so near its source, four yards wide, and knee-deep. Its source is about a mile above Mokatoba, in the same valley with the Bua and Tembwe. We were told that elephants were near, and we saw where they had been an hour before; but, after seeking about, could not find them. An old man, in the deep defile between Kokwé and Yasika mountains, pointed to the latter, and said, "Elephants! why, there they are. Elephants, or tusks walking on foot, are never absent;" but though we were eager for flesh, we could not give him credit, and went down the defile which gives rise to the Sandili River. Where we crossed it in the defile, it was a mere rill, having large trees along its banks, yet it is said to go to the Loangwa of Zumbo, north-west or north-north-west. We were now, in fact, upon the slope which inclines to that river, and made a rapid descent in altitude. We reached Silubi's village, on the base of a rocky detached hill. No food to be had; all taken by Mazitu; so Silubi gave me some masuko fruit instead. They find that they can keep the Mazitu off by going up a rocky eminence, and hurling stones and arrows down on the invaders: they can defend themselves also by stockades, and these are becoming very general.

On leaving Silubi's village, we went to a range of hills, and after passing through found that we had a comparatively level country on the north: it would be called a well-wooded country if we looked at it only from a distance. It is formed into long ridges, all green and wooded; but clumps of large trees, where villages have been, or are still situated, show that the sylvan foliage around and over the whole country is that of mere hop-poles. The whole of this upland region might be called woody, if we bear in mind that where the population is dense, and has been long undisturbed, the trees are cut down to the size of low bush. Large districts are kept to about the size of hop-poles, growing on pollards three or four feet from the ground, by charecoal burners, who in all instances are smiths too.

On reaching Zeoré's village, on the Lokuzhwa, we found it stockaded, and stagnant pools round three sides of it. The Mazitu had come, pillaged all the surrounding villages, looked at this,

and then went away; so the people had food to sell. They here call themselves Echéwa, and have a different marking from the Atumboka. The men have the hair dressed as if a number of the hairs of elephants' tails were stuck around the head. The women wear a small lip-ring, and a straw or piece of stick in the lower lip, which dangles down about level with the lower edge of the chin: their clothing in front is very scanty. The men know nothing of distant places, the Manganja being a very stay-at-home people. The stockades are crowded with huts, and the children have but small room to play in the narrow spaces between.

November 25th.—Sunday at Zeoré's. The villagers thought we prayed for rain, which was much needed. The cracks in the soil have not yet come together by the swelling of soil produced by moisture. I disabused their minds about rain-making prayers, and found the head man intelligent.

I did not intend to notice the Lokuzhwa, it is such a contemptible little rill, and not at present running; but in going to our next point, Mpandé's village, we go along its valley, and cross it several times, as it makes for the Loangwa in the north. The valley is of rich dark-red loam, and so many lilies of the *Amaryllis* kind have established themselves as completely to mask the color of the soil. They form a covering of pure white where the land has been cleared by the hoe. As we go along this valley to the Loangwa, we descend in altitude. It is said to rise at "Nombé rumé," as we formerly heard.

November 27th.—Zeoré's people would not carry without payment, so we left our extra loads as usual and went on, sending men back for them: these, however, did not come till 27th, and then two of my men got fever. I groan in spirit, and do not know how to make our gear into nine loads only. It is the knowledge that we shall be detained some two or three months during the heavy rains that makes me cleave to it as means of support.

Advantage has been taken by the people of spots where the Lokuzhwa goes round three parts of a circle, to erect their stockaded villages. This is the case here, and the water, being stagnant, engenders disease. The country abounds in a fine light-blue flowering, perennial pea, which the people make use of as a relish. At present the blossoms only are collected and boiled. On inquiring the name *chilobé*, the men asked me if we had none in our country. On replying in the negative, they looked with pity on us: "What a wretched country not to have *chilobé*!" It is on the highlands above; we never saw it elsewhere.

Another species of pea (*Chilobé Weza*), with reddish flowers, is eaten in the same way; but it has spread but little in comparison. It is worth remarking that porridge of maize or sorghum is never offered without some pulse, beans or bean-leaves, or flowers. They seem to feel the need of it, or of pulse, which is richer in flesh-formers than the porridge.

Last night a loud clapping of hands by the men was followed by several half-suppressed screams by a woman. They were quite *eldritch*, as if she could not get them out. Then succeeded a lot of utterances as if she were in ecstasy, to which a man responded, "Moio, moio." The utterances, so far as I could catch, were in five-syllable snatches—abrupt and labored. I wonder if this "bubbling or boiling over" has been preserved as the form in which the true prophets of old gave forth their "burdens?" One sentence, frequently repeated toward the close of the effusion, was "*linyama uta*," "flesh of the bow," showing that the Pythoness loved venison killed by the bow. The people applauded, and attended, hoping, I suppose, that rain would follow her efforts. Next day she was duly honored by drumming and dancing.*

Prevalent beliefs seem to be persistent in certain tribes. That strange idea of property in man that permits him to be sold to another is among the Arabs, Manganja, Makoa, Waiyau, but not among Kaffirs or Zulus, and Bechuanas. If we exclude the Arabs, two families of Africans alone are slavers on the east side of the continent.

November 30th.—We march to Chilunda's or Embora's, still on the Lokuzhwa, now a sand-stream about twenty yards wide, with pools in its bed; its course is pretty much north or north-north-west. We are now near the Loangwa country, covered with a dense dwarf forest, and the people collected in stockades. This village is on a tongue of land (between Lokuzhwa and another sluggish rivulet), chosen for its strength. It is close to a hill named Chipemba, and there are ranges of hills both east and west in the distance. Embora came to visit us soon after we arrived—a tall man with a Yankee face. He was very much tickled when asked if he were a Motumboka. After indulging in laughter at the

* Chuma remembers part of the words of her song to be as follows:

Kowé! kowé! n'andambwi,
M'vula léru, korolé ko okwé,
Waie, ona, kordi, mvula!

He can not translate it, as it is pure Manganja; but with the exception of the first line, which relates to a little song-bird with a beautiful note, it is a mere reiteration, "Rain will surely come to-day."—Ed.

idea of being one of such a small tribe of Manganja, he said proudly, "That he belonged to the Echéwa, who inhabited all the country to which I was going." They are generally smiths; a mass of iron had just been brought in to him from some outlying furnaces. It is made into hoes, which are sold for native cloths down the Loangwa.

December 3d, 1866.—March through a hilly country covered with dwarf forest to Kandé's village, still on the Lokuzhwa. We made some westing. The village was surrounded by a dense hedge of bamboo and a species of bushy fig that loves edges of water-bearing streams: it is not found where the moisture is not perennial. Kandé is a fine tall smith; I asked him if he knew his antecedents; he said he had been bought by Babisa at Chipéta, and left at Chilunda's, and therefore belonged to no one. Two Waiyau now volunteered to go on with us, and as they declared their masters were killed by the Mazitu, and Kandé seemed to confirm them, we let them join. In general, runaway slaves are bad characters, but these two seem good men, and we want them to fill up our complement: another volunteer we employ as goat-herd.

A continuous tap-tapping in the villages shows that bark-cloth is being made. The bark, on being removed from the tree, is steeped in water, or in a black muddy hole, till the outer of the two inner barks can be separated, then commences the tapping with a mallet to separate and soften the fibres. The head of this is often of ebony, with the face cut into small furrows, which, without breaking, separate and soften the fibres.



Mallet for separating
Fibres of Bark.

December 4th.—Marched westward, over a hilly, dwarf forest-covered country: as we advanced, trees increased in size, but no people inhabited it. We spent a miserable night at Katétté, wetted by a heavy thunder-shower, which lasted a good while. Morning (December 5th) muggy, clouded all over, and rolling thunder in distance. Went three hours with, for a wonder, no water, but made westing chiefly, and got on to the Lokuzhwa again: all the people are collected on it.

December 6th.—Too ill to march.

December 7th.—Went on, and passed Mesumbé's village, also protected by bamboos, and came to the hill Mparawé, with a village perched on its northern base and well up its sides. The Babisa have begun to imitate the Mazitu by attacking and plundering Manganja villages. Muasi's brother was so attacked, and

now is here and eager to attack in return. In various villages we have observed miniature huts, about two feet high, very neatly thatched and plastered: here we noticed them in dozens. On inquiring, we were told that when a child or relative dies one is made, and when any pleasant food is cooked or beer brewed, a little is placed in the tiny hut for the departed soul, which is believed to enjoy it.

The Lokuzhwa is here some fifty yards wide, and running. Numerous large pit-holes in the fine-grained schist in its bed show that much water has flowed in it.

December 8th.—A kind of bean called “chitetta” is eaten here: it is an old acquaintance in the Bechuana country, where it is called “mositsané,” and is a mere plant; here it becomes a tree, from fifteen to twenty feet high. The root is used for tanning; the bean is pounded, and then put into a sieve of bark-cloth to extract, by repeated washings, the excessively astringent matter it contains. Where the people have plenty of water, as here, it is used copiously in various processes: among Bechuanas it is scarce, and its many uses unknown. The pod becomes from fifteen to eighteen inches long, and an inch in diameter.

December 9th.—A poor child, whose mother had died, was unprovided for; no one not a relative will nurse another’s child. It called out piteously for its mother by name, and the women (like the servants in the case of the poet Cowper when a child), said, “She is coming.” I gave it a piece of bread; but it was too far gone, and is dead to-day.

An alarm of Mazitu sent all the villagers up the sides of Mparawé this morning. The affair was a chase of a hyena, but every thing is Mazitu! The Babisa came here, but were surrounded and nearly all cut off. Muasi was so eager to be off with a party to return the attack on the Mazitu, that, when deputed by the head man to give us a guide, he got the man to turn at the first village, so we had to go on without guides, and made about due north.

December 11th.—We are now detained in the forest, at a place called Chondé Forest, by set-in rains. It rains every day, and generally in the afternoon; but the country is not wetted till the “set-in” rains commence: the cracks in the soil then fill up, and every thing rushes up with astonishing rapidity; the grass is quite crisp and soft. After the fine-grained schist, we came on granite with large flakes of tale in it. This forest is of good-sized trees, many of them mopané. The birds now make much melody and noise—all intent on building.

December 12th.—Across an undulating forest country north we got a man to show us the way, if a pathless forest can so be called. We used a game-path as long as it ran north, but left it when it deviated, and rested under a baobab-tree with a marabou's nest—a bundle of sticks on a branch: the young ones uttered a hard chuck, chuck, when the old ones flew over them. A sun-bird, with bright scarlet throat and breast, had its nest on another branch: it was formed like the weaver's nest, but without a tube. I observed the dam picking out insects from the bark and leaves of the baobab, keeping on the wing the while: it would thus appear to be insectivorous as well as a honey-bibber. Much spoor of elands, zebras, gnus, kamas, pallahs, buffaloes, reed-bucks, with tsetse, their parasites.

December 13th.—Reached the Tokosusi, which is said to rise at Nombé Rumé, about twenty yards wide and knee-deep, swollen by the rains: it had left a cake of black tenacious mud on its banks. Here I got a pallah antelope, and a very strange flower called "katendé," which was a whorl of seventy-two flowers sprung from a flat, round root; but it can not be described. Our guide would have crossed the Tokosusi, which was running north-west to join the Loangwa, and then gone to that river; but always when we have any difficulty the "lazies" exhibit themselves. We had no grain; and three remained behind spending four hours at what we did in an hour and a quarter. Our guide became tired and turned, not before securing another; but he would not go over the Loangwa; no one likes to go out of his own country: he would go westward to Maranda's, and nowhere else. A "set-in" rain came on after dark, and we went on through slush, the trees sending down heavier drops than the showers as we neared the Loangwa; we forded several deep gullies, all flowing north or north-west into it. The paths were running with water, and when we emerged from the large Mopané forest, we came on the plain of excessively adhesive mud, on which Maranda's stronghold stands, on the left bank of Loangwa, here a good-sized river. The people were all afraid of us, and we were mortified to find that food is scarce. The Mazitu have been here three times, and the fear they have inspired, though they were successfully repelled, has prevented agricultural operations from being carried on.

Mem.—A flake of reed is often used in surgical operations among the natives, as being sharper than their knives.

CHAPTER VII.

Crosses the Loangwa.—Distressing March.—The King-hunter.—Great Hunger.—Christmas Feast necessarily postponed.—Loss of Goats.—Honey-hunters.—A Meal at last.—The Babisa.—The Mazitu again.—Chitembo's.—End of 1866.—The New Year.—The northern Brim of the great Loangwa Valley.—Accident to Chronometers.—Meal gives out.—Escape from a Cobra Capello.—Pushes for the Chambezé.—Death of Chitané.—Great Pinch for Food.—Disastrous Loss of Medicine-chest.—Bead Currency.—Babisa.—The Chambezé.—Reaches Chitapangwa's Town.—Meets Arab Traders from Zanzibar.—Sends off Letters.—Chitapangwa and his People.—Complications.

December 16th, 1866.—WE could get no food at any price on 15th, so we crossed the Loangwa, and judged it to be from seventy to a hundred yards wide. It is deep at present, and it must always be so, for some Atumboka submitted to the Mazitu, and ferried them over and back again. The river is said to rise in the north: it has alluvial banks with large forest-trees along them, bottom, sandy, and great sand-banks are in it, like the Zambesi. No guide would come, so we went on without one. The "lazies" of the party seized the opportunity of remaining behind—wandering, as they said, though all the cross paths were marked.* This evening we secured the latitude $12^{\circ} 40' 48''$ S., which would make our crossing-place about $12^{\circ} 45'$ S. Clouds prevented observations, as they usually do in the rainy season.

December 17th.—We went on through a bushy country without paths, and struck the Pamazi, a river of sixty yards wide, in steep banks and in flood, and held on as well as we could through a very difficult country, the river forcing us north-west: I heard hippopotami in it. Game is abundant, but wild; we shot two poku antelopes† here, called "tsébulas," which drew a hunter to us, who consented for meat and pay to show us a ford. He said that the Pamazi rises in a range of mountains we can now see (in general we could see no high ground during our marches for the last fortnight). We forded it, thigh-deep on one side and breast-deep on the other. We made only about three miles of northing,

* In coming to cross-roads, it is the custom of the leader to "mark" all side paths and wrong turnings by making a scratch across them with his spear, or by breaking a branch and laying it across: in this way those who follow are able to avoid straying off the proper road.—ED.

† *Helectragus vardonii*.

and found the people on the left bank uncivil: they would not lend a hut, so we soon put up a tent of water-proof cloth and branches.

December 18th.—As the men grumbled at their feet being pierced by thorns in the trackless portions we had passed, I was anxious to get a guide, but the only one we could secure would go to Molenga's only; so I submitted, though this led us east instead of north. When we arrived we were asked what we wanted, seeing we brought neither slaves nor ivory: I replied it was much against our will that we came; but the guide had declared that this was the only way to Casembe's, our next stage. To get rid of us, they gave a guide, and we set forward northward. The Mopané forest is perfectly level, and after rains the water stands in pools; but during most of the year it is dry. The trees here were very large, and planted some twenty or thirty yards apart: as there are no branches on their lower parts, animals see very far. I shot a gnu, but wandered in coming back to the party, and did not find them till it was getting dark. Many parts of the plain are thrown up into heaps of about the size of one's cap (probably by crabs), which now, being hard, are difficult to walk over; under the trees it is perfectly smooth. The mopané-tree furnishes the iron-wood of the Portuguese Pao Ferro: it is pretty to travel in and look at the bright sunshine of early morning; but the leaves hang perpendicularly as the sun rises high, and afford little or no shade through the day;* so, as the land is clayey, it becomes hard-baked thereby.

We observed that the people had placed corn-granaries at different parts of this forest, and had been careful to leave no track to them—a provision in case of further visits of Mazitu. King-hunters† abound, and make the air resound with their stridulous notes, which commence with a sharp, shrill cheep, and then follows a succession of notes, which resembles a pea in a whistle. Another bird is particularly conspicuous at present by its chattering activity: its nest consists of a bundle of fine seed-stalks of grass hung at the end of a branch, the free ends being left untrimmed, and no attempt at concealment made. Many other birds are now active, and so many new notes are heard, that it is probable this is a richer ornithological region than the Zambesi. Guinea-fowl and francolins are in abundance, and so indeed are all the other kinds of game, as zebras, pallahs, gnus.

* The tamarind does the same thing in the heat of the day.

† A species of kingfisher, which stands flapping its wings and attempting to sing in a ridiculous manner. It never was better described than by one observer who, after watching it through its performance, said it was "a toy-shoppy bird."—ED.

December 19th.—I got a fine male kudu. We have no grain, and live on meat alone, but I am better off than the men, inasmuch as I get a little goat's milk besides. The kudu stood five feet six inches high; horns, three feet on the straight.

December 20th.—Reached Casembe,* a miserable hamlet of a few huts. The people here are very suspicious, and will do nothing but with a haggle for prepayment; we could get no grain, nor even native herbs, though we rested a day to try.

After a short march we came to the Nyamazi, another considerable rivulet coming from the north, to fall into the Loangwa. It has the same character of steep alluvial banks as Pamazi, and about the same width, but much shallower; loin-deep, though somewhat swollen; from fifty to sixty yards wide. We came to some low hills, of coarse sandstone, and on crossing these we could see, by looking back, that for many days we had been traveling over a perfectly level valley, clothed with a mantle of forest. The barometers had shown no difference of level from about eighteen hundred feet above the sea. We began our descent into this great valley when we left the source of the Bua; and now these low hills, called Ngálé or Ngaloa, though only one hundred feet or so above the level we had left, showed that we had come to the shore of an ancient lake, which probably was let off when the rent of Kebra-basa, on the Zambesi, was made; for we found immense banks of well-rounded shingle above—or, rather, they may be called mounds of shingle—all of hard silicious schist with a few pieces of fossil-wood among them. The gullies reveal a stratum of this well-rounded shingle, lying on a soft greenish sandstone, which again lies on the coarse sandstone first observed. This formation is identical with that observed formerly below the Victoria Falls. We have the mountains still on our north and north-west (the so-called mountains of Bisa, or Babisa), and from them the Nyamazi flows, while Pamazi comes round the end, or what appears to be the end, of the higher portion.

December 22d.—Shot a bush-buck; and slept on the left bank of Nyamazi.

December 23d.—Hunger sent us on, for a meat diet is far from satisfying: we all felt very weak on it, and soon tired on a march; but to-day we hurried on to Kavimba, who successfully beat off the Mazitu. It is very hot, and between three and four hours is a good day's march. On sitting down to rest before entering the village, we were observed, and all the force of the village issued

* Not the great chief near Lake Moero of the same name.

to kill us as Mazitu, but when we stood up the mistake was readily perceived, and the arrows were placed again in their quivers. In the hut four Mazitu shields show that they did not get it all their own way: they are miserable imitations of Zulu shields, made of eland and water-buck's hides, and ill sewn.

A very small return present was made by Kavimba, and nothing could be bought except at exorbitant prices. We remained all day on the 24th, haggling and trying to get some grain. He took a fancy to a shirt, and left it to his wife to bargain for. She got the length of cursing and swearing, and we bore it, but could get only a small price for it. We resolved to hold our Christmas some other day, and in a better place. The women seem ill regulated here. Kavimba's brother had words with his spouse, and at the end of every burst of vociferation on both sides called out, "Bring the muavé! bring the muavé!" or ordeal.

Christmas-day, 1866.—No one being willing to guide us to Moerwa's, I hinted to Kavimba that, should we see a rhinoceros, I would kill it. He came himself, and led us on where he expected to find these animals, but we saw only their footsteps. We lost our four goats somewhere—stolen or strayed in the pathless forest, we do not know which, but the loss I felt very keenly, for whatever kind of food we had, a little milk made all right, and I felt strong and well; but coarse food, hard of digestion without it, was very trying. We spent the 26th in searching for them, but all in vain. Kavimba had a boy carrying two huge elephant-spears; with these he attacks that large animal single-handed. We parted from him, as I thought, good friends; but a man who volunteered to act as guide saw him in the forest afterward, and was counseled by him to leave us, as we should not pay him. This hovering near us after we parted makes me suspect Kavimba of taking the goats, but I am not certain. The loss affected me more than I could have imagined. A little indigestible porridge, of scarcely any taste, is now my fare, and it makes me dream of better.

December 27th.—Our guide asked for his cloth to wear on the way, as it was wet and raining, and his bark-cloth was a miserable covering. I consented, and he bolted on the first opportunity; the forest being so dense, he was soon out of reach of pursuit. He had been advised to this by Kavimba, and nothing else need have been expected. We then followed the track of a traveling party of Babisa, but the grass springs up over the paths, and it was soon lost: the rain had fallen early in these parts, and the grass was all in seed. In the afternoon we came to the hills

in the north where Nyamazi rises, and went up the bed of a rivulet for some time, and then ascended out of the valley. At the bottom of the ascent and in the rivulet the shingle stratum was sometimes fifty feet thick; then, as we ascended, we met mica schist tilted on edge, then gray gneiss, and last an igneous trap among quartz rocks, with a great deal of bright mica and talc in them. On resting near the top of the first ascent two honey-hunters came to us. They were using the honey-guide as an aid. The bird came to us as they arrived, waited quietly during the half-hour they smoked and chatted, and then went on with them.*

The tsetse flies, which were very numerous at the bottom, came up the ascent with us, but as we increased our altitude by another thousand feet they gradually dropped off and left us: only one remained in the evening, and he seemed out of spirits. Near sunset we encamped by water on the cool height, and made our shelters with boughs of leafy trees: mine was rendered perfect by Dr. Stenhouse's invaluable patent cloth, which is very superior to mackintosh: indeed the India-rubber cloth is not to be named in the same day with it.

December 28th.—Three men, going to hunt bees, came to us as we were starting, and assured us that Moerwa's was near. The first party had told us the same thing, and so often have we gone long distances as "*pafupi*" (near), when in reality they were "*patari*" (far), that we begin to think *pafupi* means "I wish you to go there," and *patari* the reverse. In this case *near* meant an hour and three-quarters from our sleeping-place to Moerwa's!

When we look back from the height to which we have ascended we see a great plain clothed with dark green forest, except at the line of yellowish grass, where probably the Loangwa flows. On the east and south-east this plain is bounded at the extreme range of our vision by a wall of dim blue mountains forty or fifty miles off. The Loangwa is said to rise in the Chibalé country due north of this Malambwé (in which district Moerwa's village is situated), and to flow south-east, then round to where we found it.

Moerwa came to visit me in my hut—a rather stupid man, though he has a well-shaped and well-developed forehead—and tried the usual little arts of getting us to buy all we need here,

* This extraordinary bird flies from tree to tree in front of the hunter, chirruping loudly, and will not be content till he arrives at the spot where the bees'-nest is; it then waits quietly till the honey is taken, and feeds on the broken morsels of comb which fall to its share.

though the prices are exorbitant. "No people in front, great hunger there." "We must buy food here, and carry it to support us." On asking the names of the next head men, he would not inform me, till I told him to try and speak like a man; he then told us that the first Lobemba chief was Motuna, and the next Chafunga. We have nothing, as we saw no animals in our way hither, and hunger is ill to bear. By giving Moerwa a good large cloth he was induced to cook a mess of maëre, or millet, and elephant's stomach. It was so good to get a full meal that I could have given him another cloth, and the more so as it was accompanied by a message that he would cook more next day and in larger quantity. On inquiring next evening, he said "The man had told lies," he had cooked nothing more: he was prone to lie himself, and was a rather bad specimen of a chief.

The Babisa have round bullet-heads, snub-noses, often high cheek-bones, an upward slant of the eyes, and look as if they had a lot of Bushman blood in them, and a good many would pass for Bushmen or Hottentots. Both Babisa and Waiyau may have a mixture of the race, which would account for their roving habits. The women have the fashion of exposing the upper part of the buttocks by letting a very stiff cloth fall down behind. Their teeth are filed to points: they wear no lip-ring, and the hair is parted so as to lie in a net at the back part of the head. The mode of salutation among the men is to lie down nearly on the back, clapping the hands, and making a rather inelegant half-kissing sound with the lips.

December 29th.—We remain a day at Malambwé, but get nothing save a little maëre,* which grates in the teeth and in the stomach. To prevent the Mazitu starving them, they cultivate small round patches placed at wide intervals in the forest, with which the country is covered. The spot, some ten yards or a little more in diameter, is manured with ashes and planted with this millet and pumpkins, in order that, should Mazitu come, they may be unable to carry off the pumpkins, or gather the millet, the seed of which is very small. They have no more valor than the other Africans, but more craft, and are much given to falsehood. They will not answer common questions except by misstatements; but this may arise in our case from our being in disfavor, because we will not sell all our goods to them for ivory.

December 30th.—Marched for Chitemba's, because it is said he has not fled from the Mazitu, and therefore has food to spare.

* *Eleusine coracana.*

While resting, Moerwa, with all his force of men, women, and dogs, came up, on his way to hunt elephants. The men were furnished with big spears, and their dogs are used to engage the animal's attention while they spear it; the women cook the meat and make huts, and a smith goes with them to mend any spear that may be broken.

We pass over level plateaus on which the roads are wisely placed, and do not feel that we are traveling in a mountainous region. It is all covered with dense forest, which in many cases is polarded, from being cut for bark-cloth or for hunting purposes. Masuko fruit abounds. From the cisalpine and gum-copal-trees bark-cloth is made.

We now come to large masses of hematite, which is often ferruginous: there is conglomerate too, many quartz pebbles being intermixed. It seems as if when the lakes existed in the lower lands, the higher levels gave forth great quantities of water from chalybeate fountains, which deposited this iron ore. Gray granite, or quartz with talc in it, or gneiss lie under the hematite.

The forest resounds with singing birds, intent on nidification. Francolins abound, but are wild. "Whip-poor-wills," and another bird, which has a more labored treble note and voice: "Oh, ho, ho!" Gay flowers blush unseen, but the people have a good idea of what is eatable and what not. I looked at a woman's basket of leaves which she had collected for supper, and it contained eight or ten kinds, with mushrooms and orchidaceous flowers. We have a succession of showers to-day, from north-east and east-north-east. We are uncertain when we shall come to a village, as the Babisa will not tell us where they are situated. In the evening we encamped beside a little rill, and made our shelters; but we had so little to eat that I dreamed the night long of dinners I had eaten, and might have been eating.

I shall make this beautiful land better known, which is an essential part of the process by which it will become the "pleasant haunts of men." It is impossible to describe its rich luxuriance, but most of it is running to waste through the slave-trade and internal wars.

December 31st.—When we started this morning, after rain, all the trees and grass dripping, a lion roared, but we did not see him. A woman had come a long way, and built a neat miniature hut in the burned-out ruins of her mother's house: the food-offering she placed in it, and the act of filial piety, no doubt comforted this poor mourner's heart.

We arrived at Chitembo's village, and found it deserted. The

Babisa dismantle their huts and carry off the thatch to their gardens, where they live till harvest is over. This fallowing of the frame-work destroys many insects, but we observed that wherever Babisa and Arab slavers go, they leave the breed of the domestic bug: it would be well if that were all the ill they did! Chitembo was working in his garden when we arrived, but soon came, and gave us the choice of all the standing huts: he is an old man, much more frank and truthful than our last head man, and says that Chitapanga is paramount chief of all the Abemba.

Three or four women whom we saw performing a rain dance at Moerwa's were here doing the same, their faces smeared with meal, and axes in their hands, imitating as well as they could the male voice. I got some maëre, or millet, here and a fowl.

We now end 1866. It has not been so fruitful or useful as I intended. Will try to do better in 1867, and be better—more gentle and loving; and may the Almighty, to whom I commit my way, bring my desires to pass, and prosper me! Let all the sins of '66 be blotted out for Jesus's sake!

* * * * *

January 1st, 1867.—May He who was full of grace and truth impress His character on mine. Grace—eagerness to show favor; truth—truthfulness, sincerity, honor—for His mercy's sake.

We remain to-day at Mbulukuta-Chitembo's district, by the boys' desire, because it is New-year's-day, and also because we can get some food.

January 2d, 3d.—Remain on account of a threatened *set-in* rain. Bought a senzé (*Aulocaudatus swindernianus*), a rat-looking animal; but I was glad to get any thing in the shape of meat.

January 4th.—It is a *set-in* rain. The boiling-point thermometer shows an altitude of 3565 feet above the sea; barometer, 3983 feet ditto. We get a little maëre here, and prefer it to being drenched and our goods spoiled. We have neither sugar nor salt, so there are no soluble goods; but cloth and gunpowder get damaged easily. It is hard fare and scanty; I feel always hungry, and am constantly dreaming of better food when I should be sleeping. Savory viands of former times come vividly up before the imagination, even in my waking hours: this is rather odd, as I am not a dreamer; indeed I scarcely ever dream but when I am going to be ill or actually so.*

* It may not be altogether without interest to state that Livingstone could fall asleep when he wished at the very shortest notice. A mat, and a shady tree under which to spread it, would at any time afford him a refreshing sleep, and this faculty no doubt contributed much to his great powers of endurance.—ED.

We are on the northern brim (or north-western rather) of the great Loangwa Valley we lately crossed: the rain coming from the east strikes it, and is deposited both above and below, while much of the valley itself is not yet well wetted. Here all the grasses have run up to seed, and yet they are not more than two feet or so in the seed-stalks. The pasturage is very fine. The people employ these continuous or *set-in* rains for hunting the elephant, which gets bogged, and sinks in from fifteen to eighteen inches in soft mud; then even he, the strong one, feels it difficult to escape.*

January 5th.—Still storm-stayed. We shall be off as soon as we get a fair day and these heavy rains cease.

January 6th.—After service two men came and said that they were going to Lobemba, and would guide us to Motuna's village; another came a day or two ago, but he had such a villainous look we all shrank from him. These men's faces pleased us, but they did not turn out all we expected, for they guided us away westward without a path. It was a drizzling rain, and this made us averse to striking off in the forest without them. No inhabitants now except at wide intervals, and no other animals either. In the afternoon we came to a deep ravine full of gigantic timber-trees and bamboos, with the Mavoiché River at the bottom. The dampness had caused the growth of lichens all over the trees, and the steep descent was so slippery that two boys fell, and he who carried the chronometers, twice: this was a misfortune, as it altered the rates, as was seen by the first comparison of them together in the evening. No food at Motuna's village, yet the head man tried to extort two fathoms of calico on the ground that he was owner of the country: we offered to go out of his village, and make our own sheds on "God's land," that is, where it is uncultivated, rather than have any words about it: he then begged us to stay. A very high mountain called Chikokwé appeared west-south-west from this village; the people who live on it are called Matumba; this part is named Lokumbi; but whatever the name, all the people are Babisa, the dependents of the Babemba, reduced by their own slaving habits to a miserable jungly state. They feed much on wild fruits, roots, and leaves; and yet are generally plump. They use a wooden hoe for sowing their maère. It is a sort of V-shaped implement, made from a branch with another springing out of it, about an inch in diameter at the sharp

* When the elephant becomes confused by the yelping pack of dogs with which he is surrounded, the hunter stealthily approaches behind, and with one blow of a sharp axe hamstring the huge beast.—Ed.

point, and with it they claw the soil after scattering the seed. About a dozen young men were so employed in the usual small patches as we passed in the morning.

The country now exhibits the extreme of leafiness, and the undulations are masses of green leaves. As far as the eye can reach with distinctness, it rests on a mantle of that hue, and beyond the scene becomes dark blue. Near at hand many gay flowers peep out. Here and there the scarlet martagon (*Lilium chalcedonicum*), bright blue or yellow gingers; red, orange, yellow, and pure white orchids; pale lobelias, etc.; but they do not mar the general greenness. As we ascended higher on the plateau, grasses which have pink and reddish-brown seed-vessels imparted distinct shades of their colors to the lawns, and were grateful to the eye. We turned aside early in our march to avoid being wetted by rains, and took shelter in some old Babisa sheds. These, when the party is a slaving one, are built so as to form a circle, with but one opening. A ridge-pole, or rather a succession of ridge-poles, form one long shed all round, with no partitions in the roof-shaped hut.

On the 9th of January we ascended a hardened sandstone range. Two men who accompanied our guide called out every now and then to attract the attention of the honey-guide, but none appeared. A water-buck had been killed and eaten at one spot, the ground showing marks of a severe struggle, but no game was to be seen. Buffaloes and elephants come here at certain seasons; at present they have migrated elsewhere. The valleys are very beautiful. The oozes are covered with a species of short wiry grass, which gives the valleys the appearance of well-kept gentlemen's parks; but they are full of water to overflowing—immense sponges, in fact; and one has to watch carefully in crossing them to avoid plunging into deep water-holes, made by the feet of elephants or buffaloes. In the ooze generally the water comes half-way up the shoe, and we go plash, plash, plash, in the lawn-like glade. There are no people here now in these lovely wild valleys; but to-day we came to mounds made of old for planting grain, and slag from iron furnaces. The guide was rather offended because he did not get meat and meal, though he is accustomed to leaves at home, and we had none to give except by wanting ourselves: he found a mess without much labor in the forest. My stock of meal came to an end to-day, but Simon gave me some of his. It is not the unpleasantness of eating unpalatable food that teases one, but we are never satisfied. I could brace myself to dispose of a very unsavory mess, and think

no more about it; but this maëre engenders a craving which plagues day and night incessantly.

January 10th.—We crossed the Muasi, flowing strongly to the east, to the Loangwa River.

In the afternoon an excessively heavy thunder-storm wetted us all to the skin before any shelter could be made. Two of our men wandered, and other two remained behind lost, as our track was washed out by the rains. The country is a succession of enormous waves, all covered with jungle, and no traces of paths. We were in a hollow, and our firing was not heard till this morning, when we ascended a height, and were answered. I am thankful that no one was lost, for a man might wander a long time before reaching a village. Simon gave me a little more of his meal this morning, and went without himself. I took my belt up three holes to relieve hunger. We got some wretched wild fruit like that called "jambos" in India, and at midday reached the village of Chafunga. Famine here too, but some men had killed an elephant, and came to sell the dried meat: it was high, and so were their prices; but we are obliged to give our best from this craving hunger.

January 12th.—Sitting down this morning near a tree, my head was just one yard off a good-sized cobra, coiled up in the sprouts at its root, but it was benumbed with cold: a very pretty little puff-adder lay in the path, also benumbed. It is seldom that any harm is done by these reptiles here, although it is different in India. We bought up all the food we could get; but it did not suffice for the marches we expect to make to get to the Chambezé, where food is said to be abundant; we were therefore again obliged to travel on Sunday. We had prayers before starting; but I always feel that I am not doing right: it lessens the sense of obligation in the minds of my companions; but I have no choice. We went along a rivulet till it ended in a small lake, Mapampa or Chimbwé, about five miles long, and one and a half broad. It had hippopotami, and the poku fed on its banks.

January 15th.—We had to cross the Chimbwé at its eastern end, where it is fully a mile wide. The guide refused to show another and narrower ford up the stream, which emptied into it from the east; and I, being the first to cross, neglected to give orders about the poor little dog, Chitané. The water was waist-deep, the bottom soft peaty stuff with deep holes in it, and the northern side infested by leeches. The boys were—like myself—all too much engaged with preserving their balance to think of the spirited little beast, and he must have swam till he sunk.

He was so useful in keeping all the country curs off our huts; none dare to approach and steal, and he never stole himself. He shared the staring of the people with his master; then in the march he took charge of the whole party, running to the front, and again to the rear, to see that all was right. He was becoming yellowish-red in color; and, poor thing, perished in what the boys all call Chitané's water.

January 16th.—March through the mountains, which are of beautiful white and pink dolomite, scantily covered with upland trees and vegetation. The rain, as usual, made us halt early, and wild fruits helped to induce us to stay.

In one place we lighted on a party of people living on masuko fruit, and making mats of the Shuaré* palm petioles. We have hard lines ourselves; nothing but a little maëre porridge and dampers. We roast a little grain and boil it, to make believe it is coffee. The guide, a maundering fellow, turned because he was not fed better than at home, and because he knew that but for his obstinacy we should not have lost the dog. It is needless to repeat that it is all forest on the northern slopes of the mountains—open glade and miles of forest; ground at present all sloppy; oozes full and overflowing—feet constantly wet. Rivulets rush strongly with clear water, though they are in flood: we can guess which are perennial and which mere torrents that dry up; they flow northward and westward to the Chambezé.

January 17th.—Detained in an old Babisa slaving encampment by set-in rain till noon, then set off in the midst of it. Came to hills of dolomite, but all the rocks were covered with white lichens (ash-colored). The path took us thence along a ridge, which separates the Lotiri, running westward, and the Lobo, going northward, and we came at length to the Lobo, traveling along its banks till we reached the village called Lisunga, which was about five yards broad, and very deep, in flood, with clear water, as indeed are all the rivulets now; they can only be crossed by felling a tree on the bank and letting it fall across. They do not abrade their banks—vegetation protects them. I observed that the brown ibis, a noisy bird, took care to restrain his loud, harsh voice when driven from the tree in which his nest was placed, and when about a quarter of a mile off, then commenced his loud "Ha-ha-ha!"

January 18th.—The head man of Lisunga, Chaokila, took our present, and gave nothing in return. A deputy from Chitapang-

* Raphia.

wa came afterward and demanded a larger present, as he was the greater man; and said that if we gave him two fathoms of calico, he would order all the people to bring plenty of food, not here only, but all the way to the paramount chief of Lobemba, Chitapangwa. I proposed that he should begin by ordering Chaokila to give us some in return for our present. This led, as Chaokila told us, to the cloth being delivered to the deputy, and we saw that all the starvelings south of the Chambezé were poor dependents on the Babemba, or rather their slaves, who cultivate little, and then only in the rounded patches above mentioned, so as to prevent their conquerors from taking away more than a small share. The subjects are Babisa—a miserable lying lot of serfs. This tribe is engaged in the slave-trade, and the evil effects are seen in their depopulated country and utter distrust of every one.

January 19th.—Raining most of the day. Worked out the longitude of the mountain-station said to be Mpini, but it will be better to name it Chitané's, as I could not get the name from our maundering guide; he probably did not know it. Lat. $11^{\circ} 9' 2''$ S.; long. $32^{\circ} 1' 30''$ E. Altitude above sea (barometer), 5353 feet; altitude above sea (boiling-point), 5385 feet. Difference, 32.*

Nothing but famine and famine prices, the people living on mushrooms and leaves. Of mushrooms we observed that they choose five or six kinds, and rejected ten sorts. One species becomes as large as the crown of a man's hat; it is pure white, with a blush of brown in the middle of the crown, and is very good roasted; it is named "motenta;" another, mofeta; third, boséf-wé; fourth, nakabausa; fifth, chisimbé; lobulated, green outside, and pink and fleshy inside; as a relish to others: some experience must have been requisite to enable them to distinguish the good from the noxious, of which they reject ten sorts.

We get some elephants' meat from the people, but high is no name for its condition. It is very bitter, but we used it as a relish to the maère porridge. None of the animal is wasted; skin and all is cut up and sold. Not one of us would touch it with the hand if we had aught else, for the gravy in which we dip our porridge is like an aqueous solution of aloes; but it prevents the heartburn, which maère causes when taken alone. I take mushrooms boiled instead; but the meat is never refused when we can purchase it, as it seems to ease the feeling of fatigue which

* Top of mountain (barometer) 6638 feet.

jungle fruit and fare engenders. The appetite in this country is always very keen, and makes hunger worse: the want of salt, probably, makes the gnawing sensation worse.

[We now come to a disaster which can not be exaggerated in importance when we witness its after effects month by month on Dr. Livingstone. There can be little doubt that the severity of his subsequent illnesses mainly turned upon it, and it is hardly too much to believe that his constitution from this time was steadily sapped by the effects of fever-poison which he was powerless to counteract, owing to the want of quinine. In his allusion to Bishop Mackenzie's death, we have only a further confirmation of the one rule in all such cases which must be followed, or the traveler in Africa goes—not with his life in his hand, but in some luckless box, put in the charge of careless servants. Bishop Mackenzie had all his drugs destroyed by the upsetting of a canoe, in which was his case of medicines, and in a moment every thing was soaked and spoiled.]

It can not be too strongly urged on explorers that they should divide their more important medicines in such a way that a *total loss* shall become well-nigh impossible. Three or four tin canisters containing some calomel, Dover's powder, colocynth, and, above all, a supply of quinine, can be distributed in different packages, and then, if a mishap occurs similar to that which Livingstone relates, the disaster is not beyond remedy.]

January 20th.—A guide refused, so we marched without one. The two Waiyau who joined us at Kandé's village now deserted. They had been very faithful all the way, and took our part in every case. Knowing the language well, they were extremely useful, and no one thought that they would desert, for they were free men—their masters had been killed by the Mazitu—and this circumstance, and their uniform good conduct, made us trust them more than we should have done any others who had been slaves. But they left us in the forest, and heavy rain came on, which obliterated every vestige of their footsteps. To make the loss the more galling, they took what we could least spare—the medicine-box, which they would only throw away as soon as they came to examine their booty. One of these deserters exchanged his load that morning with a boy called Baraka, who had charge of the medicine-box, because he was so careful. This was done, because with the medicine-chest were packed five large cloths and all Baraka's clothing and beads, of which he was very careful. The Waiyau also offered to carry this burden a stage to help Baraka, while he gave his own load, in which there was no cloth, in exchange. The forest was so dense and high, there was

no chance of getting a glimpse of the fugitives, who took all the dishes, a large box of powder, the flour we had purchased dearly to help us as far as the Chambezé, the tools, two guns, and a cartridge-pouch; but the medicine-chest was the sorest loss of all! I felt as if I had now received the sentence of death, like poor Bishop Mackenzie.

All the other goods I had divided, in case of loss or desertion, but had never dreamed of losing the precious quinine and other remedies; other losses and annoyances I felt as just parts of that under-current of vexations which is not wanting in even the smoothest life, and certainly not worthy of being moaned over in the experience of an explorer anxious to benefit a country and people, but this loss I feel most keenly. Every thing of this kind happens by the permission of One who watches over us with most tender care; and this may turn out for the best by taking away a source of suspicion among more superstitious, charm-dreading people farther north. I meant it as a source of benefit to my party and to the heathen.

We returned to Lisunga, and got two men off to go back to Chafunga's village, and intercept the deserters if they went there; but it is likely that, having our supply of flour, they will give our route a wide berth and escape altogether. It is difficult to say from the heart, "Thy will be done;" but I shall try. These Waiyau had few advantages. Sold into slavery in early life, they were in the worst possible school for learning to be honest and honorable; they behaved well for a long time; but, having had hard and scanty fare in Lobisa, wet and misery, in passing through dripping forests, hungry nights, and fatiguing days, their patience must have been worn out, and they had no sentiments of honor, or at least none so strong as we ought to have; they gave way to the temptation which their good conduct had led us to put in their way. Some we have come across in this journey seemed born essentially mean and base—a great misfortune to them and all who have to deal with them, but they can not be so blamable as those who have no natural tendency to meanness, and whose education has taught them to abhor it. True; yet this loss of the medicine-box gnaws at the heart terribly.

January 21st, 22d.—Remained at Lisunga—raining nearly all day; and we bought all the maëre the chief would sell. We were now forced to go on, and made for the next village to buy food. Want of food and rain are our chief difficulties now; more rain falls here on this northern slope of the upland than elsewhere; clouds come up from the north and pour down their treasures

in heavy thunder-showers, which deluge the whole country south of the edge of the plateau: the rain-clouds come from the west chiefly.

January 23d.—A march of five and three-quarter hours brought us yesterday to a village, Chibanda's stockade, where "no food" was the case, as usual. We crossed a good-sized rivulet, the Mapampa (probably ten yards wide), dashing along to the east; all the rest of the way was in dark forest. I sent off the boys to the village of Muasi to buy food; if successful, tomorrow we march for the Chambezé, on the other side of which all the reports agree in the statement that there plenty of food is to be had. We all feel weak and easily tired, and an incessant hunger teases us; so it is no wonder if so large a space of this paper is occupied by stomach affairs. It has not been merely want of nice dishes, but real biting hunger and faintness.

January 24th.—Four hours through unbroken, dark forest brought us to the Movushi, which here is a sluggish stream, winding through and filling a marshy valley a mile wide. It comes from the south-east, and falls into the Chambezé, about 2' north of our encampment. The village of Moaba is on the east side of the marshy valley of the Movuhi, and very difficult to be approached, as the water is chin-deep in several spots. I decided to make sheds on the west side, and send over for food, which, thanks to the Providence which watches over us, we found at last in a good supply of maëre and some ground-nuts; but through all this upland region the trees yielding bark-cloth, or *nyanda*, are so abundant that the people are all well clothed with it, and care but little for our cloth. Red and pink beads are in fashion, and fortunately we have red.

[We may here add a few particulars concerning beads, which form such an important item of currency all through Africa. With a few exceptions they are all manufactured in Venice. The greatest care must be exercised, or the traveler—ignorant of the prevailing fashion in the country he is about to explore—finds himself with an accumulation of beads of no more value than tokens would be if tendered in this country for coin of the realm.

Thanks to the kindness of Messrs. Levin & Co., the bead merchants, of Bevis Marks, E. C., we have been able to get some idea of the more valuable beads, through a selection made by Susi and Chuma in their warehouse. The Waiyau prefer exceedingly small beads, the size of mustard-seed, and of various colors, but they must be opaque: among them dull white chalk varieties, called "catchokolo," are valuable, besides black and

pink, named, respectively, “bububu” and “sekundereché,”=the “dregs of pombe.” One red bead, of various sizes, which has a white centre, is always valuable in every part of Africa. It is called “samisami” by the Suahélé, “chitakaraka” by the Waiyau, “mangazi,”=“blood,” by the Nyassa, and was found popular even among the Manyúéma, under the name of “masokantussi,”=“bird’s eyes.” While speaking of this distant tribe, it is interesting to observe that one peculiar long bead, recognized as common in the Manyúéma land, is only sent to the West Coast of Africa, and *never* to the East. On Chuma pointing to it as a sort found at the extreme limit explored by Livingstone, it was at once seen that he must have touched that part of Africa which begins to be within the reach of the traders in the Portuguese settlements. “Machua kanga,”=“guinea-fowl’s eyes,” is another popular variety; and the “moiompio,”=“new heart,” a large pale blue bead, is a favorite among the Wabisa; but by far the most valuable of all is a small white oblong bead, which, when strung, looks like the joints of the cane root, from which it takes its name, “salani,”=“cane.” Susi says that one pound weight of these beads would buy a tusk of ivory, at the south end of Tanganyika, so big that a strong man could not carry it more than two hours.]

January 25th.—Remain, and get our maëre ground into flour. Moaba has cattle, sheep, and goats. The other side of the Chambezé has every thing in still greater abundance; so we may recover our lost flesh. There are buffaloes in this quarter, but we have not got a glimpse of any. If game was to be had, I should have hunted; but the hopo way of hunting prevails, and we pass miles of hedges by which many animals must have perished. In passing through the forests, it is surprising to see none but old footsteps of the game; but the hopo destruction accounts for its absence. When the hedges are burned, then the manured space is planted with pumpkins and calabashes.

I observed at Chibanda’s a few green mushrooms, which, on being peeled, showed a pink, fleshy inside; they are called “chisimba;” and only one or two are put into the mortar, in which the women pound the other kinds, to give relish, it was said, to the mass: I could not ascertain what properties chisimba had when taken alone; but mushroom diet, in our experience, is good only for producing dreams of the roast-beef of by-gone days. The saliva runs from the mouth in these dreams, and the pillow is wet with it in the mornings.

These Babisa are full of suspicion; every thing has to be paid for, accordingly, in advance, and we found that giving a present to a chief is only putting it in his power to cheat us out of a sup-

per. They give nothing to each other for nothing; and if this is enlargement of mind produced by commerce, commend me to the untrading African!

Fish now appear in the rivulets. Higher altitudes have only small things, not worth catching.

An owl makes the woods resound by night and early morning with his cries, which consist of a loud, double-initial note, and then a succession of lower descending notes. Another new bird, or at least new to me, makes the forests ring.

When the vultures see us making our sheds, they conclude that we have killed some animal; but after watching a while, and seeing no meat, they depart. This is suggestive of what other things prove, that it is only by sight they are guided.*

With respect to the native head-dresses, the coloring matter, "nkola," which seems to be cam-wood, is placed as an ornament on the head, and some is put on the bark-cloth to give it a pleasant appearance. The tree, when cut, is burned to bring out the strong color, and then, when it is developed, the wood is powdered.

The gum-copal-trees now pour out gum where wounded, and I have seen masses of it fallen on the ground.

January 26th.—Went northward along the Movushi, near to its confluence with Chambezé, and then took lodging in a deserted temporary village. In the evening I shot a poku, or tsébula—full-grown male. It measured, from snout to insertion of tail, five feet three inches; tail, one foot; height at withers, three feet; circumference of chest, five feet; face to insertion of horns, nine and a half inches; horns measured on curve, sixteen inches. Twelve rings on horns, and one had a ridge behind, half an inch broad, half an inch high, and tapering up the horn; probably accidental. Color: reddish-yellow, dark points in front of foot and on the ears, belly nearly white. The shell went through from behind the shoulder to the spleen, and burst on the other side, yet he ran one hundred yards. I felt very thankful to the Giver of all good for this meat.

January 27th.—A set-in rain all the morning, but having meat

* The experience of all African sportsmen tends toward the same conclusion. Vultures probably have their beats high overhead in the sky, too far to be seen by the eye. From this altitude they can watch a vast tract of country; and whenever the disturbed movements of game are observed they draw together, and for the first time are seen wheeling about at a great height over the spot. So soon as an animal is killed, every tree is filled with them; but the hunter has only to cover the meat with boughs or reeds, and the vultures are entirely at a loss—hidden from view, it is hidden altogether: the idea that they are attracted by their keen sense of smell is altogether erroneous.—ED.

we were comfortable in the old huts. In changing my dress this morning, I was frightened at my own emaciation.

January 28th.—We went five miles along the Movushi and the Chambezé to a crossing-place said to avoid three rivers on the other side, which require canoes just now, and have none. Our latitude $10^{\circ} 34' S$. The Chambezé was flooded with clear water, but the lines of bushy trees, which showed its real banks, were not more than forty yards apart; it showed its usual character of abundant animal life in its waters and on its banks, as it wended its way westward. The canoe-man was excessively suspicious: when prepayment was acceded to, he asked a piece more; and, although he was promised full payment as soon as we were all safely across, he kept the last man on the south side as a hostage for this bit of calico: he then ran away. They must cheat each other sadly.

Went northward, wading across two miles of flooded flats on to which the *Clarias capensis*, a species of siluris, comes to forage out of the river. We had the Likindazi, a sedgy stream, with hippopotami, on our right. Slept in forest without seeing any one. Then next day we met with a party who had come from their village to look for us. We were now in Lobemba, but these villagers had nothing but hopes of plenty at Chitapangwa's. This village had half a mile of ooze and sludgy marsh in front of it, and a stockade as usual. We observed that the people had great fear of animals at night, and shut the gates carefully, of even temporary villages. When at Molembe (Chitapangwa's village) afterward, two men were killed by a lion, and great fear of crocodiles was expressed by our canoe-man at the Chambezé, when one washed in the margin of that river. There was evidence of abundance of game, elephants, and buffaloes, but we saw none.

January 29th.—When near our next stage end, we were shown where lightning had struck; it ran down a gum-copal-tree without damaging it, then ten yards horizontally, and, dividing there into two streams, it went up an ant-hill: the withered grass showed its course very plainly, and next day (31st), on the banks of the Mabula, we saw a dry tree which had been struck; large splinters had been riven off and thrown a distance of sixty yards in one direction, and thirty yards in another: only a stump was left, and patches of withered grass where it had gone horizontally.

January 30th.—Northward through almost trackless dripping forests and across oozing bogs.

January 31st.—Through forest, but gardens of larger size than

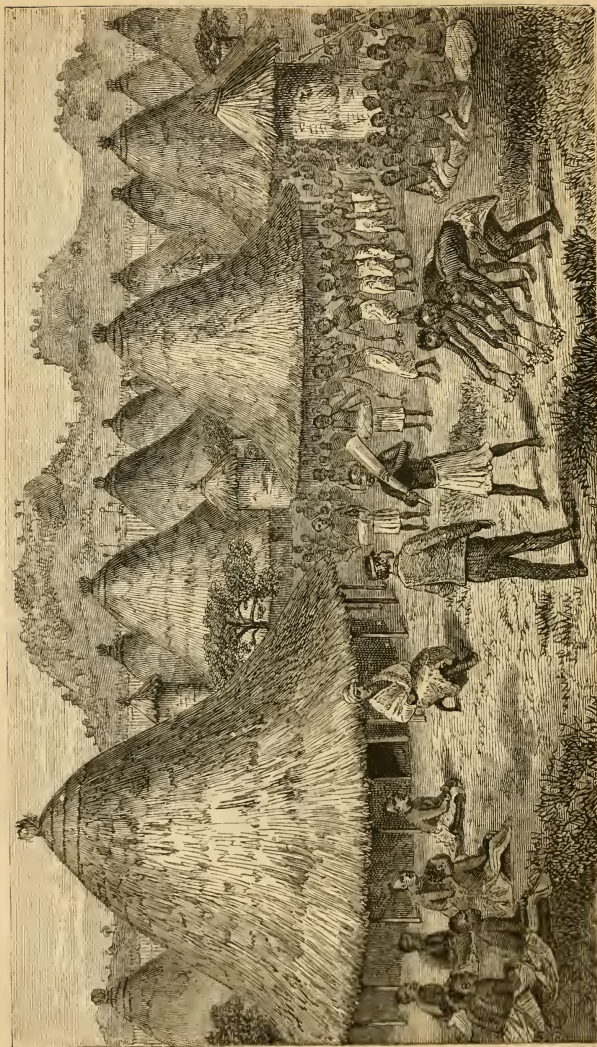
in Lobisa now appear. A man offered a thick bar of copper for sale, a foot by three inches. The hard-leaved acacia and mohempi abound. The valleys, with the oozes, have a species of grass, having pink seed-stalks and yellow seeds: this is very pretty. At midday we came to the Lopiri, the rivulet which waters Chitapanga's stockade, and soon after found that his village has a triple stockade, the inner being defended also by a deep broad ditch and hedge of a solanaceous thorny shrub. It is about two hundred yards broad and five hundred long. The huts not planted very closely.

The rivulets were all making for the Chambezé. They contain no fish, except very small ones—probably fry. On the other, or western side of the ridge, near which "Malemba" is situated, fish abound worth catching.



Chitapangwa.

Chitapangwa, or Motoka, as he is also called, sent to inquire if we wanted an audience. "We must take something in our hands the first time we came before so great a man." Being tired from marching, I replied, "Not till the evening," and sent notice at 5 P.M. of my coming. We passed through the inner stockade, and then on to an enormous hut, where sat Chitapangwa, with



CHITAPANGWA RECEIVING DR. LIVINGSTONE.

three drummers and ten or more men, with two rattles in their hands. The drummers beat furiously, and the rattlers kept time to the drums, two of them advancing and receding in a stooping posture, with rattles near the ground, as if doing the chief obeisance, but still keeping time with the others. I declined to sit on the ground, and an enormous tusk was brought for me. The chief saluted courteously. He has a fat, jolly face, and legs loaded with brass and copper leglets. I mentioned our losses by the desertion of the Waiyau, but his power is merely nominal, and he could do nothing. After talking a while, he came along with us to a group of cows, and pointed out one. "That is yours," said he. The tusk on which I sat was sent after me, too, as being mine, because I had sat upon it. He put on my cloth as token of acceptance, and sent two large baskets of sorghum to the hut afterward, and then sent for one of the boys to pump him after dark.



Chitapangwa's Wives.

February 1st, 1867.—We found a small party of black Arab slave-traders here from Bagamoio on the coast; and as the chief had behaved handsomely, as I thought, I went this morning and gave him one of our best cloths; but when we were about to kill

the cow, a man interfered and pointed out a smaller one. I asked if this was by the orders of the chief. The chief said that the man had lied, but I declined to take any cow at all if he did not give it willingly.

The slavers, the head man of whom was Magaru Mafupi, came and said that they were going off on the 2d (February 2d); but by payment I got them to remain a day, and was all day employed in writing dispatches.

February 3d.—Magaru Mafupi left this morning with a packet of letters, for which he is to get Rs. 10 at Zanzibar.* They came by a much shorter route than we followed, in fact nearly due west or south-west; but not a soul would tell us of this way of coming into the country when we were at Zanzibar. Bagamoio is only six hours north of Kurdary Harbor. It is possible that the people of Zanzibar did not know of it themselves, as this is the first time they have come so far. The route is full of villages and people who have plenty of goats, and very cheap. They number fifteen stations, or sultans, as they call the chiefs, and will be at Bagamoio in two months: 1. Chasa; 2. Lombé; 3. Ucheré; 4. Nyamiro; 5. Zonda; 6. Zambi; 7. Lioti; 8. Méreré; 9. Kirangabana; 10. Nkongozi; 11. Sombogo; 12. Suré; 13. Lomolasenga; 14. Kapass; 15. Chanzé. They are then in the country adjacent to Bagamoio. Some of these places are two or three days apart from each other.

They came to three large rivers: 1. Wembo; 2. Luaha; 3. Luvo; but I had not time to make further inquiries. They had one of Speke's companions to Tanganyika with them, named Janjé, or Janja, who could imitate a trumpet by blowing into the palm of his hand. I ordered another supply of cloth and beads, and I sent for a small quantity of coffee, sugar, candles, French preserved meats, a cheese tin, six bottles of Port-wine, quinine, calomel, and resin of jalap, to be sent to Ujiji.

I proposed to go a little way east with this route to buy goats, but Chitapangwa got very angry, saying I came only to show my things, and would buy nothing; he then altered his tone, and requested me to take the cow first presented and eat it, and as we were all much in need, I took it. We were to give only what we liked in addition; but this was a snare, and when I gave two more cloths he sent them back, and demanded a blanket. The boys alone have blankets; so I told him these were not slaves, and I could not take from them what I had once given. Though

* These letters reached England safely.

it is disagreeable to be thus victimized, it is the first time we have tasted fat for six weeks and more.

February 6th.—Chitapangwa came with his wife to see the instruments, which I explained to them as well as I could, and the books, as well as the Book of Books; and to my statements he made intelligent remarks. The boys are sorely afraid of him. When Abraham does not like to say what I state, he says to me, "I don't know the proper word;" but when I speak without him, he soon finds them. He and Simon thought that talking in a cringing manner was the way to win him over, so I let them try it with a man he sent to communicate with us; and the result was this fellow wanted to open their bundles, pulled them about, and kept them awake most of the night. Abraham came at night: "Sir, what shall I do? they won't let me sleep." "You have had your own way," I replied, "and must abide by it." He brought them over to me in the morning, but I soon dismissed both him and them.

February 7th.—I sent to the chief either to come to me or say when I should come to him and talk; the answer I got was that he would come when shaved, but he afterward sent a man to hear what I had to advance; this I declined, and when the rain ceased I went myself.

On coming into his hut, I stated that I had given him four times the value of his cow; but if he thought otherwise, let us take the four cloths to his brother Moamba, and if he said that I had not given enough, I would buy a cow and send it back. This he did not relish at all. "Oh, great Englishman! why should we refer a dispute to an inferior? I am the great chief of all this country. Ingleze mokolu, you are sorry that you have to give so much for the ox you have eaten. You would not take a smaller, and therefore I gratified your heart by giving the larger; and why should not you gratify my heart by giving cloth sufficient to cover me, and please me?"

I said that my cloths would cover him, and his biggest wife too, all over; he laughed at this, but still held out; and as we have meat, and he sent maize and calabashes, I went away. He turns round now, and puts the blame of greediness on me. I can not enter into his ideas, or see his point of view; can not, in fact, enter into his ignorance, his prejudices, or delusions, so it is impossible to pronounce a true judgment. One who has no humor can not understand one who has: this is an equivalent case.

Rain and clouds so constantly, I could not get our latitude till last night, $10^{\circ} 14' 6''$ S. On 8th got lunars. Long. $31^{\circ} 46' 45''$ E.

Altitude above sea, four thousand seven hundred feet, by boiling-point and barometer.

February 8th.—The chief demands one of my boxes and a blanket; I explain that one day's rain would spoil the contents; and the boys who have blankets, not being slaves, I can not take from them what I have given. I am told that he declares that he will take us back to the Loangwa, make war, and involve us in it, deprive us of food, etc.: this succeeds in terrifying the boys. He thinks that we have some self-interest to secure in passing through the country, and therefore he has a right to a share in the gain. When told it was for a public benefit, he pulled down the under lid of the right eye.* He believes we shall profit by our journey, though he knows not in what way.

It is possibly only a coincidence, but no sooner do we meet with one who accompanied Speke and Burton to Tanganyika, than the system of mulcting commences. I have no doubt but that Janjé told this man how his former employers paid down whatever was demanded of them.

February 10th.—I had service in the open air, many looking on, and spoke afterward to the chief, but he believes nothing save what Speke and Burton's man has told him. He gave us a present of corn and ground-nuts, and says he did not order the people not to sell grain to us. We must stop and eat green maize. He came after evening service, and I explained a little to him, and showed him wood-cuts in the "Bible Dictionary," which he readily understood.

February 11th.—The chief sent us a basket of hippopotamus flesh from the Chambezé, and a large one of green maize. He says the three cloths I offered are still mine: all he wants is a box and blanket; if not a blanket, a box must be given, a tin one. He keeps out of my way, by going to the gardens every morning. He is good-natured, and our intercourse is a laughing one; but the boys betray their terrors in their tone of voice, and render my words powerless.

The black and white, and the brownish-gray water wagtails are remarkably tame. They come about the huts and even into them, and no one ever disturbs them. They build their nests about the huts. In the Bechuana country, a fine is imposed on any man whose boys kill one, but why, no one can tell me. The

* It seems almost too ridiculous to believe that we have here the exact equivalent of the school-boy's demonstrative "Do you see any green in my eye?" Nevertheless, it looks wonderfully like it!—Ed.

boys with me aver that they are not killed, because the meat is not eaten! or because they are so tame!

February 13th.—I gave one of the boxes at last, Chitapangwa offering a heavy Arab wooden one to preserve our things, which I declined to take, as I parted with our own partly to lighten a load. Abraham unwittingly told me that he had not given me the chief's statement in full when he pressed me to take his cow: It was, "Take and eat the one you like, and give me a blanket." Abraham said, "He has no blanket." Then he said to me, "Take it and eat it, and give him any pretty thing you like." I was thus led to mistake the chief, and he, believing that he had said explicitly he wanted a blanket for it, naturally held out. It is difficult to get these lads to say what one wants uttered: either with enormous self-conceit, they give different, and, as they think, better statements, suppress them altogether, or return false answers: this is the great and crowning difficulty of my intercourse.

I got ready to go, but the chief was very angry, and came with all his force, exclaiming that I wanted to leave against his will and power, though he wished to adjust matters, and send me away nicely. He does not believe that we have no blankets. It is hard to be kept waiting here, but all may be for the best: it has always turned out so, and I trust in Him on whom I can cast all my cares. The Lord look on this, and help me! Though I have these nine boys, I feel quite alone.

I gave the chief some seeds, pease, and beans, for which he seemed thankful, and returned little presents of food and beer frequently. The beer of maëre is stuffed full of the growing grain as it begins to sprout: it is as thick as porridge, very strong and bitter, and goes to the head, requiring a strong digestion to overcome it.

February 14th.—I showed the chief one of the boys' blankets, which he is willing to part with for two of our cloths, each of which is larger than it; but he declines to receive it, because we have new ones. I invited him, since he disbelieved my assertions, to look in our bales, and if he saw none, to pay us a fine for the insult: he consented, in a laughing way, to give us an ox. All our personal intercourse has been of the good-natured sort. It is the communications to the boys by three men who are our protectors, or rather spies, that is disagreeable; I will not let them bring these fellows near me.

February 15th.—He came early in the morning, and I showed that I had no blanket, and he took the old one, and said that the

affair was ended. A long misunderstanding would have been avoided, had Abraham told me fully what the chief said at first.

February 16th.—The chief offered me a cow for a piece of red serge, and after a deal of talk and Chitapangwa swearing that no demand would be made after the bargain was concluded, I gave the serge, a cloth, and a few beads for a good fat cow. The serge was two fathoms, a portion of that which Miss Coutts gave me when leaving England in 1858.

The chief is not so bad, as the boys are so cowardly. They assume a chirping, piping tone of voice in speaking to him, and do not say what at last has to be said, because, in their cringing souls, they believe they know what should be said better than I do. It does not strike them in the least that I have grown gray among these people; and it is immense conceit in mere boys to equal themselves to me. The difficulty is greater, because when I do ask their opinions I only receive the reply, "It is as you please, sir." Very likely some men of character may arise and lead them; but such as I have would do little to civilize.

February 17th.—Too ill with rheumatic fever to have service; this is the first attack of it I ever had—and no medicine! but I trust in the Lord, who healeth his people.

February 18th.—This cow we divided at once. The last one we cooked, and divided a full, hearty meal to all every evening.

The boom—booming of water dashing against or over the rocks—is heard at a good distance from most of the burns in this upland region; hence it is never quite still.

The rocks here are argillaceous schist, red and white. (*Keel, Scotticé.*)

February 19th.—Chitapangwa begged me to stay another day, that one of the boys might mend his blanket; it has been worn every night since April, and I, being weak and giddy, consented. A glorious day of bright sunlight after a night's rain. We scarcely ever have a twenty-four hours without rain, and never half that period without thunder.

The cam-wood (?) is here called molombwa, and grows very abundantly. The people take the bark, boil, and grind it fine: it is then a splendid blood-red, and they use it extensively as an ornament, sprinkling it on the bark-cloth, or smearing it on the head. It is in large balls, and is now called mkola. The tree has pinnated, alternate lanceolate leaves, and attains a height of forty or fifty feet, with a diameter of fifteen or eighteen inches, finely and closely veined above, more widely beneath.

I am informed by Abraham that the nyumbo (numbo, or mum-

bo) is easily propagated by cuttings, or by cuttings of the roots. A bunch of the stalks is preserved in the soil for planting next year, and small pieces are cut off, and take root easily; it has a pea-shaped flower, but we never saw the seed. It is very much better here than I have seen it elsewhere; and James says that in his country it is quite white, and better still; what I have seen is of a greenish tinge after it is boiled.

[Among the articles brought to the coast, the men took care not to lose a number of seeds which they found in Dr. Livingstone's boxes after his death. These have been placed in the hands of the authorities at Kew, and we may hope that in some instances they have maintained vitality.

It is a great pity that there is such a lack of enterprise in the various European settlements on the East Coast of Africa. Were it otherwise, a large trade in valuable woods and other products would assuredly spring up. Ebony and lignum-vitæ abound; Dr. Livingstone used hardly any other fuel when he navigated the *Pioneer*, and no wood was found to make such "good steam." India-rubber may be had for the collecting, and we see that even the natives know some of the dye-woods, besides which the palm-oil-tree is found; indigo is a weed everywhere, and coffee is indigenous.]

CHAPTER VIII.

Chitapangwa's parting Oath.—Course laid for Lake Tanganyika.—Moamba's Village.—Another Water-shed.—The Babemba Tribe.—Ill with Fever.—Threatening Attitude of Chibué's people.—Continued Illness.—Reaches Cliffs overhanging Lake Liemba.—Extreme Beauty of the Scene.—Dangerous Fit of Insensibility.—Leaves the Lake.—Pernambuco Cotton.—Rumors of War between Arabs and Nsama.—Reaches Chitimba's Village.—Presents Sultan's Letter to principal Arab Hamees.—The War in Itawa.—Geography of the Arabs.—Ivory Traders and Slave-dealers.—Appeal to the Koran.—Gleans Intelligence of the Wasongo to the eastward, and their Chief, Meréré.—Hamees sets out against Nsama.—Tedious Sojourn.—Departure for Ponda.—Native Cupping.

February 20th, 1867.—I TOLD the chief before starting that my heart was sore, because he was not sending me away so cordially as I liked. He at once ordered men to start with us, and gave me a brass knife with ivory sheath, which he had long worn, as a memorial. He explained that we ought to go north, as, if we made easting, we should ultimately be obliged to turn west, and all our cloth would be expended ere we reached the Lake Tanganyika: he took a piece of clay off the ground and rubbed it on his tongue, as an oath that what he said was true, and came along with us to see that all was right; and so we parted.

We soon ascended the plateau, which incloses with its edge the village and stream of Molemba. Wild pigs are abundant, and there are marks of former cultivation. A short march brought us to an ooze, surrounded by hedges, game-traps, and pit-falls, where, as we are stiff and weak, we spend the night. Rocks abound of the same dolomite kind as on the ridge farther south, between the Loangwa and Chambezé, covered, like them, with lichens, orchids, euphorbias, and upland vegetation, hard-leaved acacias, rhododendrons, masukos. The gum-copal-tree, when perforated by a grub, exudes from branches no thicker than one's arm masses of soft, glucy-looking gum, brownish-yellow, and light gray, as much as would fill a soup-plate. It seems to yield this gum only in the rainy season, and now all the trees are full of sap and gum.

February 21st.—A night with loud and near thunder, and much heavy rain, which came through the boys' sheds. Roads all plashy, or running with water, oozes full, and rivulets overflowing; rocks of dolomite jutting out here and there. I noticed growing here

a spikenard-looking shrub, six feet high, and a foot in diameter. The path led us west against my will. I found one going north; but the boys pretended that they did not see my mark, and went west, evidently afraid of incurring Moamba's displeasure by passing him. I found them in an old hut, and made the best of it by saying nothing. They said that they had wandered; that was, they had never left the west-going path.

February 22d.—We came to a perennial rivulet running north, the Merungu. Here we met Moamba's people, but declined going to his village, as huts are disagreeable; they often have vermin, and one is exposed to the gaze of a crowd through a very small door-way. The people, in their curiosity, often make the place dark, and the impudent ones offer characteristic remarks, then raise a laugh, and run away.

We encamped on the Merungu's right bank in forest, sending word to Moamba that we meant to do so. He sent a deputation, first of all his young men, to bring us; then old men; and lastly he came himself, with about sixty followers. I explained that I had become sick by living in a little hut at Molemba; that I was better in the open air; that huts contained vermin; and that I did not mean to remain any while here, but go on our way. He pressed us to come to his village, and gave us a goat and kid, with a huge calabashful of beer. I promised to go over and visit him next day, and went accordingly.

February 23d.—Moamba's village was a mile off, and on the left bank of the Merengé, a larger stream than the Merungu, flowing north, and having its banks and oozes covered with fine, tall, straight, ever-green trees. The village is surrounded with a stockade, and a dry ditch some fifteen or twenty feet wide, and as many deep. I had a long talk with Moamba, a big, stout, public-house-looking person, with a slight outward cast in his left eye, but intelligent and hearty. I presented him with a cloth; and he gave me as much maëre meal as a man could carry, with a large basket of ground-nuts. He wished us to come to the Merengé, if not into his village, that he might see and talk with me; I also showed him some pictures in Smith's "Bible Dictionary," which he readily understood, and I spoke to him about the Bible. He asked me "to come next day and tell him about prayer to God:" this was a natural desire after being told that we prayed.

He was very anxious to know why we were going to Tanganika; for what we came; what we should buy there; and if I had any relations there. He then showed me some fine large

tusks eight feet six in length. "What do you wish to buy, if not slaves or ivory?" I replied that the only thing I had seen worth buying was a fine fat chief like him, as a specimen, and a woman feeding him, as he had, with beer. He was tickled at this; and said that when we reached our country I must put fine clothes on him. This led us to speak of our climate, and the production of wool.

February 24th.—I went over after service, but late, as the rain threatened to be heavy. A case was in process of hearing, and one old man spoke an hour on end, the chief listening all the while with the gravity of a judge. He then delivered his decision in about five minutes, the successful litigant going off lullilooing. Each person, before addressing him, turns his back to him and lies down on the ground, elapping the hands: this is the common mode of salutation. Another form here in Lobemba is to rattle the arrows or an arrow on the bow, which all carry. We had a little talk with the chief; but it was late before the cause was heard through. He asked us to come and spend one night near him on the Merengé, and then go on; so we came over in the morning to the vicinity of his village. A great deal of copper wire is here made, the wire-drawers using for one part of the process a seven-inch cable. They make very fine wire, and it is used chiefly as leglets and anklets; the chief's wives being laden with them, and obliged to walk in a stately style, from the weight: the copper comes from Katanga.

February 26th.—The chief wishes to buy a cloth with two goats, but his men do not bring them up quickly. Simon, one of the boys, is ill of fever, and this induces me to remain, though moving from one place to another is the only remedy we have in our power.

With the chief's men we did not get on well, but with himself all was easy. His men demanded prepayment for canoes to cross the River Loömbé; but in the way that he put it, the request was not unreasonable, as he gave a man to smooth our way and get canoes, or whatever else was needed, all the way to Chibué's. I gave a cloth when he put it thus, and he presented a goat, a spear ornamented with copper-wire, abundance of meal, and beer, and numbo; so we parted good friends, as his presents were worth the cloth.

Holding a north-westerly course, we met with the Chikoshó flowing west, and thence came to the Likombé by a high ridge called Losauswa, which runs a long way westward. It is probably a water-shed between streams going to the Chambezé and those that go to the northern rivers.

We have the Locopa, Loömbé, Nikélongé, then Lofubu or Lovu; the last goes north into Liembe, but accounts are very confused. The Chambezé rises in the Mambivé country, which is north-east of Moamba, but near to it.

The forest through which we passed was dense, but scrubby; trees unhealthy, and no drainage except through oozes. On the keel, which forms a clay soil, the rain runs off, and the trees attain a large size. The roads are not soured by the slow process of the ooze drainage. At present all the slopes having loamy or sandy soil are oozes, and full to overflowing; a long time is required for them to discharge their contents. The country generally may be called one covered with forest.

March 6th, 1867.—We came, after a short march, to a village on the Molilanga, flowing east into the Loömbé: here we meet with bananas for the first time, called, as in Lunda, nkondé. A few trophies from Mazitu are hung up: Chitapangwa had twenty-four skulls ornamenting his stockade. The Babemba are decidedly more warlike than any of the tribes south of them: their villages are stockaded, and have deep dry ditches round them; so it is likely that Mochimbé will be effectually checked, and forced to turn his energies to something else than to marauding.

Our man from Moamba here refused to go farther, and we were put on the wrong track by the head man, wading through three marshes, each at least half a mile broad. The people of the first village we came to shut their gates on us, then came running after us; but we declined to enter their village: it is a way of showing their independence. We made our sheds on a height in spite of their protests. They said that the gates were shut by the boys; but when I pointed out the boy who had done it, he said that he had been ordered to do it by the chief. If we had gone in now we should have been looked on as having come under considerable obligations.

March 8th.—We went on to a village on the Loömbé, where the people showed an opposite disposition; for not a soul was in it—all were out at their farms. When the good-wife of the place came, she gave us all huts, which saved us from a pelting shower. The boys herding the goats did not stir as we passed down the sides of the lovely valley. The Loömbe looks a sluggish stream from a distance. The herdsman said we were welcome, and he would show the crossing next day; he also cooked some food for us.

Guided by our host, we went along the Loömbé westward till we reached the bridge (rather a rickety affair), which, when the

water is low, may be used as a weir. The Loömbé main stream is sixty-six feet wide, six feet deep, with at least two hundred feet of flood beyond it. The water was knee-deep on the bridge, but clear; the flooded part beyond was waist-deep, and the water flowing fast.

All the people are now transplanting tobacco from the spaces under the eaves of the huts into the fields. It seems unable to bear the greater heat of summer: they plant also a kind of liranda, proper for the cold weather. We thought that we were conferring a boon in giving pease, but we found them generally propagated all over the country already, and in the cold time too. We went along the Diola River to an old hut, and made a fire; thence across country to another river, called Löendawé, six feet wide and nine feet deep.

March 10th.—I have been ill of fever ever since we left Momba's; every step I take jars in the chest, and I am very weak; I can scarcely keep up the march, though formerly I was always first, and had to hold in my pace, not to leave the people altogether. I have a constant singing in the ears, and can scarcely hear the loud tick of the chronometers. The appetite is good, but we have no proper food, chiefly maëre meal or beans, or mapemba or ground-nuts, rarely a fowl.

The country is full of hopo-hedges, but the animals are harassed, and we never see them.

March 11th.—Detained by a set-in rain. Marks on masses of dolomite elicited the information that a party of Londa smiths came once to this smelting-ground and erected their works here. We saw an old iron furnace, and masses of hematite, which seems to have been the ore universally used.

March 12th.—Rain held us back for some time, but we soon reached Chibué, a stockaded village. Like them all, it is situated by a stream, with a dense clump of trees on the water-side of some species of mangrove. They attain large size, have soft wood, and succulent leaves; the roots intertwine in the mud, and one has to watch that he does not step where no roots exist, otherwise he sinks up to the thigh. In a village the people feel that we are on their property, and crowd upon us inconveniently; but outside, where we usually erect our sheds, no such feeling exists: we are each on a level, and they do not take liberties.

The Balungu are marked by three or four little knobs on the temples, and the lobes of the ears are distended by a piece of wood, which is ornamented with beads; bands of beads go across the forehead and hold up the hair.

Chibué's village is at the source of the Lokwéna, which goes north and north-east; a long range of low hills is on our north-east, which are the Mambwé, or part of them. The Chambezé rises in them, but farther south. Here the Lokwéna, round whose source we came on starting this morning to avoid wet feet, and all others north and west of this, go to the Lofu or Lobu, and into Liemba Lake. Those from the hills on our right go east into the Loanzu, and so into the Lake.

March 15th.—We now are making for Kasonso, the chief of the Lake, and a very large country all around it, passing the Lochenjé, five yards wide, and knee-deep, then to the Chañumba. All flow very rapidly just now, and are flooded with clean water. Every one carries an axe, as if constantly warring with the forest. My long-continued fever ill disposes me to enjoy the beautiful landscape. We are evidently on the ridge, but people have not a clear conception of where the rivers run.

March 19th.—A party of young men came out of the village near which we had encamped, to force us to pay something for not going into their village. "The son of a great chief ought to be acknowledged," etc. They had their bows and arrows with them, and all ready for action. I told them we had remained near them because they said we could not reach Kasonso that day. Their head man had given us nothing. After talking a while, and threatening to do a deal to-morrow, they left, and, through an Almighty Providence, nothing was attempted. We moved on north-west in forest, with long, green, tree-covered slopes on our right, and came to a village of Kasonso in a very lovely valley. Great green valleys were now scooped out, and many, as the Kakanza, run into the Lovu.

March 20th.—The same features of country prevailed; indeed it was impossible to count the streams flowing north-west. We found Kasonso situated at the confluence of two streams; he shook hands a long while, and seems a frank sort of man. A shower of rain set the driver-ants on the move, and about two hours after we had turned in we were overwhelmed by them. They are called kalandu, or nkalanda.

To describe this attack is utterly impossible. I wakened covered with them: my hair was full of them. One by one they cut into the flesh, and the more they are disturbed, the more vicious are their bites; they become quite insolent. I went outside the hut, but there they swarmed everywhere; they covered the legs, biting furiously; it is only when they are tired that they leave off.

One good trait of the Balungu up here is, they retire when they see food brought to any one; neither Babisa nor Makoa had this sense of delicacy: the Babemba are equally polite.

We have descended considerably into the broad valley of the Lake, and it feels warmer than on the heights. Cloth here is more valuable, inasmuch as bark-cloth is scarce. The skins of goats and wild animals are used, and the kilt is very diminutive among the women.

March 22d.—Cross Loéla, thirty feet wide and one deep, and meet with tsetse-fly; though we have seen none since we left Chitapangwa's. Kasonso gave us a grand reception, and we saw men present from Tanganyika. I saw cassava here, but not in plenty.

March 28th.—Set-in rain, and Chuma fell ill. There are cotton bushes of very large size here, of the South American kind. After sleeping in various villages and crossing numerous streams, we came to Mombo's village, near the ridge overlooking the Lake.

March 31st, April 1st, 1867.—I was too ill to march through. I offered to go on the 1st, but Kasonso's son, who was with us, objected. We went up a low ridge of hills at its lowest part, and soon after passing the summit the blue water loomed through the trees. I was detained, but soon heard the boys firing their muskets on reaching the edge of the ridge, which allowed of an undisturbed view. This is the south-eastern end of Liemba, or, as it is sometimes called, Tanganyika.* We had to descend at least two thousand feet before we got to the level of the Lake. It seems about eighteen or twenty miles broad, and we could see about thirty miles up to the north. Four considerable rivers flow into the space before us. The nearly perpendicular ridge of about two thousand feet extends with breaks all around, and there, embosomed in tree-covered rocks, reposes the Lake peacefully in the huge cup-shaped cavity.

I never saw any thing so still and peaceful as it lies all the morning. About noon a gentle breeze springs up, and causes the waves to assume a bluish tinge. Several rocky islands rise in the eastern end, which are inhabited by fishermen, who capture abundance of fine large fish, of which they enumerate about twenty-four species. In the north it seems to narrow into a gateway; but the people are miserably deficient in geographical knowledge, and can tell us nothing about it. They suspect us, and we can not get information, or indeed much of any thing else.

* It subsequently proved to be the southern extremity of this great lake.

I feel deeply thankful at having got so far. I am excessively weak; can not walk without tottering, and have constant singing in the head, but the Highest will lead me farther.

Latitude of the spot we touched at first, April 2d, 1867: Lat. $8^{\circ} 46' 54''$ S., long. $31^{\circ} 57'$; but I only worked out (and my head is out of order) one set of observations. Height above level of the sea over two thousand eight hundred feet, by boiling-point thermometers and barometer. The people will not let me sound the Lake.

After being a fortnight at this Lake, it still appears one of surpassing loveliness. Its peacefulness is remarkable, though at times it is said to be lashed up by storms. It lies in a deep basin whose sides are nearly perpendicular, but covered well with trees; the rocks which appear are bright-red argillaceous schist; the trees at present all green: down some of these rocks come beautiful cascades, and buffaloes, elephants, and antelopes wander and graze on the more level spots, while lions roar by night. The level place below is not two miles from the perpendicular. The village (Pambété), at which we first touched the Lake, is surrounded by palm-oil-trees—not the stunted ones of Lake Nyassa, but the real West Coast palm-oil-tree,* requiring two men to carry a bunch of the ripe fruit. In the morning and evening huge crocodiles may be observed quietly making their way to their feeding-grounds; hippopotami snort by night and at early morning.

After I had been a few days here I had a fit of insensibility, which shows the power of fever without medicine. I found myself floundering outside my hut, and unable to get in; I tried to lift myself from my back by laying hold of two posts at the entrance, but when I got nearly upright I let them go, and fell back heavily on my head on a box. The boys had seen the wretched state I was in, and hung a blanket at the entrance of the hut, that no stranger might see my helplessness: some hours elapsed before I could recognize where I was.

As for these Balungu, as they are called, they have a fear of us; they do not understand our objects, and they keep aloof. They promise every thing and do nothing. But for my excessive weakness we should go on, but we wait for a recovery of strength.

As people, they are greatly reduced in numbers by the Mazitu, who carried off very large numbers of the women, boys, girls, and children. They train, or like to see the young men arrayed as Mazitu, but it would be more profitable if they kept them to agri-

* Elais, sp. (?).

culture. They are all excessively polite. The clapping of hands on meeting is something excessive, and then the string of salutations that accompany it would please the most fastidious Frenchman. It implies real politeness; for, in marching with them, they always remove branches out of the path, and indicate stones or stumps in it carefully to a stranger; yet we can not prevail on them to lend carriers to examine the Lake or to sell goats, of which, however, they have very few, and all on one island.

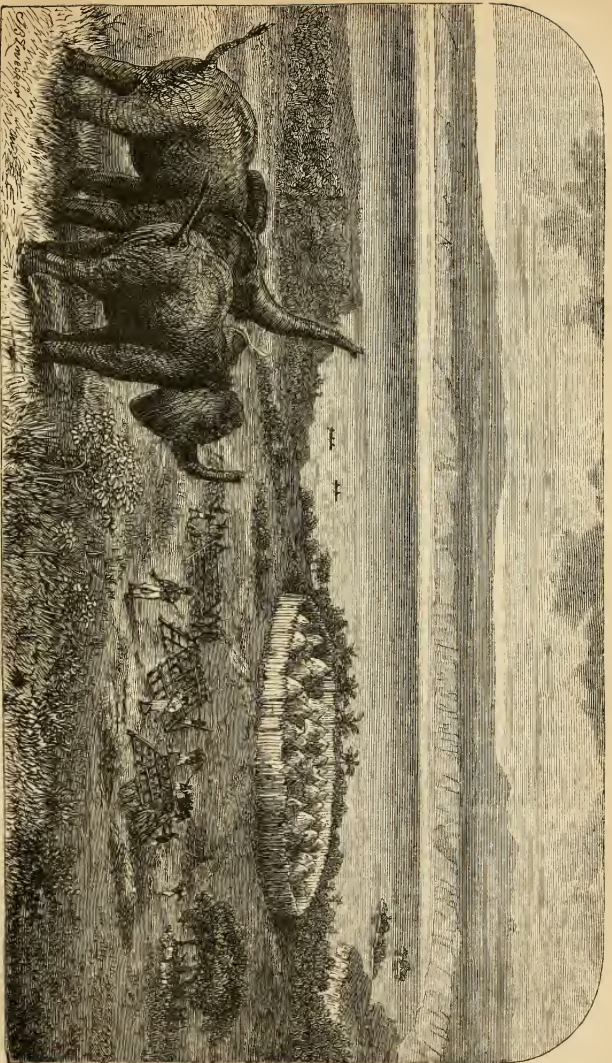
The Lake discharges its water north-westward, or rather north-north-westward. We observe weeds going in that direction; and as the Lonzua, the Kowé, the Kapata, the Luazé, the Kalambwé, flow into it near the east end, and the Lovu, or Lofubu, or Lofu, from the south-west near the end, it must find an exit for so much water. All these rivers rise in or near the Mambwé country, in lat. 10° S., where, too, the Chambezé rises. Liemba is said to remain of about the same size as we go north-west; but this we shall see for ourselves.

Elephants come all about us. One was breaking trees close by. I fired into his ear without effect: I am too weak to hold the gun steadily.

April 30th.—We begin our return march from Liemba. Slept at a village on the Lake, and went on next day to Pambété, where we first touched it. I notice that here the people pound tobacco-leaves in a mortar after they have undergone partial fermentation by lying in the sun; then they put the mass in the sun to dry for use.

The reason why no palm-oil-trees grow farther east than Pambété is said to be the stony soil there; and this seems a valid one, for it loves rich loamy meadows.

May 1st, 1867.—We intended to go north-west to see whether this Lake narrows or not; for all assert that it maintains its breadth such as we see it beyond Pemba as far as they know it; but when about to start, the head man and his wife came and protested so solemnly that by going north-west we should walk into the hands of a party of Mazitu there, that we deferred our departure. It was not with a full persuasion of the truth of the statement that I consented, but we afterward saw good evidence that it was true, and that we were saved from being plundered. These marauders have changed their tactics; for they demand so many people, and so many cloths, and then leave. They made it known that their next scene of mulcting would be Mombo's village, and there they took twelve people—four slaves, and many cloths, then went south to the hills they inhabit. A strict



THE VILLAGE ON LAKE TANGANYIKA.

watch was kept on their movements by our head man and his men. They trust to fleeing into a thicket on the west of the village, should the Mazitu come.

I have been informed on good authority that Kasonso was on his way to us when news arrived that his young son had died. He had sent on beer and provisions for us; but the Mazitu intervening, they were consumed.

The Mazitu having left, we departed, and slept half-way up the ridge. I had another fit of insensibility last night: the muscles of the back lose all power,* and there is constant singing in the ears, and inability to do the simplest sum. Cross the Aeezé (which makes the water-fall), fifteen yards wide and knee-deep. The streams like this are almost innumerable.

Mombo's village. It is distressingly difficult to elicit accurate information about the Lake and rivers, because the people do not think accurately. Mombo declared that two Arabs came when we were below, and inquired for us; but he denied our presence, thinking thereby to save us trouble and harm.

The cotton cultivated is of the Pernambuco species, and the bushes are seven or eight feet high. Much cloth was made in these parts before the Mazitu raids began: it was striped black and white, and many shawls are seen in the country yet. It is curious that this species of cotton should be found only in the middle of this country.

In going westward on the upland, the country is level, and covered with scraggy forest as usual: long lines of low hills, or rather ridges, of denudation run north and south on our east. This is called Moami country, full of elephants, but few are killed. They do much damage, eating the sorghum in the gardens unmolested.

May 11th.—A short march to-day brought us to a village on the same Moami, and, to avoid a Sunday in the forest, we remained. The elephants had come into the village and gone all about it, and, to prevent their opening the corn-safes, the people had bedaubed them with elephant's droppings. When a cow would not give milk, save to its calf, a like device was used at Kolobeng; the cow's droppings were smeared on the teats, and the calf was too much disgusted to suck: the cow then ran till she was distressed by the milk fever, and was willing to be relieved by the herdsman.

May 12th, 13th.—News that the Arabs had been fighting with

* This is a common symptom; men will suddenly lose all power in the lower extremities, and remain helpless where they fall.—ED.

Nsama came; but this made us rather anxious to get northward along Liemba, and we made for Mokambola's village, near the edge of the precipice which overhangs the Lake. Many Shuaré *Raphia* palms grow in the river which flows past it.

As we began our descent, we saw the Lofu coming from the west and entering Liemba. A projection of Liemba comes to meet it, and then it is said to go away to the north or north-west as far as my informants knew. Some pointed due north, others north-west; so, probably, its true course amounts to north-north-west. We came to a village about 2' west of the confluence, whose head man was affable and generous. The village has a meadow some four miles wide on the land side, in which buffaloes disport themselves; but they are very wild, and hide in the gigantic grasses. Sorghum, ground-nuts, and voandzeia grow luxuriantly. The Lofu is a quarter of a mile wide, but higher up three hundred yards. The valley was always clouded over at night, so I could not get an observation except early in the morning, when the cold had dissipated the clouds.

We remained here because two were lame, and all tired by the descent of upward of two thousand feet, and the head man sent for fish for us. He dissuaded us strongly from attempting to go down the Liemba, as the son of Nsama (Kapoma) was killing all who came that way in revenge for what the Arabs had done to his father's people, and he might take us for Arabs. A Suaheli Arab came in the evening, and partly confirmed the statements of the head man of Karambo; I resolved, therefore, to go back to Chitimba's, in the south, where the chief portion of the Arabs are assembled, and hear from them more certainly.

The last we heard of Liemba was that at a great way north-west it is dammed up by rocks, and where it surmounts these there is a great water-fall. It does not, it is said, diminish in size so far, but by bearings protracted it is two miles wide.

May 18th.—Return to Mokambola's village, and leave for Chitimba's. Baraka stopped behind at the village, and James ran away to him, leaving his bundle, containing three chronometers, in the path: I sent back for them, and James came up in the evening; he had no complaint, and no excuse to make. The two think it will be easy to return to their own country by begging, though they could not point it out to me when we were much nearer to where it is supposed to be.

May 19th.—Where we were brought to a stand-still was miserably cold (55°), so we had prayers, and went on south and south-west to the village of Chisaka.

May 20th.—Chitimba's village was near in the same direction; here we found a large party of Arabs, mostly black Suahelis. They occupied an important portion of the stockaded village, and, when I came in, politely showed me to a shed where they are in the habit of meeting. After explaining whence I had come, I showed them the Sultan's letter. Hamees presented a goat, two fowls, and a quantity of flour. It was difficult to get to the bottom of the Nsama affair; but, according to their version, that chief sent an invitation to them, and, when they arrived, called for his people, who came in crowds—as he said to view the strangers. I suspect that the Arabs became afraid of the crowds, and began to fire: several were killed on both sides, and Nsama fled, leaving his visitors in possession of the stockaded village and all it contained. Others say that there was a dispute about an elephant, and that Nsama's people were the aggressors. At any rate, it is now all confusion; those who remain at Nsama's village help themselves to food in the surrounding villages and burn them, while Chitimba has sent for the party who are quartered here to come to him. An hour or two after we arrived, a body of men came from Kasonso with the intention of proceeding into the country of Nsama, and, if possible, catching Nsama, "he having broken public law by attacking people who brought merchandise into the country." This new expedition makes the Arabs resolve to go and do what they can to injure their enemy. It will just be a plundering foray—each catching what he can, whether animal or human, and retiring when it is no longer safe to plunder!

This throws the barrier of a broad country between me and Lake "Moero" in the west, but I trust in Providence a way will be opened. I think now of going southward, and then westward, thus making a long *détour* round the disturbed district.

The name of the principal Arab is Hamees Wodim Tagh, the other is Syde bin Alle bin Mansure: they are connected with one of the most influential native mercantile houses in Zanzibar. Hamees has been particularly kind to me in presenting food, beads, cloth, and getting information.

Thami bin Suaelim is the Arab to whom my goods are directed at Ujiji.

May 24th.—At Chitimba's we are waiting to see what events turn up to throw light on our western route. Some of the Arabs and Kasonso's men went off to-day: they will bring information, perhaps, as to Nsama's haunts, and then we shall move south and thence west. Wrote to Sir Thomas Maclear, giving the position

of Liemba, and to Dr. Seward, in case other letters miscarry. The hot season is beginning now. This corresponds to July farther south.

Three goats were killed by a leopard close to the village in open day.

May 28th.—Information came that Nsama begged pardon of the Arabs, and would pay all that they had lost. He did not know of his people stealing from them: we shall hear in a day or two whether the matter is to be patched up or not. While some believe his statements, others say, "Nsama's words of peace are simply to gain time to make another stockade:" in the mean time, Kasonso's people will ravage all his country on this eastern side.

Hamees is very anxious that I should remain a few days longer, till Kasonso's son, Kampamba, comes with *certain* information, and then he will see to our passing safely to Chiwéré's village from Kasonso's. All have confidence in this last-named chief as an upright man.

June 1st, 1867.—Another party of marauders went off this morning to plunder Nsama's country to the west of the confluence of the Lofu, as a punishment for a breach of public law. The men employed are not very willing to go, but when they taste the pleasure of plunder, they will relish it more!

The water-shed begins to have a northern slope about Moamba's, lat. $10^{\circ} 10' S.$; but the streams are very tortuous, and the people have very confused ideas as to where they run. The Lokhopa, for instance, was asserted by all the men at Moamba's to flow into Lokholu, and then into a river going to Liemba; but a young wife of Moamba, who seemed very intelligent, maintained that Lokhopa and Lokholu went to the Chambezé; I therefore put it down thus. The streams which feed the Chambezé and the Liemba overlap each other, and it would require a more extensive survey than I can give to disentangle them.

North of Moamba, on the Merengé, the slope begins to Liemba. The Lofu rises in Chibu's country, and, with its tributaries, we have long ridges of denudation, each some five hundred or six hundred feet high, and covered with green trees. The valleys of denudation inclosed by these hill-ranges guide the streams toward Liemba, or the four rivers which flow into it. The country gradually becomes lower, warmer, and tsetse and mosquitoes appear; so at last we come to the remarkable cup-shaped cavity in which Liemba reposes. Several streams fall down the nearly perpendicular cliffs, and form beautiful cascades. The lines of

denudation are continued, one range rising behind another as far as the eye can reach to the north and east of Liemba, and probably the slope continues away down to Tanganyika. The watershed extends westward to beyond Casembé, and the Luapula, or Chambezé, rises in the same parallels of latitude as does the Lofu and the Lonzua.

The Arabs inform me that between this and the sea, about two hundred miles distant, lies the country of the Wasango—called Usango—a fair people, like Portuguese, and very friendly to strangers. The Wasango possess plenty of cattle: their chief is called Meréré.* They count this twenty-five days, while the distance thence to the sea at Bagamoio is one month and twenty-five days—say four hundred and forty miles. Uchéré is very far off northward, but a man told me that he went to a salt manufactory in that direction in eight days from Kasonso's. Meréré goes frequently on marauding expeditions for cattle, and is instigated thereto by his mother.

What we understand by primeval forest is but seldom seen in the interior here, though the country can not be described otherwise than as generally covered with interminable forests. Insects kill or dwarf some trees, and men maim others for the sake of the bark-cloth; elephants break down a great number, and it is only here and there that gigantic specimens are seen: they may be expected in shut-in valleys among mountains, but, on the whole, the trees are scraggy, and the varieties not great. The different sorts of birds which sing among the branches seem to me to exceed those of the Zambesi region, but I do not shoot them: the number of new notes I hear astonishes me.

The country in which we now are is called by the Arabs and natives Ulungu, that farther north-west is named Marungu. Hamees is on friendly terms with the Mazitu (Watuta) in the east, who do not plunder. The chief sent a man to Kasonso lately, and he, having received a present, went away highly pleased.

Hamees is certainly very anxious to secure my safety. Some men came from the north-east to inquire about the disturbance here, and they recommend that I should go with them, and then up the east side of the Lake to Ujiji; but that would ruin my plan of discovering Moero and afterward following the water-shed, so as to be certain that this is either the water-shed of the Congo or Nile. He was not well pleased when I preferred to go south and then westward, as it looks like rejecting his counsel; but he

* The men heard in 1873 that he had been killed.

said if I waited till his people came, then we should be able to speak with more certainty.

On inquiring if any large mountains exist in this country, I was told that Moufipa, or Fipa, opposite the lower end of the Lake, is largest—one can see Tanganyika from it. It probably gives rise to the Nkalambwé River and the Luazé.

There is nothing interesting in a heathen town. All are busy in preparing food or clothing, mats or baskets, while the women are cleaning or grinding their corn, which involves much hard labor. They first dry this in the sun, then put it into a mortar, and afterward with a flat basket clean off the husks and the dust, and grind it between two stones; the next thing is to bring wood and water to cook it. The chief here was aroused the other day, and threatened to burn his own house and all his property because the people stole from it, but he did not proceed so far: it was probably a way of letting the Arab dependents know that he was aroused.

Some of the people who went to fight attacked a large village, and killed several men; but in shooting in a bushy place, they killed one of their own party and wounded another.

On inquiring of an Arab who had sailed on Tanganyika which way the water flowed, he replied to the south!

The wagtails build in the thatch of the huts; they are busy, and men and other animals are active in the same way.

I am rather perplexed how to proceed. Some Arabs seem determined to go westward as soon as they can make it up with Nsama, while others distrust him. One man will send his people to pick up what ivory they can, but he himself will retire to the Usango country. Nsama is expected to-day or to-morrow. It would be such a saving of time and fatigue for us to go due west rather than south, and then west, but I feel great hesitation as to setting out on the circuitous route. Several Arabs came from the Liemba side yesterday; one had sailed on Tanganyika, and described the winds there as very baffling, but no one of them has a clear idea of the Lake. They described the lower part as a "sea," and thought it different from Tanganyika.

Close observation of the natives of Ulungu makes me believe them to be extremely polite. The mode of salutation among relatives is to place the hands round each other's chests kneeling; they then clap their hands close to the ground. Some more abject individuals kiss the soil before a chief; the generality kneel only, with the forearms close to the ground, and the head bowed down to them, saying, "O Ajadla chiusa, Mari a bwino." The

Usanga say, "Ajé senga." The clapping of hands to superiors, and even equals, is in some villages a perpetually recurring sound. Aged persons are usually saluted: how this extreme deference to each other could have arisen I can not conceive; it does not seem to be fear of each other that elicits it. Even the chiefs inspire no fear, and those cruel old platitudes about governing savages by fear seem unknown, yet governed they certainly are, and upon the whole very well. The people were not very willing to go to punish Nsama's breach of public law; yet, on the decision of the chiefs, they went, and came back, one with a wooden stool, another with a mat, a third with a calabash of ground-nuts or some dried meat, a hoe, or a bow—poor, poor pay for a fortnight's hard work hunting fugitives and burning villages.

June 16th.—News came to-day that an Arab party in the south-west, in Lunda, lost about forty people by the small-pox ("ndué"), and that the people there, having heard of the disturbance with Nsama, fled from the Arabs, and would sell neither ivory nor food: this looks like another obstacle to our progress thither.

June 17th–19th.—Hamees went to meet the party from the south-west, probably to avoid bringing the small-pox here. They remain at about two hours' distance. Hamees reports that though the strangers had lost a great many people by small-pox, they had brought good news of certain Arabs still farther west: one, Seide ben Umale, or Salem, lived at a village near Casembé, ten days distant; and another, Juma Merikano, or Katata Katanga, at another village farther north; and Seide ben Habib was at Phueto, which is nearer Tanganyika. This party comprises the whole force of Hamees; and he now declares that he will go to Nsama and make the matter up, as he thinks that he is afraid to come here, and so he will make the first approach to friendship.

On pondering over the whole subject, I see that, tiresome as it is to wait, it is better to do so than go south and then west; for if I should go I shall miss seeing Moero, which is said to be three days from Nsama's present abode. His people go there for salt, and I could not come to it from the south without being known to them, and perhaps considered to be an Arab. Hamees remarked that it was the Arab way first to smooth the path before entering upon it; sending men and presents first, thereby ascertaining the disposition of the inhabitants. He advises patience, and is in hopes of making a peace with Nsama. That his hopes are not unreasonable, he mentioned that when the disturbance began, Nsama sent men with two tusks to the village whence he had just been expelled, offering thereby to make the matter up; but

the Arabs, suspecting treachery, fired upon the carriers and killed them; then ten goats and one tusk were sent with the same object, and met with a repulse; Hamees thinks that had he been there himself the whole matter would have been settled amicably.

All complain of cold here. The situation is elevated, and we are behind a clump of trees on the rivulet Chiloa, which keeps the sun off us in the mornings. This cold induces the people to make big fires in their huts, and frequently their dwellings are burned. Minimum temperature is as low as 46° ; sometimes 33° .

June 24th.—The Arabs are all busy reading their Korán, or Kurán, and in praying for direction. To-morrow they will call a meeting to deliberate as to what steps they will take in the Nsama affair. Hamees, it seems, is highly thought of by that chief, who says, "Let him come, and all will be right." Hamees proposes to go with but a few people. These Zanzibar men are very different from the slavers of the Waiyau country.

June 25th.—The people, though called, did not assemble, but they will come to-morrow.

Young wagtails nearly full-fledged took wing, leaving one in the nest: from not being molested by the people, they took no precautions, and ran out of the nest on the approach of the old ones, making a loud chirping. The old ones tried to induce the last one to come out too, by flying to the nest, and then making a sally forth, turning round immediately to see if he followed: he took a few days longer.

It was decided at the meeting that Hamees, with a few people only, should go to Nsama on the first day after the appearance of the new moon (they are very particular on this point). The present month having been an unhappy one, they will try the next.

June 28th.—A wedding took place among the Arabs to-day. About a hundred blank cartridges were fired off, and a procession of males, dressed in their best, marched through the village. They sang with all their might, though with but little music in the strain. Women sprinkled grain on their heads, as wishes for plenty.*

Nsama is said to be waiting for the Arabs in his new stockade. It is impossible to ascertain exactly who is to blame in this matter, for I hear one side only; but the fact of the chiefs in this part of the country turning out so readily to punish his breach of

* This comes near to the custom of throwing rice after the bride and bridegroom in England.—ED.

public law, and no remonstrance coming from him, makes me suspect that Nsama is the guilty party. If he had been innocent he certainly would have sent to ask the Bulungu, or Baulungu, why they had attacked his people without cause.

[Here is an entry concerning the tribe living far to the east.]

The Wasongo seem much like Zulus: they go naked, and have prodigious numbers of cattle, which occupy the same huts with their owners. Oxen two shukabs each; plenty of milk. Meréré is very liberal with his cattle, and gives every one an ox. There is no rice, but maize and maëre. Hamees left the people to cultivate rice. Meréré had plenty of ivory when the Arabs came first, but now has none.

July 1st, 1867.—New moon to-day. They are very particular as to the time of offering up prayers, and in making charms. One to-night was at 10 P.M. exactly.

A number of cabalistic figures were drawn by Halfani, and it is believed that by these Nsama's whereabouts may be ascertained: they are probably remains of the secret arts which prevailed among Arabs before Mohammed appeared. These Suaheli Arabs appear to have come down the coast before that prophet was born.

July 3d.—Kasonso's people are expected. All the captives that were taken are to be returned, and a quantity of cloth given to Nsama in addition: so far all seems right. The new moon will appear to-night. The Arabs count from one appearance to the next; not, as we do, from its conjunction with the sun to the next.

July 4th.—Katawanya came from near Liemba to join the peace-makers. He and his party arrived at Liemba after we did: he sent his people all round to seek ivory. They do not care for any thing but ivory, and can not understand why I do not do the same.

July 6th.—An earthquake happened at 3.30 P.M., accompanied with a hollow rumbling sound: it made me feel as if afloat, but it lasted only a few seconds. The boys came running to ask me what it was. Nowhere could it be safer: the huts will not fall, and there are no high rocks near. Barometer, 25.0; temperature, 68° 5'. Heavy cumuli hanging about; no rain afterward.

July 7th.—Hamees started this morning with about three hundred followers dressed in all their finery, and he declares that his sole object is peace. Kasonso, Mombo, Chitimba send their people, and go themselves to lend all their influence in favor of peace. Sydé stops here. Before starting, Sydé put some incense

on hot coals, and all the leaders of the party joined in a short prayer: they seem earnest and sincere in their incantations, according to their knowledge and belief. I wished to go too, but Hamees objected, as not being quite sure whether Nsama would be friendly, and he would not like any thing to befall me when with him.

July 8th.—Kasonso found an excuse for not going himself. Two men—Arabs, it was said—came to Chibué's and were there killed, and Kasonso must go to see about it. The people who go carry food with them, evidently not intending to live by plunder this time.

While the peace-makers are gone, I am employing time in reading Smith's "Bible Dictionary," and calculating different positions which have stood over in traveling. I do not succeed well in the Bäulungu dialect.

The owners of huts lent to strangers have a great deal of toil in consequence: they have to clean them after the visitors have withdrawn; then, in addition to this, to clean themselves, all soiled by the dust left by the lodgers: their bodies and clothes have to be cleansed afterward: they add food, too, in all cases of acquaintanceship, and then we have to remember the labor of preparing that food. My remaining here enables me to observe that both men and women are in almost constant employment. The men are making mats, or weaving, or spinning; no one could witness their assiduity in their little affairs and conclude that they were a lazy people. The only idle time I observe here is in the mornings about seven o'clock, when all come and sit to catch the first rays of the sun as he comes over our clump of trees; but even that time is often taken as an opportunity for stringing beads.

I hear that some of Nsama's people crossed the Lovu at Karambo to plunder, in retaliation for what they have suffered: and the people there were afraid to fish, lest they should be caught by them at a distance from their stockades.

The Bäulungu men are in general tall and well formed; they use bows over six feet in length, and but little bent. The facial angle is as good in most cases as in Europeans, and they have certainly as little of the "lark-heel" as whites. One or two of the under front teeth are generally knocked out in women, and also in men.

July 14th.—Sydé added to his other presents some more beads: all have been very kind, which I attribute in a great measure to Seyed Majid's letter. Hamees crossed the Lovu to-day at a ford-

able spot. The people on the other side refused to go with a message to Nsama, so Hamees had to go and compel them by destroying their stockade. A second village acted in the same way, though told that it was only peace that was sought of Nsama: this stockade suffered the same fate, and then the people went to Nsama, and he showed no reluctance to have intercourse. He gave abundance of food, pombe, and bananas; the country being extremely fertile. Nsama also came and ratified the peace by drinking blood with several of the underlings of Hamees. He is said to be an enormously bloated old man, who can not move unless carried, and women are constantly in attendance pouring pombe into him. He gave Hamees ten tusks, and promised him twenty more, and also to endeavor to make his people return what goods they plundered from the Arabs, and he is to send his people over here to call us after the new moon appears.

It is tiresome beyond measure to wait so long; but I hope to see Moero for this exercise of patience, and I could not have visited it had Hamees not succeeded in making peace.

July 17th.—A lion roared very angrily at the village last night: he was probably following the buffaloes that sometimes come here to drink at night: they are all very shy, and so is all the game, from fear of arrows.

A curious disease has attacked my left eyelid and surrounding parts: a slight degree of itchiness is followed by great swelling of the part: it must be a sort of lichen. Exposure to the sun seems to cure it, and this leads me to take long walks therein. This is about 30° 19' E. long.; lat. 8° 57' 55" S.

July 24th.—A fire broke out at 4 A.M., and, there being no wind, the straw roofs were cleared off in front of it on our side of the village. The granaries were easily unroofed, as the roof is not attached to the walls; and the Arabs tried to clear a space on their side, but were unable, and then moved all their ivory and goods outside the stockade. Their side of the village was all consumed, and three goats perished in the flames.

Chitimba has left us from a fear of his life, he says. It is probable that he means this flight to be used as an excuse to Nsama after we are gone. "And I, too, was obliged to flee from my village to save my life! What could I do?" This is to be his argument, I suspect.

A good many slaves came from the two villages that were destroyed: on inquiry, I was told that these would be returned when Nsama gave the ivory promised.

When Nsama was told that an Englishman wished to go past him to Moero, he replied, "Bring him, and I shall send men to take him thither."

Hamees is building a "tembé," or house, with a flat roof, and walls plastered over with mud, to keep his ivory from fire while he is absent. We expect that Nsama will send for us a few days after August 2d, when the new moon appears: if they do not come soon, Hamees will send men to Nsama without waiting for his messengers.

July 28th.—Prayers, with the Litany.* Slavery is a great evil wherever I have seen it. A poor old woman and child are among the captives; the boy, about three years old, seems a mother's pet: his feet are sore from walking in the sun. He was offered for two fathoms, and his mother for one fathom: he understood it all, and cried bitterly, clinging to his mother. She had, of course, no power to help him: they were separated at Karungu afterward.

[The above is an episode of every-day occurrence in the wake of the slave-dealer. "Two fathoms," mentioned as the price of the boy's life—the more valuable of the two—means four yards of unbleached calico, which is a universal article of barter throughout the greater part of Africa: the mother was bought for two yards. The reader must not think that there are no lower prices; in the famines which succeed the slave-dealer's raids, boys and girls are at times to be purchased by the dealer for a few handfuls of maize.]

July 29th.—Went two and a half hours west to village of Ponda, where a head Arab, called by the natives Tipo Tipo, lives; his name is Hamid bin Mohamad bin Juma Borajib. He presented a goat, a piece of white calico, and four big bunches of beads, also a bag of *Holeus* sorghum, and apologized because it was so little. He had lost much by Nsama; and received two arrow-wounds there; they had only twenty guns at the time, but some were in the stockade; and though the people of Nsama were very numerous they beat them off, and they fled carrying the bloated carcass of Nsama with them. Some reported that boxes were found in the village which belonged to parties who had perished before, but Sydé assured me that this was a mistake.

Moero is three days distant, and as Nsama's people go thither

* In his journal the doctor writes "S," and occasionally "Service," whenever a Sunday entry occurs. We may add that at all times during his travels the services of the Church of England were resorted to by him.—ED.

to collect salt on its banks, it would have been impossible for me to visit it from the south without being seen, and probably suffering loss.

The people seem to have no family names. A man takes the name of his mother, or, should his father die, he may assume that. Marriage is forbidden to the first, second, and third degrees: they call first and second cousins brothers and sisters.

A woman after cupping her child's temples for sore eyes, threw the blood over the roof of her hut as a charm.

[In the above process a goat's horn is used, with a small hole in the pointed end. The base is applied to the part from which the blood is to be withdrawn, and the operator, with a small piece of chewed india-rubber in his mouth, exhausts the air, and at the proper moment plasters the small hole up with his tongue. When the cupping-horn is removed, some cuts are made with a small knife, and it is again applied. As a rough appliance, it is a very good one, and in great repute everywhere.]

CHAPTER IX.

Peace Negotiations with Nsama.—Geographical Gleanings.—Curious Spider.—Reaches the River Lofu.—Arrives at Nsama's.—Hamees marries the Daughter of Nsama.—Flight of the Bride.—Conflagration in Arab Quarters.—Anxious to visit Lake Moero.—Arab Burial.—Serious Illness.—Continues Journey.—Slave-traders on the March.—Reaches Moero.—Description of the Lake.—Information concerning the Chambezé and Luapula.—Hears of Lake Bemba.—Visits Spot of Dr. Lacerda's Death.—Casembe apprised of Livingstone's Approach.—Meets Mohamad Bogarib.—Lakelet Mofwé.—Arrives at Casembe's Town.

August 1st, 1867.—HAMEES sends off men to trade at Chiweré's. *Zikwé* is the name for locust here; Nsigé or Zigé and Pansi the Suaheli names.

A perforated stone had been placed on one of the poles which form the gate-way into this stockade. It is oblong, seven or eight inches long by four broad, and beveled off on one side, and the diameter of the hole in the middle is about an inch and a half: it shows evidence of the boring process in rings. It is of hard porphyry, and of a pinkish hue, and resembles somewhat a weight for a digging-stick I saw in 1841 in the hands of a Bush-woman; I saw one at a gate-way near Kasonso's. The people know nothing of its use, except as a charm to keep away evil from the village.

August 2d.—Chronometer A stopped to-day without any apparent cause except the earthquake.

It is probably malaria which causes that constant singing in the ears ever since my illness at Lake Liemba.

August 3d.—We expect a message from Nsama every day, the new moon having appeared on the first of this month, and he was to send after its appearance.

August 5th.—Men came yesterday with the message that Hamees must wait a little longer, as Nsama had not yet got all the ivory and the goods which were stolen: they remained over yesterday. The head man, Katala, says that Lunda is eight days from Nsama or Moero, and in going we cross a large river called Movue, which flows into Luapula; another river called Mokobwa comes from the south-east into Moero. Itawa is the name of Msama's country and people.

A day distant from Nsama's place there is a hot fountain called "Paka pezhia," and around it the earth shakes at times: it is

possible that the earthquake we felt here may be connected with this same centre of motion.

August 6th.—The weather is becoming milder. An increase of cold was caused by the wind coming from the south. We have good accounts of the Wasongo from all the Arabs. Their houses built for cattle are flat-roofed and enormously large; one, they say, is a quarter of a mile long. Meréré, the chief, has his dwelling-house within it. Milk, butter, cheese, are in enormous quantities; the tribe, too, is very large. I fear that they may be spoiled by the Arab underlings.

August 7th.—Some of my people went down to Karambo and were detained by the chief, who said, "I won't let you English go away and leave me in trouble with these Arabs."

A slave had been given in charge to a man here and escaped; the Arabs hereupon went to Karambo and demanded payment from the chief there; he offered clothing, but they refused it, and would have a man; he then offered a man, but this man having two children, they demanded all three. They bully as much as they please by their fire-arms. After being spoken to by my people, the Arabs came away. The chief begged that I would come and visit him once more, for only one day; but it is impossible, for we expect to move directly. I sent the information to Hamees, who replied that they had got a clue to the man who was wiling away their slaves from them. My people saw others of the low squad which always accompanies the better-informed Arabs bullying the people of another village, and taking fowl and food without payment. Slavery makes a bad neighborhood!

Hamees is on friendly terms with a tribe of Mazitu, who say that they have given up killing people. They lifted a great many cattle, but have very few now: some of them came with him to show the way to Kasonso's.

Slaves are sold here in the same open way that the business is carried on in Zanzibar slave-market. A man goes about calling out the price he wants for the slave, who walks behind him: if a woman, she is taken into a hut to be examined in a state of nudity.

Some of the Arabs believe that meteoric stones are thrown at Satan for his wickedness. They believe that cannon were taken up Kilimanjaro by the first Arabs who came into the country, and there they lie. They deny that Van der Decken did more than go round a portion of the base of the mountain; he could not get on the mass of the mountain: all his donkeys and some

of his men died by the cold. Hamees seems to be Cooley's great geographical oracle!

The information one can cull from the Arabs respecting the country on the north-west is very indefinite. They magnify the difficulties in the way by tales of the cannibal tribes, where any one dying is bought and no one ever buried; but this does not agree with the fact, which also is asserted, that the cannibals have plenty of sheep and goats. The Rua is about ten days west of Tanganyika, and five days beyond it a lake or river ten miles broad is reached; it is said to be called Logarawá: all the water flows northward; but no reliance can be placed on the statements. Kiombo is said to be chief of Rua country.

Another man asserts that Tanganyika flows northward, and forms a large water beyond Uganda; but no dependence can be placed on the statements of these half Arabs; they pay no attention to any thing but ivory and food.

August 25th.—Nsama requested the Arabs to give back his son who was captured; some difficulty was made about this by his captor, but Hamees succeeded in getting him and about nine others, and they are sent off to-day. We wait only for the people, who are scattered about the country. Hamees presented cakes, flour, a fowl, and leg of goat, with a piece of eland meat: this animal goes by the same name here as at Kolobeng—"pofu."*

A fig-tree here has large knobs on the bark, like some species of acacia; and another looks like the Malolo of the Zambesi magnified. A yellow wood gives an odor like incense when burned.

A large spider makes a nest inside the huts. It consists of a piece of pure white paper, an inch and a half broad, stuck flat on the wall; under this some forty or fifty eggs are placed, and then a quarter of an inch of thinner paper is put round it, apparently to fasten the first firmly. When making the paper the spider moves itself over the surface in wavy lines; she then sits on it with her eight legs spread over all for three weeks continuously, catching and eating any insects, as cockroaches, that come near her nest. After three weeks she leaves it to hunt for food, but always returns at night: the natives do not molest it.

A small ant masters the common fly by seizing a wing or leg, and holding on till the fly is tired out: at first the fly can move about on the wing without inconvenience, but it is at last obliged to succumb to an enemy very much smaller than itself.

* Chéfu, among the Manganja. Any animal possessing strength has the terminal "fu" or "vu;" thus Njobvu, an elephant; M'vu, the hippopotamus.—ED.

A species of Touraco, new to me, has a broad yellow mask on the upper part of the bill and forehead; the top-knot is purple, the wings the same as in other species, but the red is roseate. The yellow of the mask plates is conspicuous at a distance.

A large callosity forms on the shoulders of the regular Unyamwesi porters, from the heavy weights laid on them. I have noticed them an inch and a half thick along the top of the shoulders. An old man was pointed out to me who had once carried five frasilahs (=175 pounds) of ivory from his own country to the coast.

August 30th.—We marched to-day from Chitimba's village after three months and ten days' delay. On reaching Ponda, two hours and a half distant, we found Tipo Tipo, or Hamidi bin Mohamad, gone on, and so we followed him. Passed a fine stream flowing south-west to the Lofu. Tipo Tipo gave me a fine fat goat.

August 31st.—Pass along a fine undulating district, with much country covered with forest, but many open glades, and fine large trees along the water-courses. We were on the northern slope of the water-shed, and could see far. Crossed two fine rivulets. The oozes still full and flowing.

September 1st, 1867.—We had to march in the afternoon on account of a dry patch existing in the direct way. We slept without water, though by diverging a few miles to the north we should have crossed many streams; but this is the best path for the whole year.

Baraka went back to Tipo Tipo's village, thus putting his intention of begging among the Arab slaves into operation. He has only one complaint, and that is dislike to work. He tried perseveringly to get others to run away with him: lost the medicine-box, six table-cloths, and all our tools, by giving his load off to a country lad while he went to collect mushrooms: he will probably return to Zanzibar, and be a slave to the Arab slavers after being a perpetual nuisance to us for upward of a year.

September 2d.—When we reached the ford of the Lofu, we found that we were at least a thousand feet below Chitimba's. The last six hours of our march were without water, but when near to Chungu's village at the ford we came to fine flowing rivulets, some ten feet or so broad. Here we could see westward and northward the long lines of hills of denudation in Nsama's country, which till lately was densely peopled. Nsama is of the Babemba family. Kasonso, Chitimba, Kiwé, Urongwé, are equals and of one family, Urungai. Chungu is a pleasant per-

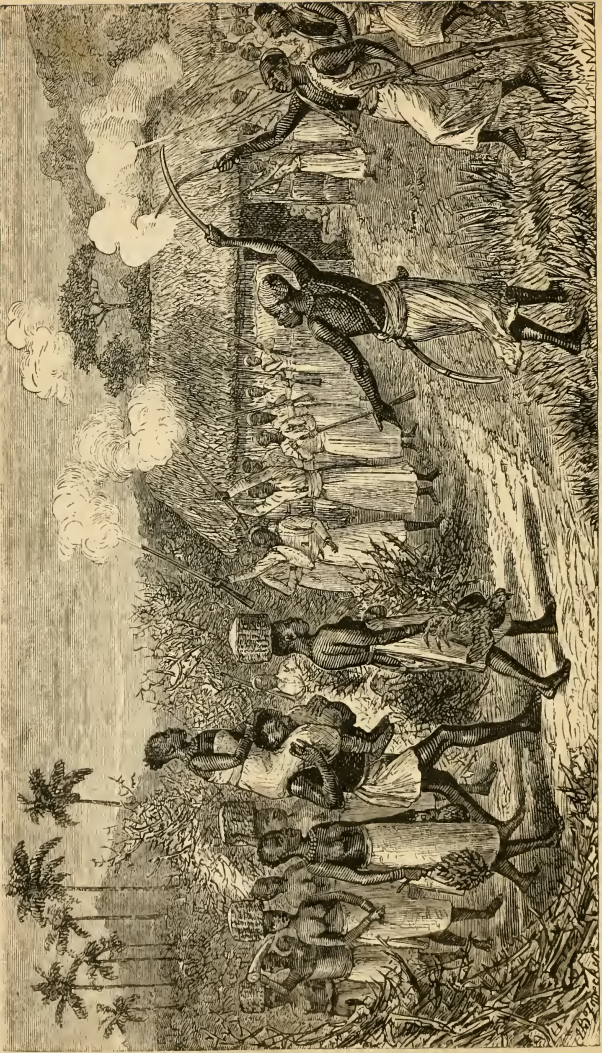
son, and liberal according to his means. Large game is very abundant through all this country.

The Lofu at the ford was two hundred and ninety-six feet, the water flowing briskly over hardened sandstone flag, and from thigh to waist deep; elsewhere it is a little narrower, but not passable except by canoes.

September 4th, 5th.—Went seven hours west of the Lofu to a village called Hara, one of those burned by Hamees because the people would not take a peaceful message to Nsama. This country is called Itawa, and Hara is one of the districts. We waited at Hara to see if Nsama wished us any nearer to himself. He is very much afraid of the Arabs, and well he may be, for he was until lately supposed to be invincible. He fell before twenty muskets, and this has caused a panic throughout the country. The land is full of food, though the people have nearly all fled. The ground-nuts are growing again for want of reapers; and three hundred people living at free quarters make no impression on the food.

September 9th.—Went three hours west of Hara, and came to Nsama's new stockade, built close by the old one burned by Tipo Tipo, as Hamidi bin Mohamad was named by Nsama.* I sent a message to Nsama, and received an invitation to come and visit him, but bring no guns. A large crowd of his people went with us, and before we came to the inner stockade they felt my clothes to see that no fire-arms were concealed about my person. When we reached Nsama, we found a very old man, with a good head and face and a large abdomen, showing that he was addicted to pombe: his people have to carry him. I gave him a cloth, and asked for guides to Moero, which he readily granted, and asked leave to feel my clothes and hair. I advised him to try and live at peace; but his people were all so much beyond the control of himself and head men, that at last, after scolding them, he told me that he would send for me by night, and then we could converse, but this seems to have gone out of his head. He sent me a goat, flour, and pombe, and next day we returned to Hara.

* The natives are quick to detect a peculiarity in a man, and give him a name accordingly; the conquerors of a country try to forestall them by selecting one for themselves. Susi states that when Tipo Tipo stood over the spoil taken from Nsama, he gathered it closer together, and said, "Now I am Tipo Tipo," that is, "the gatherer together of wealth." Kumba Kumba, of whom we shall hear much, took his name from the number of captives he gathered in his train under similar circumstances; it might be translated, "The collector of people."—ED.



THE ARRIVAL OF HAMEES'S BRIDE

Nsama's people have generally small, well-chiseled features, and many are really handsome, and have nothing of the West Coast Negro about them; but they file their teeth to sharp points, and greatly disfigure their mouths. The only difference between them and Europeans is the color. Many of the men have very finely-formed heads, and so have the women; and the fashion of wearing the hair sets off their foreheads to advantage. The forehead is shaved off to the crown, the space narrowing as it goes up; then the back hair is arranged into knobs of about ten rows.

September 10th.—Some people of Ujiji have come to Nsama's to buy ivory with beads, but, finding that the Arabs have forestalled them in the market, they intend to return in their dhow, or rather canoe, which is manned by about fifty hands. My goods are reported safe, and the meat of the buffaloes which died in the way is there, and sun-dried. I sent a box, containing papers, books, and some clothes, to Ujiji.

September 14th.—I remained at Hara, for I was ill, and Hamees had no confidence in Nsama, because he promised his daughter to wife by way of cementing the peace, but had not given her. Nsama also told Hamees to stay at Hara, and he would send him ivory for sale; but none came, nor do people come here to sell provisions, as they do elsewhere; so Hamees will return to Chitimba's, to guard his people and property there, and send on Sydé Hamidi and his servants Lopéré, Kabuiré, and Moero, to buy ivory. He advised me to go with them, as he has no confidence in Nsama; and Hamidi thought that this was the plan to be preferred: it would be slower, as they would purchase ivory on the road, but safer to pass his country altogether than trust myself in his power.

The entire population of the country has received a shock from the conquest of Nsama, and their views of the comparative values of bows and arrows and guns have undergone a great change. Nsama was the Napoleon of these countries; no one could stand before him; hence the defeat of the invincible Nsama has caused a great panic. The Arabs say that they lost about fifty men in all: Nsama must have lost at least an equal number. The people seem intelligent, and will no doubt act on the experience so dearly bought.

In the midst of the doubts of Hamees, a daughter of Nsama came this afternoon to be a wife, and cementer of the peace! She came riding "pickaback" on a man's shoulders; a nice, modest, good-looking young woman, her hair rubbed all over with nkola, a red pigment, made from the cam-wood, and much used as

an ornament. She was accompanied by about a dozen young and old female attendants, each carrying a small basket with some provisions, as cassava, ground-nuts, etc. The Arabs were all dressed in their finery, and the slaves, in fantastic dresses, flourished swords, fired guns, and yelled. When she was brought to Hamees's hut she descended, and with her maids went into the hut. She and her attendants had all small, neat features. I had been sitting with Hamees, and now rose up and went away. As I passed him, he spoke thus to himself: "Hamees Wadim Tagh! see to what you have brought yourself!"

September 15th.—A guide had come from Nsama to take us to the countries beyond his territory. Hamees set off this morning with his new wife to his father-in-law, but was soon met by two messengers, who said that he was not to come yet. We now sent for all the people who were out to go west or north-west without reference to Nsama.

September 16th-18th.—Hamidi went to Nsama to try and get guides, but he would not let him come into his stockade unless he came up to it without either gun or sword. Hamidi would not go in on these conditions; but Nsama promised guides, and they came after a visit by Hamees to Nsama, which he paid without telling any of us: he is evidently ashamed of his father-in-law.

Those Arabs who despair of ivory invest their remaining beads and cloth in slaves.

September 20th.—I had resolved to go to Nsama's, and thence to Moero to-day; but Hamees sent to say that men had come, and we were all to go with them on the 22d. Nsama was so vacillating that I had no doubt but this was best.

Hamees's wife, seeing the preparations that were made for starting, thought that her father was to be attacked, so she, her attendants, and the guides decamped by night. Hamees went again to Nsama and got other guides to enable us to go off at once.

September 22d.—We went north for a couple of hours, then descended into the same valley as that in which I found Nsama. This valley is on the slope of the water-shed, and lies east and west: a ridge of dark-red sandstone, covered with trees, forms its side on the south. Other ridges like this make the slope have the form of a stair with huge steps: the descent is gradually lost as we insensibly climb up the next ridge. The first plain between the steps is at times swampy, and the paths are covered with the impressions of human feet, which, being hardened by the sun, make walking on their uneven surface very difficult.

Mosquitoes again; we had lost them during our long stay on the higher lands behind us.

September 23d.—A fire had broken out the night after we left Hara, and the wind being strong, it got the upper hand, and swept away at once the whole of the temporary village of dry straw huts. Hamees lost all his beads, guns, powder, and cloth, except one bale. The news came this morning, and prayers were at once offered for him with incense; some goods will also be sent, as a little incense was. The prayer-book was held in the smoke of the incense while the responses were made. These Arabs seem to be very religious in their way: the prayers were chiefly to Harasji, some relative of Mohammed.

September 24th.—Roused at 3 A.M. to be told that the next stage had no water, and we should be oppressed with the midday heat if we went now. We were to go at 2 P.M. Hamidi's wife, being ill yesterday, put a stop to our march on that afternoon. After the first hour we descended from the ridge to which we had ascended; we had then a wall of tree-covered rocks on our left of more than a thousand feet in altitude: after flanking it for a while we went up, and then along it northward till it vanished in forest. Slept without a fresh supply of water.

September 25th.—Off at 5.30 A.M. through the same well-grown forest we have passed, and came to a village stockade, where the gates were shut, and the men all outside, in fear of the Arabs; we then descended from the ridge on which it stood, about a thousand feet, into an immense plain, with a large river in the distance, some ten miles off.

September 26th.—Two and a half hours brought us to the large river we saw yesterday: it is more than a mile wide, and full of papyrus and other aquatic plants, and very difficult to ford, as the papyrus roots are hard to the bare feet, and we often plunged into holes up to the waist. A loose mass floated in the middle of our path: one could sometimes get on along this while it bent and heaved under the weight, but through it he would plunge and find great difficulty to get out. The water under this was very cold from evaporation; it took an hour and a half to cross it. It is called Chiséra, and winds away to the west to fall into the Kalongosi and Moero. Many animals, as elephants, tahetsis, zebras, and buffaloes, graze on the long sloping banks of about a quarter of a mile down, while the ranges of hills we crossed as mere ridges now appear behind us in the south.

September 27th.—The people are numerous and friendly. One elephant was killed, and we remained to take the ivory from the

dead beast; buffaloes and zebras were also killed. It was so cloudy that no observations could be taken to determine our position, but Chiséra rises in Lopéré. Farther west it is free of papyrus, and canoes are required to cross it.

September 28th.—Two hours north brought us to the Kamosenga, a river eight yards wide, of clear water, which ran strongly among aquatic plants. Hippopotami, buffalo, and zebra abound. This goes into the Chiséra eastward; country flat, and covered with dense tangled bush. Cassias, and another tree of the pea family, are now in flower, and perfume the air. Other two hours took us round a large bend of this river.

September 30th.—We crossed the Kamosenga or another, and reached Karungu's. The Kamosenga divides Lopéré from Itawa, the latter being Nsama's country; Lopéré is north-west of it.

October 1st, 1867.—Karungu was very much afraid of us: he kept every one out of his stockade at first; but during the time the Arabs sent forward to try and conciliate other chiefs he gradually became more friendly. He had little ivory to sell; and of those who had, Mtété or Mtéma seemed inclined to treat the messengers roughly. Men were also sent to Nsama asking him to try and induce Mtéma and Chikongo to be friendly and sell ivory and provisions; but he replied that these chiefs were not men under him, and if they thought themselves strong enough to contend against guns he had nothing to say to them. Other chiefs threatened to run away as soon as they saw the Arabs approaching. These were assured that we meant to pass through the country alone; and if they gave us guides to show us how, we should avoid the villages altogether, and proceed to the countries where ivory was to be bought: however, the panic was too great; no one would agree to our overtures; and at last when we did proceed, a chief on the River Choma fulfilled his threat and left us three empty villages. There were no people to sell, though the granaries were crammed, and it was impossible to prevent the slaves from stealing.

October 3d, 4th.—When Chikongo heard Tipó Tipó's message about buying ivory, he said, "And when did Tipó Tipó place ivory in my country, that he comes seeking it?" Yet he sent a tusk, and said, "That is all I have, and he is not to come here." Their hostile actions are caused principally by fear. "If Nsama could not stand before the Malongwana or traders, how can we face them?" I wished to go on to Moero, but all declare that our ten guns would put all the villages to flight: they are terror-struck. First rains of this season on the 5th.

October 10th.—I had a long conversation with Sydé, who thinks that the sun rises and sets because the Koran says so, and he sees it. He asserts that Jesus foretold the coming of Mohammed; and that it was not Jesus who suffered on the cross, but a substitute, it being unlikely that a true prophet would be put to death so ignominiously. He does not understand how we can be glad that our Saviour died for our sins.

October 12th.—An elephant killed by Tipo Tipo's men. It is always clouded over, and often not a breath of air stirring.

October 16th.—A great many of the women of this district and of Lopéré have the swelled thyroid gland called *gôitre*, or Derbyshire neck; men, too, appeared with it, and they, in addition, have hydrocele of large size.

An Arab who had been long ill at Chitimba's died yesterday, and was buried in the evening. No women were allowed to come near. A long, silent prayer was uttered over the corpse when it was laid beside the grave, and then a cloth was held over as men in it deposited the remains beneath sticks placed slanting on the side of the bottom of the grave: this keeps the earth from coming directly into contact with the body.

A feast was made by the friends of the departed, and portions sent to all who had attended the funeral: I got a good share.

October 18th.—The last we hear of Nsama is that he will not interfere with Chikongo. Two wives beat drums, and he dances to them: he is evidently in his dotage. We hear of many Arabs to the west of us.

October 20th.—Very ill; I am always so when I have no work—sore bones—much headache; then lose power over the muscles of the back, as at Liemba; no appetite, and much thirst. The fever uninfluenced by medicine.

October 21st.—Sydé sent his men to build a new hut in a better situation. I hope it may be a healthful one for me.

October 22d.—The final message from Chikongo was a discouraging one—no ivory. The Arabs, however, go west with me as far as Chisawé's, who, being accustomed to Arabs from Tanganyika, will give me men to take me on to Moero: the Arabs will then return, and we shall move on.

October 23d.—Tipo Tipo gave Karungu some cloth, and this chief is "looking for something" to give him in return; this detains us one day more.

When a slave wishes to change his master he goes to one whom he likes better and breaks a spear or a bow in his presence: the transference is irrevocable. This curious custom prevails on the

Zambesi, and also among the Wanyamwesi. If the old master wishes to recover his slave the new one may refuse to part with him, except when he gets his full price: a case of this kind happened here yesterday.

October 25th.—Authority was found in the Koran for staying one day more here. This was very trying; but the fact was our guide from Hara hither had enticed a young slave-girl to run away, and he had given her in charge to one of his countrymen, who turned round and tried to secure her for himself, and gave information about the other enticing her away. Nothing can be more tedious than the Arab way of traveling.

October 26th.—We went south-west for five hours through an undulating, well-wooded, well-peopled country, and quantities of large game. Several trees give out, when burned, very fine scents; others do it when cut. Euphorbia is abundant. We slept by a torrent which had been filled with muddy water by late rains. It thunders every afternoon, and rains somewhere as regularly as it thunders, but these are but partial rains; they do not cool the earth, nor fill the cracks made in the dry season.

October 27th.—Off early in a fine, drizzling rain, which continued for two hours, and came on to a plain about three miles broad, full of large game. These plains are swamps at times, and they are flanked by ridges of denudation some two or three hundred feet above them, and covered with trees.

The ridges are generally hardened sandstone, marked with madrepores, and masses of brown hematite. It is very hot, and we become very tired. There is no system in the Arab marches. The first day was five hours, this three and a half hours; had it been reversed—short marches during the first days and longer afterward—the muscles would have become inured to the exertion. A long line of heights on our south points to the valley of Nsama.

October 28th.—Five hours brought us to the Choma River and the villages of Chifupa; but, as already mentioned, the chief and people had fled, and no persuasion could prevail on them to come and sell us food. We showed a few who ventured to come among us what we were willing to give for flour, but they said, "Yes, we will call the women, and they will sell." None came.

Rested all day on the banks of the Choma, which is a muddy stream coming from the north and going to the south-west to join the Chiséra. It has worn itself a deep bed in the mud of its banks, and is twenty yards wide, and in some spots waist-deep; at other parts it is unfordable: it contains plenty of fish, and hippopotami

and crocodiles abound. I bought a few ground-nuts at an exorbitant price, the men evidently not seeing that it would have been better to part with more at a lower price than run off and leave all to be eaten by the slaves.

October 30th.—Two ugly images were found in huts built for them: they represent in a poor way the people of the country, and are used in rain-making and curing the sick ceremonies. This is the nearest approach to idol worship I have seen in the country.*

October 31st.—We marched over a long line of hills on our west, and in five and a half hours came to some villages where the people sold us food willingly, and behaved altogether in a friendly way. We were met by a herd of buffaloes; but Sydé seized my gun from the boy who carried it, and when the animals came close past me I was powerless, and not at all pleased with the want of good sense shown by my usually polite Arab friend.

Note.—The Choma is said by Mohamad bin Saleh to go into Tanganyika (?). It goes to Kalongosi.

November 1st, 1867.—We came along between ranges of hills considerably higher than those we have passed in Itawa or Nsama's country, and thickly covered with trees, some in full foliage, and some putting forth fresh red leaves: the hills are about seven or eight hundred feet above the valleys. This is not a district of running rills: we crossed three sluggish streamlets knee-deep. Buffaloes are very numerous.

The Ratel covers the buffalo droppings with earth in order to secure the scavenger beetles which bury themselves therein; thus he prevents them from rolling a portion away as usual.

We built our sheds on a hill-side. Our course was west and six and a quarter hours.

November 2d.—Still in the same direction, and in an open valley remarkable for the numbers of a small euphorbia, which we smashed at every step. Crossed a small but strong rivulet, the Lipandé, going south-west to Moero; then, an hour afterward, crossed it again, now twenty yards wide and knee-deep. After descending from the tree-covered hill which divides Lipandé from Luao, we crossed the latter to sleep on its western bank. The hills are granite now, and a range on our left, from seven hundred to fifteen hundred feet high, goes on all the way to Moero.

* It is on the West Coast alone that idols are really worshiped in Africa.—ED.

These valleys along which we travel are beautiful. Green is the prevailing color; but the clumps of trees assume a great variety of forms, and often remind one of English park scenery. The long line of slaves and carriers, brought up by their Arab employers, adds life to the scene: they are in three bodies, and number four hundred and fifty in all. Each party has a guide with a flag, and when that is planted all that company stops till it is lifted, and a drum is beaten, and a kudu's horn sounded. One party is headed by about a dozen leaders, dressed with fantastic head-gear of feathers and beads, red cloth on the bodies, and skins cut into strips and twisted: they take their places in line, the drum beats, the horn sounds harshly, and all fall in. These sounds seem to awaken a sort of *esprit de corps* in those who have once been slaves. My attendants now jumped up, and would scarcely allow me time to dress when they heard the sounds of their childhood, and all day they were among the foremost. One said to me "that his feet were rotten with marching," and this though told that they were not called on to race along like slaves.

The Africans can not stand sneers. When any mishap occurs in the march (as when a branch tilts a load off a man's shoulder), all who see it set up a yell of derision: if any thing is accidentally spilled, or if one is tired and sits down, the same yell greets him, and all are excited thereby to exert themselves. They hasten on with their loads, and hurry with the sheds they build, the masters only bringing up the rear, and helping any one who may be sick. The distances traveled were quite as much as the masters or we could bear. Had frequent halts been made—as, for instance, a half or a quarter of an hour at the end of every hour or two—but little distress would have been felt; but five hours at a stretch is more than men can bear in a hot climate. The female slaves held on bravely; nearly all carried loads on their heads; the head, or lady of the party, who is also the wife of the Arab, was the only exception. She had a fine white shawl, with ornaments of gold and silver on her head. These ladies had a jaunty walk, and never gave in on the longest march: many pounds' weight of fine copper leglets above the ankles seemed only to help the sway of their walk. As soon as they arrive at the sleeping-place they begin to cook; and in this art they show a good deal of expertness, making savory dishes for their masters out of wild fruits and other not very likely materials.

November 3d.—The ranges of hills retire as we advance; the soil is very rich. At two villages the people did not want us;

so we went on and encamped near a third, Kabwakwa, where a son of Mohamad bin Saleh, with a number of Wanyamwesi, lives. The chief of this part is Muabo, but we did not see him: the people brought plenty of food for us to buy. The youth's father is at Casembe's. The country people were very much given to falsehood: every place inquired for was near: ivory abundant—provisions of all sorts cheap and plenty. Our head men trusted to these statements of this young man rather, and he led them to desist going farther. Rua country was a month distant, he said, and but little ivory there. It is but three days off. (We saw it after three days.) "No ivory at Casembe's, or here in Buiré, or Kabuiré." He was right as to Casembe. Letters, however, came from Hamees, with news of a depressing nature. Chitimba is dead, and so is Mambwé. Chitimba's people are fighting for the chieftainship. Great hunger prevails there now, the Arabs having bought up all the food. Moriri, a chief dispossessed of his country by Nsama, wished Hamees to restore his possessions; but Hamees said that he had made peace, and would not interfere.

This unfavorable news from a part where the chief results of their trading were deposited, made Sydé and Tipo Tipo decide to remain in Buiré only ten or twenty days, send out people to buy what ivory they could find, and then retire.

As Sydé and Tipo Tipo were sending men to Casembe for ivory, I resolved to go thither first, instead of shaping my course for Ujiji.

Very many cases of goitre in men and women here: I see no reason for it. This is only three thousand three hundred and fifty feet above the sea.

November 7th.—Start for Moero, convoyed by all the Arabs for some distance: they have been extremely kind. We draw near to the mountain-range on our left, called Kakoma, and sleep at one of Kaputa's villages, our course now being nearly south.

November 8th.—Villages are very thickly studded over the valley formed by Kakoma range, and another at a greater distance on our right. One or two hundred yards is a common distance between these villages, which, like those in Londa, or Lunda, are all shaded with trees of a species of *Ficus Indica*. One belongs to Puta, and this Puta, the paramount chief, sent to say that if we slept there, and gave him a cloth, he would send men to conduct us next day and ferry us across. I was willing to remain, but his people would not lend a hut, so we came on to the Lake, and no ferry. Probably he thought that we were going across the Lualaba into Rua.

Lake Moero seems of goodly size, and is flanked by ranges of mountains on the east and west. Its banks are of coarse sand, and slope gradually down to the water. Outside these banks stands a thick belt of tropical vegetation, in which fishermen build their huts. The country called Rua lies on the west, and is seen as a lofty range of dark mountains: another range of less height, but more broken, stands along the eastern shore, and in it lies the path to Casembe. We slept in a fisherman's hut on the north shore. They brought a large fish, called "mondé," for sale; it has a slimy skin and no scales, a large head, with tentaculæ like the Siluridæ, and large eyes: the great gums in its mouth have a brush-like surface, like a whale's in miniature: it is said to eat small fish. A bony spine rises on its back (I suppose for defense), which is two and a half inches long, and as thick as a quill. They are very retentive of life.

The northern shore has a fine sweep like an unbent bow, and round the western end flows the water that makes the river Lu-alaba, which, before it enters Moero, is the Luapula; and that again (if the most intelligent reports speak true) is the Chambezé before it enters Lake Bemba, or Bangweolo.

We came along the north shore till we reached the eastern flanking range, then ascended and turned south; the people very suspicious, shutting their gates as we drew near. We were alone, and only nine persons in all, but they must have had reason for fear. One head man refused us admission, then sent after us, saying that the man who had refused admission was not the chief: he had come from a distance, and had just arrived. It being better to appear friendly than otherwise, we went back, and were well entertained. Provisions were given when we went away. Flies abound, and are very troublesome; they seem to be attracted by the great numbers of fish caught. The people here are Babemba, but beyond the River Kalongosi they are all Balunda.

A trade in salt is carried on from different salt springs and salt mud to Lunda and elsewhere. We meet parties of salt-traders daily, and they return our salutations very cordially, rubbing earth on the arms. We find our path lies between two ranges of mountains, one flanking the eastern shore, the other about three miles more inland, and parallel to it: these are covered thickly with trees, and are of loosely coherent granite. Many villages are in the space inclosed by these ranges, but all insecure.

November 12th.—We came to the Kalongosi, or, as the Arabs and Portuguese pronounce it, Karungwesi, about sixty yards wide, and flowing fast over stones. It is deep enough, even now

when the rainy season is not commenced, to require canoes. It is said to rise in Kumbi, or Afar, a country to the south-east of our ford. Fish in great numbers are caught when ascending to spawn: they are secured by weirs, nets, hooks. Large strong baskets are placed in the rapids, and filled with stones; when the water rises these baskets are standing-places for the fishermen to angle or throw their nets. Having crossed the Kalongosi, we were now in Lunda, or Londa.

November 13th.—We saw that the Kalongosi went north till it met a large meadow on the shores of Moero, and, turning westward, it entered there. The fishermen gave us the names of thirty-nine species of fish in the Lake: they said that they never cease ascending the Kalongosi, though at times they are more abundant than at others. They are as follows:

Mondé, Mota, Lasa, Kasibé, Molobé, Lopembé, Motoya, Chipansa, Mpifu, Manda, Mpala, Moombo, Mfeu, Mendé, Seusé, Kadia nkololo, Etiaka, Nkomo, Lifisha, Sambamkaka, Ntondo, Sampa, Bongwé, Mabanga, Kisé, Kuanya, Nkosu, Palé, Mosungu, Litembwa, Mecheberé, Koninchia, Sipa, Lomembé, Molenga, Mirongé, Nfindo, Pendé.

November 14th.—Being doubtful as to whether we were in the right path, I sent to a village to inquire. The head man, evidently one of a former Casembe school, came to us full of wrath. "What right had we to come that way, seeing the usual path was to our left?" He mouthed some sentences in the pompous Lunda style, but would not show us the path; so we left him, and after going through a forest of large trees four and a half hours south, took advantage of some huts on the Kifurwa River, built by bark-cloth cutters.

November 15th.—Heavy rains, but we went on, and found a village, Kifurwa, surrounded by cassava fields, and next day crossed the Muatozé, twenty-five yards wide, and running strongly toward Moero, knee-deep. The River Kabukwa, seven yards wide, and also knee-deep, going to swell the Muatozé.

We now crossed a brook, Chirongo, one yard wide and one deep; but our march was all through well-grown forest, chiefly gum-copal-trees and bark-cloth-trees. The gum-copal oozes out in abundance after or during the rains, from holes a quarter of an inch in diameter, made by an insect: it falls, and in time sinks into the soil, a supply for future generations. The small well-rounded features of the people of Nsama's country are common here, as we observe in the salt-traders and villages; indeed, this is the home of the Negro, and the features such as we see in pic-

tures of ancient Egyptians, as first pointed out by Mr. Winwood Reade. We sleep by the River Mandapala, twelve yards wide, and knee-deep.

November 18th.—We rest by the Kabusi, a sluggish, narrow rivulet. It runs into the Chungu, a quarter of a mile off. The Chungu is broad, but choked with trees and aquatic plants—Sapotas, Eschinomenas, Papyrus, etc. The free stream is eighteen yards wide, and waist-deep. We had to wade about one hundred yards, thigh and waist deep, to get to the free stream.

On this, the Chungu, Dr. Lacerda died; it is joined by the Mandapala, and flows a united stream into Moero. The statements of the people are confused, but the following is what I have gleaned from many: there were some Ujiji people with the Casembe of the time. The Portuguese and Ujijians began to fight, but Casembe said to them and the Portuguese, "You are all my guests, why should you fight and kill each other?" He then gave Lacerda ten slaves, and men to live with him and work at building huts, bringing fire-wood, water, etc. He made similar presents to the Ujijians, which quieted them. Lacerda was but ten days at Chungu when he died. The place of his death was about $9^{\circ} 32'$, and not $8^{\circ} 43'$ as in Mr. Arrowsmith's map. The feud arose from one of Lacerda's people killing an Ujijian at the water: this would certainly be a barrier to their movements.

Palm-oil-trees are common west of the Chungu, but none appeared east of it. The oil is eaten by the people, and is very nice and sweet. This is remarkable, as the altitude above the sea is three thousand three hundred and fifty feet.

Allah is a very common exclamation among all the people west of Nsama. By advice of a guide whom we picked up at Kifurwa, we sent four fathoms of calico to apprise Casembe of our coming: the Arabs usually send ten fathoms. In our case it was a very superfluous notice, for Casembe is said to have been telegraphed to by runners at every stage of our progress after crossing the Kalongosi.

We remain by the Chungu till Casembe sends one of his counselors to guide us to his town. It has been so perpetually clouded over that we have been unable to make out our progress, and the dense forest prevented us seeing Moero as we wished: rain and thunder perpetually, though the rain seldom fell where we were.

I saw pure white-headed swallows (*Psalidoprocne albiceps*) skimming the surface of the Chungu as we crossed it. The soil is very rich. Casembe's ground-nuts are the largest I have seen, and so is the cassava. I got over a pint of palm-oil for a cubit of calico.

A fine young man, whose father had been the Casembe before this one, came to see us; he is in the background now, otherwise he would have conducted us to the village. A son or heir does not succeed to the chieftainship here.

November 21st.—The River Lundé was five miles from Chungu. It is six yards wide where we crossed it, but larger farther down; springs were oozing out of its bed: we then entered on a broad plain covered with bush, the trees being all cleared off in building a village. When one Casembe dies, the man who succeeds him invariably removes and builds his pembwé, or court, at another place: when Dr. Lacerda died, the Casembe moved to near the north end of the Mofwé. There have been seven Casembes in all. The word means a *general*.

The plain extending from the Lundé to the town of Casembe is level, and studded pretty thickly with red-ant hills, from fifteen to twenty feet high. Casembe has made a broad path from his town to the Lundé, about a mile and a half long, and as broad as a carriage-path. The chief's residence is inclosed in a wall of reeds, eight or nine feet high and three hundred yards square; the gate-way is ornamented with about sixty human skulls: a shed stands in the middle of the road before we come to the gate, with a cannon dressed in gaudy cloths. A number of noisy fellows stopped our party, and demanded tribute for the cannon; I burst through them, and the rest followed without giving any thing: they were afraid of the English. The town is on the east bank of the Lakelet Mofwé, and one mile from its northern end. Mohamad bin Saleh now met us, his men firing guns of welcome; he conducted us to his shed of reception, and then gave us a hut till we could build one of our own. Mohamad is a fine, portly black Arab, with a pleasant smile and pure white beard, and has been more than ten years in these parts, and lived with four Casembes: he has considerable influence here, and also on Tanganyika.

An Arab trader, Mohamad Bogarib, who arrived seven days before us with an immense number of slaves, presented a meal of vermicelli, oil, and honey, also cassava-meal cooked, so as to resemble a sweetmeat (I had not tasted honey or sugar since we left Lake Nyassa, in September, 1866): they had coffee too.

Neither goats, sheep, nor cattle thrive here, so the people are confined to fowls and fish. Cassava is very extensively cultivated; indeed, so generally is this plant grown, that it is impossible to know which is town and which is country: every hut has a plantation around it, in which is grown cassava, *Holeus sorghum*, maize, beans, nuts.

Mohamad gives the same account of the River Luapula and Lake Bemba that Jumbe did, but he adds that the Chambezé, where we crossed it, is the Luapula before it enters Bemba or Bangweolo. On coming out of that lake it turns round and comes away to the north, as Luapula, and, without touching the Mofwé, goes into Moero; then, emerging thence at the north-west end, it becomes Lualaba, goes into Rua, forms a lake there, and afterward goes into another lake beyond Tanganyika.

The Lakelet Mofwé fills during the rains, and spreads westward, much beyond its banks. Elephants wandering in its mud flats when covered are annually killed in numbers: if it were connected with the Lake Moero the flood would run off.

Many of Casembe's people appear with the ears cropped and hands lopped off: the present chief has been often guilty of this barbarity. One man has just come to us without ears or hands: he tries to excite our pity, making a chirruping noise by striking his cheeks with the stumps of his hands.

A dwarf also, one Zofu, with backbone broken, comes about us: he talks with an air of authority, and is present at all public occurrences: the people seem to bear with him. He is a stranger, from a tribe in the north, and works in his garden very briskly: his height is three feet nine inches.

CHAPTER X.

Grand Reception of the Traveler.—Casembe and his Wife.—Long Stay in the Town.—Goes to explore Moero.—Dispatch to Lord Clarendon, with Notes on recent Travels.—Illness at the End of 1867.—Farther Exploration of Lake Moero.—Flooded Plains.—The River Luao.—Visits Kabwawata.—Joy of Arabs at Mohamad bin Saleh's Freedom.—Again ill with Fever.—Stories of under-ground Dwellings.

November 24th, 1867.—WE were called to be presented to Casembe in a grand reception.

The present Casembe has a heavy, uninteresting countenance, without beard or whiskers, and somewhat of the Chinese type, and his eyes have an outward squint. He smiled but once during the day, and that was pleasant enough, though the cropped ears and lopped hands, with human skulls at the gate, made me indisposed to look on any thing with favor. His principal wife came with her attendants, after he had departed, to look at the Englishman (Moengerésé). She was a fine, tall, good-featured lady, with two spears in her hand. The principal men who had come around made way for her, and called on me to salute: I did so; but she, being forty yards off, I involuntarily beckoned her to come nearer: this upset the gravity of all her attendants; all burst into a laugh, and ran off.

Casembe's smile was elicited by the dwarf making some uncouth antics before him. His executioner also came forward to look: he had a broad Lunda sword on his arm, and a curious scissor-like instrument at his neck for cropping ears. On saying to him that his was nasty work, he smiled, and so did many who were not sure of their ears a moment; many men of respectability show that at some former time they have been thus punished. Casembe sent us another large basket of fire-dried fish in addition to that sent us at Chungu, two baskets of flour, one of dried cassava, and a pot of pombe, or beer. Mohamad, who was accustomed to much more liberal Casembes, thinks this one very stingy, having neither generosity nor good sense; but as we can not consume all he gives, we do not complain.

November 27th.—Casembe's chief wife passes frequently to her plantation, carried by six, or more commonly by twelve, men in a sort of palanquin: she has European features, but light-brown complexion. A number of men run before her, brandishing swords and battle-axes, and one beats a hollow instrument, giv-

ing warning to passengers to clear the way: she has two enormous pipes ready filled for smoking. She is very attentive to her agriculture; cassava is the chief product; sweet-potatoes, maize, sorghum, pennisetum, millet, ground-nuts, cotton. The people seem more savage than any I have yet seen: they strike each other barbarously from mere wantonness, but they are civil enough to me.

Mohamad bin Saleh proposes to go to Ujiji next month. He waited when he heard of our coming, in order that we might go together. He has a very low opinion of the present chief. The area which has served for building the chief town at different times is about ten miles in diameter.

Mofwé is a shallow piece of water about two miles broad, four or less long, full of sedgy islands, the abodes of water-fowl; but some are solid enough to be cultivated. The bottom is mud, though sandy at the east shore: it has no communication with the Luapula.

November 28th.—The Lundé, Chungu, and Mandapala are said to join and flow into Moero. Fish are in great abundance (perch). On the west side there is a grove of palm-oil palms, and beyond, west, rises a long range of mountains of the Rua country fifteen or twenty miles off.

December 1st, 1867.—An old man named Pérémbé is the owner of the land on which Casembe has built. They always keep up the traditional ownership. Munongo is a brother of Pérémbé, and he owns the country east of the Kalongosi. If any one wished to cultivate land he would apply to these aboriginal chiefs for it.

I asked a man from Casembe to guide me to the south end of Moero, but he advised me not to go, as it was so marshy. The Lundé forms a marsh on one side, and the Luapula lets water percolate through sand and mud, and so does the Robukwé, which makes the path often knee-deep. He said he would send men to conduct me to Moero, a little farther down, and added that we had got very little to eat from him, and he wanted to give more. Moero's south end is about $9^{\circ} 30' S$.

Old Pérémbé is a sensible man: Mohamad thinks him one hundred and fifty years old. He is always on the side of liberality and fairness; he says that the first Casembe was attracted to Mofwé by the abundance of fish in it. He has the idea of all men being derived from a single pair.

December 7th.—It is very cloudy here: no observations can be made, as it clouds over every afternoon and night.

December 8th, 11th.—Cleared off last night, but intermittent fever prevented my going out.

December 13th.—Set in rains. A number of fine young girls who live in Casembe's compound came and shook hands in their way, which is to cross the right over to your left, and clasp them; then give a few claps with both hands, and repeat the crossed clasp: they want to tell their children that they have seen me.

December 15th.—To-day I announced to Casembe our intention of going away. Two traders got the same return present from him that I did—namely, one goat and some fish, meal, and cassava. I am always ill when not working. I spend my time writing letters, to be ready when we come to Ujiji.

December 18th.—We have been here a month, and I can not get more than two lunars: I got altitudes of the meridian of stars north and south soon after we came, but not lunars. Casembe sent a big basket of fire-dried fish, two pots of beer, and a basket of cassava, and says we may go when we choose.

December 19th.—On going to say good-bye to Casembe, he tried to be gracious, said that we had eaten but little of his food; yet he allowed us to go. He sent for a man to escort us; and on December 22d we went to Lundé River, crossed it, and went on to sleep at the Chungu, close by the place where Casembe's court stood when Dr. Lacerda came, for the town was moved farther west as soon as the doctor died. There are many palm-oil palms about, but no tradition exists of their introduction.

December 23d.—We crossed the Chungu. Rain from above, and cold and wet to the waist below, as I do not lift my shirt, because the white skin makes all stare. I saw black monkeys at this spot. The Chungu is joined by the Kaleusi and the Mandapala before it enters Moero. Casembe said that the Lundé ran into Mofwé; others denied this, and said that it formed a marsh, with numbers of pools in long grass; but it may ooze into Mofwé thus. Casembe sent three men to guide me to Moero.

December 24th.—Drizzly rain, and we are in a miserable spot by the Kabusi, in a bed of brakens four feet high. The guides will not stir in this weather. I gave beads to buy what could be got for Christmas.

December 25th.—Drizzly showers every now and then; soil, black mud. About ten men came as guides and as a convoy of honor to Mohamad.

December 27th.—In two hours we crossed Mandapala, now waist-deep. This part was well stocked with people five years ago, but Casembe's severity in cropping ears and other mutila-

tions, selling the children for slight offenses, etc., made them all flee to neighboring tribes; and now, if he sent all over the country, he could not collect a thousand men.

[Livingstone refers (on December 15th) to some writings he was engaged upon, and we find one of them here in his journal which takes the form of a dispatch to Lord Clarendon, with a note attached to the effect that it was not copied or sent, as he had no paper for the purpose. It affords an epitomized description of his late travels, and the stay at Casembe, and is inserted here in the place of many notes written daily, but which only repeat the same events and observations in a less readable form. It is especially valuable at this stage of his journal, because it treats on the whole geography of the district between Lakes Nyassa and Moero, with a broad handling which is impossible in the mere jottings of a diary.]

Town of Casembe, December 10th, 1867.

Lat. $9^{\circ} 37' 13''$ S.; long. 28° E.

THE RIGHT HONORABLE THE EARL OF CLARENDON.

MY LORD,—The first opportunity I had of sending a letter to the coast occurred in February last, when I was at a village called Molembe (lat. $10^{\circ} 14'$ S.; long. $31^{\circ} 46'$ E.), in the country named Lobemba. Lobisa, Lobemba, Ulungu, and Itawa-Lunda are the names by which the districts of an elevated region between the parallels 11° and 8° S., and meridians 28° – 33° long. E. are known. The altitude of this upland is from four thousand to six thousand feet above the level of the sea. It is generally covered with forest, well watered by numerous rivulets, and comparatively cold. The soil is very rich, and yields abundantly wherever cultivated. This is the water-shed between the Loangwa, a tributary of the Zambesi, and several rivers which flow toward the north. Of the latter, the most remarkable is the Chambezé, for it assists in the formation of three lakes, and changes its name three times in the five or six hundred miles of its course.

On leaving Lobemba, we entered Ulungu, and, as we proceeded northward perceived by the barometers and the courses of numerous rivulets that a decided slope lay in that direction. A friendly old Ulungu chief, named Kasonso, on hearing that I wished to visit Lake Liemba, which lies in his country, gave his son, with a large escort, to guide me hither; and on the 2d of April last we reached the brim of the deep cup-like cavity in which the Lake reposes. The descent is two thousand feet, and still the surface of the water is upward of twenty-five hundred feet above the level of the sea. The sides of the hollow are very

steep, and sometimes the rocks run the whole two thousand feet sheer down to the water. Nowhere is there three miles of level land from the foot of the cliffs to the shore; but top, sides, and bottom are covered with well-grown wood and grass, except where the bare rocks protrude. The scenery is extremely beautiful. The "Acasy," a stream of fifteen yards broad and thigh-deep, came down alongside our precipitous path, and formed cascades by leaping three hundred feet at a time. These, with the bright red of the clay schists among the greenwood-trees, made the dullest of my attendants pause and remark with wonder. Antelopes, buffaloes, and elephants abound on the steep slopes; and hippopotami, crocodiles, and fish swarm in the water. Gnus are here unknown, and these animals may live to old age, if not beguiled into pit-falls. The elephants sometimes eat the crops of the natives, and flap their big ears just outside the village stockades. One got out of our way on to a comparatively level spot, and then stood and roared at us. Elsewhere they make clear off at sight of man.

The first village we came to on the banks of the Lake had a grove of palm-oil and other trees around it. This palm-tree was not the dwarf species seen on Lake Nyassa. A cluster of the fruit passed the door of my hut which required two men to carry it. The fruit seemed quite as large as those on the West Coast. Most of the natives live on two islands, where they cultivate the soil, rear goats, and catch fish. The Lake is not large, from fifteen to twenty miles broad, and from thirty to forty long. It is the receptacle of four considerable streams, and sends out an arm two miles broad to the north-north-west, it is said to Tanganyika, and it may be a branch of that Lake. One of the streams, the Lonzu, drives a smooth body of water into the Lake fifty yards broad and ten fathoms deep, bearing on its surface duckweed and grassy islands. I could see the mouths of other streams, but got near enough to measure the Lofu only; and at a ford fifty miles from the confluence it was one hundred yards wide and waist-deep in the dry season.

We remained six weeks on the shores of the Lake, trying to pick up some flesh and strength. A party of Arabs came into Ulungu after us in search of ivory, and hearing that an Englishman had preceded them, naturally inquired where I was. But our friends, the Bäulungu, suspecting that mischief was meant, stoutly denied that they had ever seen any thing of the sort; and then became very urgent that I should go on to one of the inhabited islands for safety. I regret that I suspected them of

intending to make me a prisoner there, which they could easily have done by removing the canoes; but when the villagers who deceived the Arabs told me afterward, with an air of triumph, how nicely they had managed, I saw that they had only been anxious for my safety. On three occasions the same friendly disposition was shown; and when we went round the west side of the Lake in order to examine the arm or branch above referred to, the head man at the confluence of the Lofu protested so strongly against my going—the Arabs had been fighting, and I might be mistaken for an Arab, and killed—that I felt half inclined to believe him. Two Arab slaves entered the village the same afternoon in search of ivory, and confirmed all he had said. We now altered our course, intending to go south about the district disturbed by the Arabs. When we had gone sixty miles, we heard that the head-quarters of the Arabs were twenty-two miles farther. They had found ivory very cheap, and pushed on to the west, till attacked by a chief named Nsama, whom they beat in his own stockade. They were now at a loss which way to turn. On reaching Chitimba's village (lat. $8^{\circ} 57' 55''$ S.; long. $30^{\circ} 20'$ E.), I found them about six hundred in all; and, on presenting a letter I had from the Sultan of Zanzibar, was immediately supplied with provisions, beads, and cloth. They approved of my plan of passing to the south of Nsama's country, but advised waiting till the effects of punishment, which the Bäulungu had resolved to inflict on Nsama for breach of public law, were known. It had always been understood that whoever brought goods into the country was to be protected; and two hours after my arrival at Chitimba's, the son of Kasonso, our guide, marched in with his contingent. It was anticipated that Nsama might flee: if to the north, he would leave me a free passage through his country; if to the south, I might be saved from walking into his hands. But it turned out that Nsama was anxious for peace. He had sent two men with elephants' tusks to begin a negotiation; but treachery was suspected, and they were shot down. Another effort was made with ten goats, and repulsed. This was much to the regret of the head Arabs. It was fortunate for me that the Arab goods were not all sold, for Lake Moero lay in Nsama's country, and without peace no ivory could be bought, nor could I reach the Lake. The peace-making between the people and Arabs was, however, a tedious process, occupying three and a half months—drinking each other's blood. This, as I saw it west of this in 1854, is not more horrible than the thirtieth dilution of deadly nightshade, or strychnine, is in

homeopathy. I thought that, had I been an Arab, I could easily swallow that, but not the next means of cementing the peace—marrying a black wife. Nsama's daughter was the bride, and she turned out very pretty. She came riding pickaback on a man's shoulders: this is the most dignified conveyance that chiefs and their families can command. She had ten maids with her, each carrying a basket of provisions, and all having the same beautiful features as herself. She was taken by the principal Arab, but soon showed that she preferred her father to her husband; for, seeing preparations made to send off to purchase ivory, she suspected that her father was to be attacked, and made her escape. I then visited Nsama, and, as he objected to many people coming near him, took only three of my eight attendants. His people were very much afraid of fire-arms, and felt all my clothing to see if I had any concealed on my person. Nsama is an old man, with head and face like those sculptured on the Assyrian monuments. He has been a great conqueror in his time, and with bows and arrows was invincible. He is said to have destroyed many native traders from Tanganyika; but twenty Arab guns made him flee from his own stockade, and caused a great sensation in the country. He was much taken with my hair and woolen clothing; but his people, heedless of his scolding, so pressed upon us that we could not converse, and, after promising to send for me to talk during the night, our interview ended. He promised guides to Moero, and sent us more provisions than we could carry; but showed so much distrust, that after all we went without his assistance.

Nsama's people are particularly handsome. Many of the men have as beautiful heads as one could find in an assembly of Europeans. All have very fine forms, with small hands and feet. None of the West Coast ugliness, from which most of our ideas of the Negroes are derived, is here to be seen. No prognathous jaws nor lark-beels offended the sight. My observations deepened the impression first obtained from the remarks of Winwood Reade, that the typical Negro is seen in the ancient Egyptian, and not in the ungainly forms which grow up in the unhealthy swamps of the West Coast. Indeed it is probable that this upland forest region is the true home of the Negro. The women excited the admiration of the Arabs. They have fine, small, well-formed features: their great defect is one of fashion, which does not extend to the next tribe; they file their teeth to points, the hussies, and that makes their smile like that of the crocodile.

Nsama's country is called Itawa, and his principal town is in

lat. $8^{\circ} 55'$ S., and long. $29^{\circ} 21'$ E. From the large population he had under him, Itawa is in many parts well cleared of trees for cultivation, and it is lower than Ulungu, being generally about three thousand feet above the sea. Long lines of tree-covered hills, raised some six or seven hundred feet above these valleys of denudation, prevent the scenery from being monotonous. Large game is abundant. Elephants, buffaloes, and zebras grazed in large numbers on the long sloping banks of a river called Chiséra, a mile and a half broad. In going north we crossed this river, or rather marsh, which is full of papyrus plants and reeds. Our ford was an elephant's path; and the roots of the papyrus, though a carpet to these animals, were sharp and sore to feet usually protected by shoes, and often made us shrink and flounder into holes chest-deep. The Chiséra forms a larger marsh west of this, and it gives off its water to the Kalongosi, a feeder of Lake Moero.

The Arabs sent out men in all directions to purchase ivory; but their victory over Nsama had created a panic among the tribes which no verbal assurances could allay. If Nsama had been routed by twenty Arab guns no one could stand before them but Casembe; and Casembe had issued strict orders to his people not to allow the Arabs who fought Nsama to enter his country. They did not attempt to force their way, but after sending friendly messages and presents to different chiefs, when these were not cordially received, turned off in some other direction, and at last, despairing of more ivory, turned homeward. From first to last they were extremely kind to me, and showed all due respect to the Sultan's letter. I am glad that I was witness to their mode of trading in ivory and slaves. It formed a complete contrast to the atrocious dealings of the Kilwa traders, who are supposed to be, but are not, the subjects of the same Sultan. If one wished to depict the slave-trade in its most attractive, or rather least objectionable, form, he would accompany these gentlemen subjects of the Sultan of Zanzibar. If he would describe the land traffic in its most disgusting phases, he would follow the Kilwa traders along the road to Nyassa, or the Portuguese half-castes from Tette to the River Shiré.

Keeping to the north of Nsama altogether, and moving westward, our small party reached the north end of Moero on the 8th of November last. There the Lake is a goodly piece of water twelve or more miles broad, and flanked on the east and west by ranges of lofty tree-covered mountains. The range on the west is the highest, and is part of the country called Rua-Moero; it

gives off a river at its north-west end called Lualaba, and receives the River Kalongosi (pronounced by the Arabs Karungwesi) on the east near its middle, and the rivers Luapula and Rovukwe at its southern extremity. The point of most interest in Lake Moero is that it forms one of a chain of lakes, connected by a river some five hundred miles in length. First of all, the Chambezé rises in the country of Mambwé, north-east of Molemba. It then flows south-west and west till it reaches lat. 11° S., and long. 29° E., where it forms Lake Bemba, or Bangweolo; emerging thence, it assumes the new name Luapula, and comes down here to fall into Moero. On going out of this lake, it is known by the name Lualaba, as it flows north-west in Rua to form another lake, with many islands, called Urengé or Ulengé. Beyond this, information is not positive as to whether it enters Tanganyika or another lake beyond that. When I crossed the Chambezé, the similarity of names led me to imagine that this was a branch of the Zambesi. The natives said, "No. This goes south-west, and forms a very large water there." But I had become prepossessed with the idea that Lake Liemba was that Bemba of which I had heard in 1863, and we had been so starved in the south that I gladly set my face north. The river-like prolongation of Liemba might go to Moero, and where I could not follow the arm of Liemba. Then I worked my way to this lake. Since coming to Casembe's, the testimony of natives and Arabs has been so united and consistent that I am but ten days from Lake Bemba, or Bangweolo, that I can not doubt its accuracy. I am so tired of exploration without a word from home or anywhere else for two years, that I must go to Ujiji, or Tanganyika, for letters before doing any thing else. The banks and country adjacent to Lake Bangweolo are reported to be now very muddy, and very unhealthy. I have no medicine. The inhabitants suffer greatly from swelled thyroid gland, or Derbyshire neck, and elephantiasis, and this is the rainy season, and very unsafe for me.

When at the lower end of Moero, we were so near Casembe that it was thought well to ascertain the length of the lake, and see Casembe too. We came up between the double range that flanks the east of the lake; but mountains and plains are so covered with well-grown forest that we could seldom see it. We reached Casembe's town on November 28th. It stands near the north end of the Lakelet Mofwé; this is from one to three miles broad, and some six or seven long: it is full of sedgy islands, and abounds in fish. The country is quite level, but fifteen or twenty miles west of Mofwé we see a long range of the mountains of

Rua. Between this range and Mofwé the Luapula flows past into Moero, the lake called Moero-okata—the great Moero, being about fifty miles long. The town of Casembe covers a mile square of cassava plantations, the huts being dotted over that space. Some have square inclosures of reeds, but no attempt has been made at arrangement: it might be called a rural village rather than a town. No estimate could be formed by counting the huts, they were so irregularly planted, and hidden by cassava; but my impression from other collections of huts was that the population was under a thousand souls. The court or compound of Casembe—some would call it a palace—is a square inclosure of three hundred yards by two hundred yards. It is surrounded by a hedge of high reeds. Inside, where Casembe honored me with a grand reception, stands a gigantic hut for Casembe, and a score of small huts for domestics. The queen's hut stands behind that of the chief, with a number of small huts also. Most of the inclosed space is covered with a plantation of cassava (*Curcus purgaris*), and cotton. Casembe sat before his hut on a square seat placed on lion and leopard skins. He was clothed in a coarse blue-and-white Manchester print edged with red baize, and arranged in large folds so as to look like a crinoline put on wrong side foremost. His arms, legs, and head were covered with sleeves, leggings, and cap made of various colored beads in neat patterns: a crown of yellow feathers surmounted his cap. Each of his head men came forward, shaded by a huge, ill-made umbrella, and, followed by his dependents, made obeisance to Casembe, and sat down on his right and left: various bands of musicians did the same. When called upon, I rose and bowed, and an old councilor, with his ears cropped, gave the chief as full an account as he had been able to gather during our stay of the English in general, and my antecedents in particular. My having passed through Lunda to the west of Casembe, and visited chiefs of whom he scarcely knew any thing, excited most attention. He then assured me that I was welcome to his country, to go where I liked, and do what I chose. We then went (two boys carrying his train behind him) to an inner apartment, where the articles of my present were exhibited in detail. He had examined them privately before, and we knew that he was satisfied. They consisted of eight yards of orange-colored serge, a large striped table-cloth; another large cloth, made at Manchester, in imitation of West Coast native manufacture, which never fails to excite the admiration of Arabs and natives, and a large richly gilded comb for the back hair, such as ladies wore fifty years ago:

this was given to me by a friend at Liverpool; and as Casembe and Nsama's people cultivate the hair into large knobs behind, I was sure that this article would tickle the fancy. Casembe expressed himself pleased, and again bade me welcome.

I had another interview, and tried to dissuade him from selling his people as slaves. He listened a while, then broke off into a tirade on the greatness of his country, his power and dominion, which Mohamad bin Saleh, who has been here for ten years, turned into ridicule, and made the audience laugh by telling how other Lunda chiefs had given me oxen and sheep, while Casembe had only a poor little goat and some fish to bestow. He insisted also that there were but two sovereigns in the world, the Sultan of Zanzibar and Victoria. When we went, on a third occasion, to bid Casembe farewell, he was much less distant, and gave me the impression that I could soon become friends with him; but he has an ungainly look, and an outward squint in each eye. A number of human skulls adorned the entrance to his court-yard; and great numbers of his principal men having their ears cropped, and some with their hands lopped off, showed his barbarous way of making his ministers attentive and honest. I could not avoid indulging a prejudice against him.

The Portuguese visited Casembe long ago; but as each new Casembe builds a new town, it is not easy to fix on the exact spot to which strangers came. The last seven Casembes have had their towns within seven miles of the present one. Dr. Lacerda, governor of Tette, on the Zambesi, was the only visitor of scientific attainments, and he died at the rivulet called Chungu, three or four miles from this. The spot is called Nshinda, or Inchinda, which the Portuguese wrote Lucenda, or Ucenda. The latitude given is nearly fifty miles wrong; but the natives say that he lived only ten days after his arrival; and if, as is probable, his mind was clouded with fever when he last observed, those who have experienced what that is will readily excuse any mistake he may have made. His object was to accomplish a much-desired project of the Portuguese to have an overland communication between their eastern and western possessions. This was never made by any of the Portuguese nation; but two black traders succeeded partially with a part of the distance, crossing once from Cassangé, in Angola, to Tette, on the Zambesi, and returning with a letter from the Governor of Mozambique. It is remarkable that this journey, which was less by a thousand miles than from sea to sea and back again, should have forever quenched all white Portuguese aspirations for an overland route.

The different Casembes visited by the Portuguese seem to have varied much in character and otherwise. Pereira, the first visitor, said (I quote from memory) that Casembe had twenty thousand trained soldiers, watered his streets daily, and sacrificed twenty human victims every day. I could hear nothing of human sacrifices now, and it is questionable if the present Casembe could bring a thousand stragglers into the field. When he usurped power five years ago, his country was densely peopled; but he was so severe in his punishments—cropping the ears, lopping off the hands, and other mutilations, selling the children for very slight offenses, that his subjects gradually dispersed themselves in the neighboring countries beyond his power. This is the common mode by which tyranny is cured in parts like these, where fugitives are never returned. The present Casembe is very poor. When he had people who killed elephants, he was too stingy to share the profits of the sale of the ivory with his subordinates. The elephant-hunters have either left him or neglected hunting, so he has now no tusks to sell to the Arab traders who come from Tanganyika. Major Monteiro, the third Portuguese who visited Casembe, appears to have been badly treated by this man's predecessor, and no other of his nation has ventured so far since. They do not lose much by remaining away, for a little ivory and slaves are all that Casembe ever can have to sell. About a month to the west of this the people of Katanga smelt copper ore (malachite) into large bars shaped like the capital letter I. They may be met with of from fifty to a hundred pounds' weight all over the country, and the inhabitants draw the copper into wire for armlets and leglets. Gold is also found at Katanga, and specimens were lately sent to the Sultan of Zanzibar.

As we come down from the water-shed toward Tanganyika, we enter an area of the earth's surface still disturbed by internal igneous action. A hot fountain in the country of Nsama is often used to boil cassava and maize. Earthquakes are by no means rare. We experienced the shock of one while at Chitimba's village, and they extend as far as Casembe's. I felt as if afloat, and as huts would not fall, there was no sense of danger: some of them that happened at night set the fowls a-cackling. The most remarkable effect of this one was that it changed the rates of the chronometers: no rain fell after it. No one had access to the chronometers but myself, and, as I never heard of this effect before, I may mention that one which lost with great regularity 1^s.5 daily, lost 15^s; another, whose rate since leaving the coast

was 15°, lost 40°; and a third, which gained 6° daily, stopped altogether. Some of Nsama's people ascribed the earthquakes to the hot fountain, because it showed unusual commotion on these occasions; another hot fountain exists nearer Tanganyika than Nsama's, and we passed one on the shores of Moero.

We could not understand why the natives called Moero much larger than Tanganyika till we saw both. The greater lake lies in a comparatively narrow trough, with high land on each side, which is always visible; but when we look at Moero, to the south of the mountains of Rua on the west, we have nothing but an apparently boundless sea horizon. The Luapula and Rovukwé form a marsh at the southern extremity, and Casembe dissuaded me from entering it, but sent a man to guide me to different points of Moero farther down. From the heights at which the southern portions were seen, it must be from forty to sixty miles broad. From the south end of the mountains of Rua (9° 4' S. lat.) it is thirty-three miles broad. No native ever attempts to cross it even there. Its fisheries are of great value to the inhabitants, and the produce is carried to great distances.

Among the vegetable products of this region, that which interested me most was a sort of potato. It does not belong to the solanaceous, but to the papilionaceous, or pea family, and its flowers have a delightful fragrance. It is easily propagated by small cuttings of the root or stalk. The tuber is oblong, like our kidney potato, and, when boiled, tastes exactly like our common potato. When unripe, it has a slight degree of bitterness, and it is believed to be wholesome; a piece of the root eaten raw is a good remedy in nausea. It is met with on the uplands alone, and seems incapable of bearing much heat, though I kept some of the roots without earth in a box, which was carried in the sun almost daily for six months without destroying their vegetative power.

It is remarkable that, in all the central regions of Africa visited, the cotton is that known as the Pernambuco variety. It has a long, strong staple, seeds clustered together, and adherent to each other. The bushes, eight or ten feet high, have woody stems, and the people make strong striped black-and-white shawls of the cotton.

It was pleasant to meet the palm-oil palm (*Elaeis Guineensis*) at Casembe's, which is over three thousand feet above the level of the sea. The oil is sold cheap, but no tradition exists of its introduction into the country.

I send no sketch of the country, because I have not yet passed

over a sufficient surface to give a connected view of the whole water-shed of this region, and I regret that I can not recommend any of the published maps I have seen as giving even a tolerable idea of the country. One bold constructor of maps has tacked on two hundred miles to the north-west end of Lake Nyassa, a feat which no traveler has ever ventured to imitate. Another has placed a river in the same quarter running three or four thousand feet up hill, and named it the "NEW ZAMBESI," because, I suppose, the old Zambesi runs down hill. I have walked over both these mental abortions, and did not know that I was walking on water till I saw them in the maps.

[The dispatch breaks off at this point. The year concludes with health impaired. As time goes on, we shall see how ominous the conviction was which made him dread the swamps of Bangweolo.]

December 28th–31st, 1867.—We came on to the rivulet Chirongo, and then to the Kabukwa, where I was taken ill. Heavy rains kept the convoy back. I have had nothing but coarsely-ground sorghum meal for some time back, and am weak; I used to be the first in the line of march, and am now the last; Mohamad presented a meal of finely-ground porridge and a fowl, and I immediately felt the difference, though I was not grumbling at my coarse dishes. It is well that I did not go to Bangweolo Lake, for it is now very unhealthy to the natives; and I fear that, without medicine, continual wettings by fording rivulets might have knocked me up altogether. As I have mentioned, the people suffer greatly from swelled thyroid gland, or Derbyshire neck, and *Elephantiasis scroti*.

January 1st, 1868.—Almighty Father, forgive the sins of the past year for thy Son's sake. Help me to be more profitable during this year. If I am to die this year, prepare me for it.

* * * * *

I bought five hoes at two or three yards of calico each: they are thirteen and a half by six and a half inches: many are made in Casembe's country, and this is the last place we can find them. When we come into Buiré we can purchase a good goat for one. One of my goats died, and the other dried up. I long for others, for milk is the most strengthening food I can get.

My guide to Moero came to-day, and I visited the Lake several times, so as to get a good idea of its size. The first fifteen miles in the north are from twelve or more to thirty-three miles broad. The great mass of the Rua Mountains confines it. Thus in a

clear day a lower range is seen continued from the high point of the first mass away to the west-south-west; this ends, and sea horizon is alone visible away to the south and west: from the height we viewed it at, the width must be over forty, perhaps sixty miles. A large island, called Kirwa,* is situated between the Mandapala and Kabukwa rivers, but nearest to the other shore. The natives never attempt to cross any part of the Lake south of this Kirwa. Land could not be seen with a good glass on the clearest day we had. I can understand why the natives pronounced Moero to be larger than Tanganyika: in the last named they see the land always on both sides; it is like a vast trough flanked with highlands; but at Moero nothing but sea horizon can be seen when one looks south-west of the Rua Mountains.

At the Kalongosi meadow one of Mohamad's men shot a buffalo, and he gave me a leg of the good beefy flesh. Our course was slow, caused partly by rains, and partly by waiting for the convoy. The people at Kalongosi were afraid to ferry us or any of his people in the convoy out of Casembe's country; but at last we gave a good fee, and their scruples yielded: they were influenced also by seeing other villagers ready to undertake the job. The latter nearly fought over us on seeing that their neighbors got all the fare.

We then came along the Lake, and close to its shores. The moisture caused a profusion of gingers, ferns, and tropical forest. Buffaloes, zebras, and elephants are numerous, and the villagers at Chukosi's, where we slept, warned us against lions and leopards.

January 12th.—Sunday at Karembwé's village. The mountains east of him are called Makunga. We went yesterday to the shore, and by protraction Rua Point was distant thirty-three miles. Karembwé sent for us, to have an audience: he is a large man, with a gruff voice, but liked by his people and by strangers. I gave him a cloth, and he gave me a goat. The enthusiasm with which I held on to visit Moero had communicated itself to Tipo Tipo and Sydé bin Alle, for they followed me up to this place to see the Lake, and remained five days while we were at Casembe's. Other Arabs, or rather Suahelis, must have seen it, but never mentioned it as any thing worth looking at; and it was only when all hope of ivory was gone that these two head men found time to come. There is a large population here.

* Kirwa and its various corruptions, such as Shirwa, Chirua, and Kiroa, perpetually recur in Africa, and would almost seem to stand for "the island."—ED.

January 13th.—Heavy rains. Karembé mentioned a natural curiosity as likely to interest me: a little rivulet, Chipamba, goes some distance under-ground, but is uninteresting.

Next day we crossed the Vuna, a strong torrent, which has a hot fountain close by the ford, in which maize and cassava may be boiled. A large one in Nsama's country is used in the same way, maize and cassava being tied to a string and thrown in to be cooked: some natives believe that earthquakes are connected with its violent ebullitions. We crossed the Katétté, another strong torrent, before reaching the north end of Moero, where we slept in some travelers' huts.

Leaving the Lake and going north, we soon got on to a plain flooded by the Luao. We had to wade through very adhesive black mud, generally ankle-deep, and having many holes in it much deeper: we had four hours of this, and then came to the ford of the Luao itself. We waded up a branch of it waist-deep for at least a quarter of a mile, then crossed a narrow part by means of a rude bridge of branches and trees of about forty yards width. The Luao, in spreading over the plains, confers benefits on the inhabitants, though I could not help concluding it imparts disease too, for the black mud in places smells horribly. Great numbers of Siluridæ, chiefly *Clarias capensis*, often three feet in length, spread over the flooded portions of the country, eating the young of other fishes, and insects, lizards, and worms, killed by the waters. The people make weirs for them, and, as the waters retire, kill large numbers, which they use as a relish to their farinaceous food.

January 16th.—After sleeping near the Luao, we went on toward the village, in which Mohamad's son lives. It is on the Kakoma River, and is called Kabwabwata, the village of Mubao. In many of the villages the people shut their stockades as soon as we appear, and stand, bows and arrows in hand, till we have passed: the reason seems to be that the slaves, when out of sight of their masters, carry things with a high hand, demanding food and other things as if they had power and authority. One slave stole two tobacco-pipes yesterday, in passing through a village: the villagers complained to me when I came up, and I waited till Mohamad came, and told him; we then went forward, the men keeping close to me till we got the slave and the pipes. They stole cassava as we went along, but this could scarcely be prevented. They laid hold of a plant an inch and a half thick, and tore it out of the soft soil, with its five or six roots as large as our largest carrots, stowed the roots away in their loads, and went on

eating them; but the stalk thrown among those still growing shows the theft. The raw roots are agreeable and nutritious. No great harm is done by this, for the gardens are so large; but it inspires distrust in the inhabitants, and makes it dangerous for Arabs to travel not fully manned and armed.

On reaching the village Kabwabwata, a great demonstration was made by Mohamad's Arab dependents and Wanyamwesi: the women had their faces all smeared with pipe-clay, and lulliloed with all their might. When we came among the huts, they cast handfuls of soil on their heads, while the men fired off their guns as fast as they could load them. Those connected with Mohamad ran and kissed his hands, and fired, till the sound of shouting, lullilooing, clapping of hands, and shooting was deafening: Mohamad was quite overcome by this demonstration, and it was long before he could still them.

On the way to this village from the south, we observed an extensive breadth of land under ground-nuts, which are made into oil: a large jar of this is sold for a hoe. The ground-nuts were now in flower, and green maize ready to be eaten. People all busy planting, transplanting, or weeding: they plant cassava on mounds prepared for it, on which they have sown beans, sorghum, maize, pumpkins: these ripen, and leave the cassava a free soil. The sorghum, or dura, is sown thickly; and when about a foot high—if the owner has been able to prepare the soil elsewhere—it is transplanted, a portion of the leaves being cut off to prevent too great evaporation and the death of the plant.

January 17th.—The Wanyamwesi and people of Garaganza say that we have thirteen days' march from this to the Tanganyika Lake. It is often muddy, and many rivulets are to be crossed.

Mohamad is naturally anxious to stay a little while with his son, for it is a wet season, and the mud is disagreeable to travel over: it is said to be worse near Ujiji. He cooks small delicacies for me with the little he has, and tries to make me comfortable. Vinegar is made from bananas, and oil from ground-nuts. I am anxious to be off, but chiefly to get news.

I find that many Unyamwesi people are waiting here, on account of the great quantity of rain-water in front. It would be difficult, they say, to get canoes on Tanganyika, as the waves are now large.

January 24th.—Two of Mohamad Bogharib's people came from Casembe's to trade here, and a body of Syde bin Habib's people also from Garaganza, near Kazé: they report the flooded lands on this side of Lake Tanganyika as waist and chest deep. Bin Habib, being at Katanga, will not stir till the rains are over, and

I fear we are storm-stayed till then too. The feeders of the Marungu are not fordable just now, and no canoes are to be had.

January 26th, 27th.—I am ill with fever, as I always am when stationary.

January 28th.—Better, and thankful to Him of the Greatest Name. We must remain: it is a dry spot, and favorable for ground-nuts. Hooping-cough here.

January 30th.—The earth, cooled by the rain last night, sets all to transplanting dura, or sorghum; they cut the leaves till only about eighteen inches of them are left, but it grows all the better for the change of place.

Mohamad believes that Tanganyika flows through Rusizi to Lohindé (Chuambo).

Seyd Seyd is said to have been the first Arab sultan who traded, and Seyed Majid follows the example of his father, and has many Arab traders in his employment. He lately sent eight buffaloes to Mtéza, king of Uganda, son of Sunna, by way of increasing his trade, but it is not likely that he will give up the lucrative trade in ivory and slaves.

Susi bought a hoe with a little gunpowder, then a cylinder of dura, three feet long by two feet in diameter, for the hoe: it is at least one hundred-weight.

Stone under-ground houses are reported in Rua; but whether natural or artificial Mohamad could not say. If a present is made to the Rua chiefs, they never obstruct passengers.

Chikosi, at whose village we passed a night, near Kalongosi, and Chiputa, are both dead.

The Mofwé fills during the greater rains, and spreads over a large district; elephants then wander in its marshes, and are killed easily by people in canoes: this happens every year, and Mohamad Bogharib waits now for this ivory.

February 7th–21st, 1868.—On inquiring of men who have seen the under-ground houses in Rua, I find that they are very extensive, ranging along mountain sides for twenty miles, and in one part a rivulet flows inside. In some cases the door-ways are level with the country adjacent; in others, ladders are used to climb up to them: inside they are said to be very large, and not the work of men, but of God. The people have plenty of fowls, and they too obtain shelter in these Troglodyte habitations.

February 23d.—I was visited by an important chief called Chapé, who said that he wanted to make friends with the English. He, Chisapi, Sama, Muabo, Karembwé, are of one tribe or family, the Oanza. He did not beg any thing, and promised to send me a goat.

CHAPTER XI.

Riot in the Camp.—Mohamad's Account of his long Imprisonment.—Superstitions about Children's Teeth.—Concerning Dreams.—News of Lake Chowambé.—Life of the Arab Slavers.—The Katanga Gold Supply.—Muabo.—Ascent of the Rua Mountains.—Syde bin Habib.—Birthday, March 19th, 1868.—Hostility of Mpwéto.—Contemplates visiting Lake Bemba.—Nile Sources.—Men desert.—The Shores of Moero.—Visits Fungafunga.—Return to Casembe's.—Obstructiveness of "Cropped-ears."—Accounts of Pereira and Dr. Lacerda.—Major Monteiro.—The Line of Casembe's.—Casembe explains the Connection of the Lakes and the Luapula.—Queen Moäri.—Arab Sacrifice.—Kapika gets rid of his Wife.

February 24th, 1868.—SOME slaves who came with Mohamad Bogharib's agent abused my men this morning, as bringing unclean meat into the village to sell, though it had been killed by a man of the Wanyamwesi. They called out, "Kaffir, Kaffir!" and Susi, roused by this, launched forth with a stick; the others joined in the row, and the offenders were beat off; but they went and collected all their number, and renewed the assault. One threw a heavy block of wood and struck Simon on the head, making him quite insensible and convulsed for some time. He has three wounds on the head, which may prove serious. This is the first outburst of Mohammedan bigotry we have met; and by those who know so little of the creed that it is questionable if one of them can repeat the formula, "Lā illāhā illā lahu Moham-med Rasulela salla lahu, a leihi oa Salama." Simon recovered, but Gallahs are in general not strong.

February 25th.—Mohamad called on me this morning to apologize for the outrage of yesterday, but no one was to blame except the slaves, and I wanted no punishment inflicted if they were cautioned for the future. It seems plain that if they do not wish to buy the unclean meat they can let it alone—no harm is done. The Wanyamwesi kill for all; and some Mohammedans say that they will not eat of it, but their wives and people do eat it privately.

I asked Mohamad to-day if it were true that he was a prisoner at Casembe's. He replied, "Quite so." Some Garaganza people, now at Katanga, fought with Casembe, and Mohamad was suspected of being connected with them. Casembe attacked his people, and during the turmoil a hundred frasilahs of copper were stolen from him, and many of his people killed. Casembe

kept him a prisoner till sixty of his people were either killed or died, among these Mohamad's eldest son: he was thus reduced to poverty. He gave something to Casembe to allow him to depart, and I suspect that my Sultan's letter had considerable influence in inducing Casembe to accede to his request; for he repeated again and again in my hearing that he must pay respect to my letter, and see me safe at least as far as Ujiji. Mohamad says that he will not return to Casembe again, but will begin to trade with some other chief: it is rather hard for a man at his age to begin *de novo*. He is respected among the Arabs, who pronounce him to be a good man. He says that he has been twenty-two years in Africa, and never saw an outburst like that of yesterday among the Wanyamwesi: it is, however, common for the people at Ujiji to drink palm toddy, and then have a general row in the bazar, but no bad feeling exists next day.

If a child cuts the upper front teeth before the lower, it is killed, as unlucky: this is a widely-spread superstition. When I was among the Makololo, in 1859, one of Sekelétu's wives would not allow her servant's child to be killed for this; but few would have the courage to act in opposition to public feeling as she did. In Casembe's country, if a child is seen to turn from one side to the other in sleep it is killed. They say of any child who has what they consider these defects, "He is an Arab child," because the Arabs have none of this class of superstitions; and, should any Arab be near, they give the child to him: it would bring ill luck, misfortunes, "milando," or guilt, to the family. These superstitions may account for the readiness with which one tribe parted with their children to Speke's followers. Mohamad says that these children must have been taken in war, as none sell their own offspring.

If Casembe dreams of any man twice or three times, he puts the man to death, as one who is practicing secret arts against his life: if any one is pounding or cooking food for him, he must preserve the strictest silence: these and other things show extreme superstition and degradation.

During his enforced detention, Mohamad's friends advised him to leave Casembe by force, offering to aid him with their men, but he always refused. His father was the first to open this country to trade with the Arabs, and all his expenses while so doing were borne by himself; but Mohamad seems to be a man of peace, and unwilling to break the appearance of friendship with the chiefs. He thinks that this Casembe poisoned his predeces-

sor: he certainly killed his wife's mother, a queen, that she might be no obstacle to him in securing her daughter.

We are waiting, in company with a number of Wanyamwesi, for the cessation of the rains, which have flooded the country between this and Tanganyika. If there were much slope, this water would flow off: this makes me suspect that Tanganyika is not so low as Speke's measurement. The Arabs are positive that water flows from that lake to the Victoria Nyanza, and assert that Dagara, the father of Rumanyika, was anxious to send canoes from his place to Ujiji, or, as some say, to dig a canal to Ujiji. The Wanyamwesi here support themselves by shooting buffaloes at a place two days distant, and selling the meat for grain and cassava. No sooner is it known that an animal is killed than the village women crowd in here, carrying their produce to exchange it for meat, which they prefer to beads or any thing else. Their farinaceous food creates a great craving for flesh: were my shoes not done, I would go in for buffaloes too.

A man from the upper part of Tanganyika gives the same account of the river from Rusisi that Burton and Speke received when they went to its mouth. He says that the water of the lake goes up some distance, but is met by Rusisi water, and driven back thereby. The lake water, he adds, finds an exit northward and eastward by several small rivers which would admit small canoes only. They pour into lake Chowambé—probably that discovered by Mr. Baker. This Chowambé is in Hundi, the country of cannibals, but the most enlightened informants leave the impression on the mind of groping in the dark: it may be all different when we come to see it.

The fruit of the palm, which yields palm-oil, is first of all boiled, then pounded in a mortar, then put into hot or boiling water, and the oil skimmed off. The palm-oil is said to be very abundant at Ujiji, as much as three hundred gallons being often brought into the bazar for sale in one morning: the people buy it eagerly for cooking purposes. Mohamad says that the island of Pemba, near Zanzibar, contains many of these palms, but the people are ignorant of the mode of separating the oil from the nut: they call the palm nkoma at Casembe's, and chikichi at Zanzibar.*

No better authority for what has been done or left undone by Mohammedans in this country can be found than Mohamad bin

* Chikichi-nuts have been an article of trade and export for some time from Zanzibar. The oil-palm grows wild in Pemba.

Saleh; for he is very intelligent, and takes an interest in all that happens, and his father was equally interested in this country's affairs. He declares that no attempt was ever made by Mohammedans to proselytize the Africans: they teach their own children to read the Koran, but them only; it is never translated, and to servants who go to the mosque it is all dumb-show. Some servants imbibe Mohammedan bigotry about eating, but they offer no prayers. Circumcision, to make *halel*, or fit to slaughter the animals for their master, is the utmost advance any have made. As the Arabs in East Africa never feel themselves called on to propagate the doctrines of Islam among the heathen Africans, the statement of Captain Burton that they would make better missionaries to the Africans than Christians, because they would not insist on the abandonment of polygamy, possesses the same force as if he had said Mohammedans would catch more birds than Christians, because they would put salt on their tails. The indispensable requisite or qualification for any kind of missionary is that he have some wish to proselytize: this the Arabs do not possess in the slightest degree.

As they never translate the Koran, they neglect the best means of influencing the Africans, who invariably wish to understand what they are about. When we were teaching adults the alphabet, they felt it a hard task. "Give me medicine; I shall drink it to make me understand it," was their earnest entreaty. When they have advanced so far as to form clear conceptions of Old Testament and Gospel histories, they tell them to their neighbors; and, on visiting distant tribes, feel proud to show how much they know: in this way the knowledge of Christianity becomes widely diffused. Those whose hatred to its self-denying doctrines has become developed by knowledge, propagate slanders; but still they speak of Christianity, and awaken attention. The plan, therefore, of the Christian missionary in imparting knowledge is immeasurably superior to that of the Moslem in dealing with dumb-show. I have, however, been astonished to see that none of the Africans imitate the Arab prayers: considering their great reverence of the Deity, it is a wonder that they do not learn to address prayers to Him except on very extraordinary occasions.

My remarks referring to the education by Mohammedans do not refer to the Suahelis, for they teach their children to read, and even send them to school. They are the descendants of Arab and African women, and inhabit the coast-line. Although they read, they understand very little Arabic beyond the few

words which have been incorporated into Suaheli. The establishment of Moslem missions among the heathen is utterly unknown, and this is remarkable, because the Wanyamwesi, for instance, are very friendly with the Arabs—are great traders, too, like them, and are constantly employed as porters and native traders, being considered very trustworthy: they even acknowledge Seyed Majid's authority. The Arabs speak of all the Africans as "*Gumu*," that is, hard or callous to the Mohammedan religion.

Some believe that Kilimanjaro Mountain has mummies, as in Egypt, and that Moses visited it of old.

Mungo Park mentions that he found the Africans in the far interior of the west in possession of the stories of Joseph and his brethren, and others. They probably got them from the Koran, as verbally explained by some liberal Mullah, and showed how naturally they spread any new ideas they obtained: they were astonished to find that Park knew the stories.

The people at Katanga are afraid to dig for the gold in their country, because they believe that it has been hidden where it is by "*Ngolu*," who is the owner of it. The Arabs translate *Ngolu* by Satan: it means *Mézimo*, or departed spirits, too. The people are all oppressed by their superstitions; the fear of death is remarkably strong. The wagtails are never molested, because if they were killed death would visit the village; this too is the case with the small whydah birds; the fear of death in the minds of the people saves them from molestation. But why should we be so prone to criticise? A remnant of our own superstitions is seen in the prejudice against sitting down thirteen to dinner, spilling the salt and not throwing a little of it over the left shoulder. Ferdinand I., the king of Naples, in passing through the streets, perpetually put one hand into his pockets to cross the thumb over the finger in order to avert the influence of the evil eye!

On the 6th, Muabo, the great chief of these parts, came to call on Mohamad: several men got up and made some antics before him, then knelt down and did obeisance, then Muabo himself jumped about a little, and all applauded. He is a good-natured looking man, fond of a joke, and always ready with a good-humored smile: he was praised very highly—*Mpwéto* was nothing to Muabo *mokolu*, the great Muabo; and he returned the praise by lauding *Tipo Tipo* and *Mpamari*, Mohamad's native name, which means, "Give me wealth, or goods." Mohamad made a few of the ungainly antics like the natives, and all were highly pleased, and went off rejoicing.

Some Arabs believe that a serpent on one of the islands in the Nyanza Lake has the power of speaking, and is the same that beguiled Eve. It is a crime at Ujiji to kill a serpent, even though it enters a house and kills a kid! The native name for the people of Ujiji is Wayeyé, the very same as the people on the Zouga, near Lake Ngami. They are probably an offshoot from Ujiji.*

There are under-ground stone houses in Kabiuré, in the range called Kakoma, which is near to our place of detention.

March 15th.—The roots of the nyumbo, or noombo, open in four or five months from the time of planting; those planted by me on the 6th of February have now stalks fifteen inches long. The root is reported to be a very wholesome food, never disagreeing with the stomach; and the raw root is an excellent remedy in obstinate vomiting and nausea; four or five tubers are often given by one root. In Marungu they attain a size of six inches in length by two in diameter.

March 16th.—We started for Mpwéto's village, which is situated on the Lualaba, and in our course crossed the Lokinda, which had a hundred yards of flood-water on each side of it. The river itself is forty yards wide, with a rude bridge over it, as it flows fast away into Moero.

Next day we ascended the Rua Mountains, and reached the village of Mpwéto, situated in a valley between two ridges, about one mile from the right bank of the Lualaba, where it comes through the mountains: it then flows about two miles along the base of a mountain lying east and west before it begins to make northing: its course is reported to be very winding. This seems additional evidence that Tanganyika is not in a depression of only one thousand eight hundred and forty-four feet above the sea, otherwise the water of Lualaba would flow faster and make a straighter channel. It is said to flow into the Lufira, and that into Tanganyika.

March 18th.—On reaching Mpwéto's yesterday, we were taken up to the house of Syde bin Habib, which is built on a ridge overhanging the chief's village—a square building of wattle and plaster, and a mud roof to prevent it being fired by an enemy. It is a very pretty spot among the mountains. Sariama is Bin Habib's agent, and he gave us a basket of flour and leg of kid. I sent a message to Mpwéto, which he politely answered by say-

* A chief named Moené Ungu, who admires the Arabs, sent his children to Zanzibar to be instructed to read and write.

ing that he had no food ready in his village, but if we waited two days he would have some prepared, and would then see us. He knew what we should give him, and he need not tell us. I met a man from Seskéké, left sick at Kirwa by Bin Habib, and now with him here.

A very beautiful young woman came to look at us, perfect in every way, and nearly naked, but unconscious of indecency—a very Venus in black. The light-gray, red-tailed parrot seen on the West Coast is common in Rua, and tamed by the natives.*

March 19th.†—Grant, Lord, grace to love Thee more, and serve Thee better.

The favorite son of Mpwéto called on us. His father is said to do nothing without consulting him; but he did not seem to be endowed with much wisdom.

March 20th, 21st.—Our interview was put off; and then a sight of the cloth we were to give was required. I sent a good large cloth, and explained that we were nearly out of goods now, having been traveling two years, and were going to Ujiji to get more. Mpwéto had prepared a quantity of pombe, a basket of meal, and a goat; and when he looked at them and the cloth, he seemed to feel that it would be a poor bargain; so he sent to say that we had gone to Casembe and given him many cloths, and then to Muabo, and if I did not give another cloth he would not see me. “He had never slept with only one cloth.” “I had put medicine on this one to kill him, and must go away.”

It seems he was offended because we went to his great rival, Muabo, before visiting him. He would not see Syde bin Habib for eight days; and during that time was using charms to try if it would be safe to see him at all. On the ninth day he peeped past a door for some time to see if Bin Habib were a proper person, and then came out: he is always very suspicious.

At last he sent an order to us to go away, and if we did not move, he would come with all his people and drive us off. Sariumo said if he were not afraid for Syde bin Habib's goods, he would make a stand against Mpwéto; but I had no wish to stay, or to quarrel with a worthless chief, and resolved to go next day (March 24th). He abused a native trader with his tongue for coming to trade, and sent him away too. We slept again at our half-way village, Kapemba, just as a party of salt-traders from Rua came into it: they were tall, well-made men, and rather dark.

* This bird is often brought to Zanzibar by the ivory caravans.

† The doctor's birthday.

March 25th.—Reached Kabwabwata at noon, and were welcomed by Mohamad and all the people. His son, Sheik But, accompanied us; but Mohamad told us previously that it was likely Mpwéto would refuse to see us.

The water is reported to be so deep in front that it is impossible to go north: the Wanyamwesi, who are detained here as well as we, say it is often more than a man's depth, and there are no canoes. They would not stop here, if a passage home could be made. I am thinking of going to Lake Bemba, because at least two months must be passed here still before a passage can be made; but my goods are getting done, and I can not give presents to the chiefs on our way.

This lake has a sandy, not muddy bottom, as we were at first informed, and there are four islands in it: one, the Bangweolo, is very large, and many people live on it; they have goats and sheep in abundance: the owners of canoes demand three hoes for the hire of one capable of carrying eight or ten persons. Beyond this island it is sea horizon only. The tsécula and nzoé antelopes abound. The people desire salt, and not beads, for sale.

April 2d, 1868.—If I am not deceived by the information I have received from various reliable sources, the springs of the Nile rise between 9° and 10° S. lat., or at least four or five hundred miles south of the south end of Speke's lake, which he considered to be the sources of the Nile. Tanganyika is declared to send its water through north into Lake Chowambé, or Baker's Lake. If this does not prove false, then Tanganyika is an expansion of the Nile, and so is Lake Chowambé; the two lakes being connected by the River Loanda. Unfortunately, the people on the east side of the Loanda are constantly at war with the people on the west of it, or those of Rusisi. The Arabs have been talking of opening up a path through to Chowambé, where much ivory is reported. I hope that the Most High may give me a way there.

April 11th.—I had a long oration from Mohamad yesterday against going off for Bemba to-morrow. His great argument is the extortionate way of Casembe, who would demand cloth, and say that, in pretending to go to Ujiji, I had told him lies: he adds to this argument that this is the last month of the rains; the Masika has begun, and our way north will soon be open. The fact of the matter is, that Mohamad, by not telling me of the superabundance of water in the country of the Marungu, which occurs every year, caused me to lose five months. He knew that we should be detained here; but he was so eager to

get out of his state of durance with Casembe that he hastened my departure by asserting that we should be at Ujiji in one month. I regret this deception, but it is not to be wondered at; and in a Mohammedan, and in a Christian too, it is thought clever. Were my goods not nearly done, I would go, and risk the displeasure of Casembe for the chance of discovering the Lake Bemba. I thought once of buying from Mohamad Bogharib, but am afraid that his stock may be getting low too. I fear that I must give up this lake for the present.

April 12th.—I think of starting to-morrow for Bangweolo, even if Casembe refuses a passage beyond him: we shall be better there than we are here, for every thing at Kabwabwata is scarce and dear. There we can get a fowl for one string of beads, here it costs six: there fish may be bought, here none. Three of Casembe's principal men are here—Kakwata, Charley, and Kapitenga. They are anxious to go home, and would be a gain to me, but Mohamad detains them; and when I ask his reason, he says, "Muabo refuses;" but they point to Mohamad's house, and say, "It is he who refuses."

[A very serious desertion took place at this time among Dr. Livingstone's followers. Not to judge them too harshly, they had become, to a great extent, demoralized by camp life with Mohamad and his horde of slaves and slavers. The Arab tried all he could to dissuade the traveler from proceeding south instead of homeward through Ujiji, and the men seem to have found their own breaking-point where this disappointment occurred.]

April 13th.—On preparing to start this morning, my people refused to go: the fact is, they are all tired, and Mohamad's opposition encourages them. Mohamad, who was evidently eager to make capital out of their refusal, asked me to remain over to-day, and then demanded what I was going to do with those who had absconded. I said, "Nothing: if a magistrate were on the spot, I would give them over to him." "Oh," said he, "I am magistrate; shall I apprehend them?" To this I assented. He repeated this question till it was tiresome: I saw his reason long afterward, when he asserted that I "came to him and asked him to bind them, but he had refused:" he wanted to appear to the people as much better than I am.

April 14th.—I start off with five attendants, leaving most of the luggage with Mohamad, and reach the Luao, to spend the night. Head man Ndowa.

April 15th.—Amoda ran away early this morning. "Wishes

to stop with his brothers." They think that by refusing to go to Bemba they will force me to remain with them, and then go to Ujiji: one of them has infused the idea into their minds that I will not pay them, and exclaims, "Look at the sepoy!"—not knowing that they are paid by the Indian Government; and as for the Johanna men, they were prepaid £29 4s. in cash, besides clothing. I sent Amoda's bundle back to Mohamad. My messenger got to Kabwabwata before Amoda did, and he presented himself to my Arab friend, who, of course, scolded him: he replied that he was tired of carrying, and no other fault had he; I may add that I found out that Amoda wished to come south to me with one of Mohamad Bogharib's men, but "Mpamari" told him not to return. Now that I was fairly started, I told my messenger to say to Mohamad that I would on no account go to Ujiji till I had done all in my power to reach the Lake I sought: I would even prefer waiting at Luao or Moero till people came to me from Ujiji to supplant the runaways. I did not blame them very severely in my own mind for absconding: they were tired of tramping, and so, verily, am I; but Mohamad, in encouraging them to escape to him, and talking with a double tongue, can not be exonerated from blame. Little else can be expected from him. He has lived some thirty-five years in the country, twenty-five being at Casembe's, and there he had often to live by his wits. Consciousness of my own defects makes me lenient.

April 16th.—Ndowa gives Mita, or Mpamañkanana, as the names of the excavations in Muabo's hills. He says that they are sufficient to conceal all the people of this district in case of war: I conjecture that this implies room for ten thousand people. Provisions are stored in them, and a perennial rivulet runs along a whole street of them. On one occasion, when the main entrance was besieged by an enemy, some one who knew all the intricacies of the excavations led a party out by a secret passage, and they, coming over the invaders, drove them off with heavy loss. Their formation is universally ascribed to the Deity. This may mean that the present inhabitants have succeeded the original burrowing race, which dug out many caves adjacent to Mount Hoor—the *Jebel Nebi Harin* (Mount of the Prophet Aaron) of the Arabs—and many others; and even the Bushman caves, a thousand miles south of this region.

A very minute sharp-biting mosquito is found here: the women try to drive them out of their huts by whisking bundles of green leaves all round the walls before turning into them.

April 17th.—Crossed the Luao by a bridge thirty yards long, and more than half a mile of flood on each side; passed many villages, standing on little heights, which overlook plains filled with water. Some three miles of grassy plains abreast of Moero were the deepest parts, except the banks of Luao. We had four hours of wading, the bottom being generally black, tenacious mud. Ruts had been formed in the paths by the feet of passengers: these were filled with soft mud, and, as they could not be seen, the foot was often placed on the edge, and when the weight came on it, down it slumped into the mud, half-way up the calves; it was difficult to draw it out, and very fatiguing. To avoid these ruts, we encroached on the grass at the sides of the paths; but often stepping on the unseen edge of a rut, we floundered in with both feet to keep the balance, and this was usually followed by a rush of bubbles to the surface, which, bursting, discharged foul air of frightful fecal odor. In parts, the black mud and foul water were cold, in others hot, according as circulation went on or not. When we came near Moero, the water became half-chest and whole-chest deep: all perishable articles had to be put on the head. We found a party of fishermen on the sands, and I got a hut, a bath in the clear but tepid waters, and a delicious change of dress. Water of lake, 83° at 3 P.M.

April 18th.—We marched along the north end of Moero, which has a south-east direction. The soft, yielding sand, which is flanked by a broad belt of tangled tropical vegetation and trees, added to the fatigues of yesterday; so, finding a deserted fisherman's village near the eastern hills, we gladly make it our quarters for Sunday (19th). I made no mark, but the Lake is at least twenty feet higher now than it was on our first visits, and there are banks showing higher rises even than this.

Large fish-baskets, made of split reeds, are used in trios for catching small fish; one man at each basket drives fish ashore.

April 20th.—Went on to Katétté River, and then to a strong torrent. Slept at a village on the north bank of the River Vuna, where, near the hills, is a hot fountain, sometimes used to cook cassava and maize.

April 21st.—Crossed the Vuna, and went on to Kalemwé's village, meeting the chief at the gate, who guided us to a hut, and manifested great curiosity to see all our things: he asked if we could not stop next day and drink beer, which would then be ready. Leopards abound here. The Lake now seems broader than ever.

I could not conceive that a hole in the cartilage of the nose

could be turned to any account except to hold an ornament, though that is usually only a bit of grass, but a man sewing feathers on his arrows used his nose-hole for holding a needle! In coming on to Kangalola, we found the country swimming: I got separated from the company, though I saw them disappear in the long grass not a hundred yards off, and shouted, but the splashing of their feet prevented any one hearing. I could not find a path going south, so I took one to the east to a village. The grass was so long and tangled I could scarcely get along; at last I engaged a man to show me the main path south, and he took me to a neat village of a woman—Nyinakasanga—and would go no farther. “Mother Kasanga,” as the name means, had been very handsome, and had a beautiful daughter, probably another edition of herself: she advised my waiting in the deep shade of the *Ficus Indica*, in which her houses were placed. I fired a gun, and when my attendants came gave her a string of beads, which made her express distress at my “leaving without drinking any thing of hers.” People have abandoned several villages on account of the abundance of ferocious wild beasts.

April 23d.—Through very thick tangled nyassi grass to Chikosi’s burned village; Nsama had killed him. We spent the night in a garden but which the fire of the village had spared. Turnips were growing in the ruins. The nyassi, or long coarse grass, hangs over the paths, and, in pushing it aside, the sharp seeds penetrate the clothes, and are very annoying. The grass itself rubs on the face and eyes disagreeably: when it is burned off and greensward covers the soil, it is much more pleasant walking.

April 24th.—We leave Chikosi’s ruins and make for the ford of the Kalungosi. Marigolds are in full bloom all over the forest, and so are foxgloves. The river is here fully one hundred yards broad, with three hundred yards of flood on its western bank; so deep we had to remain in the canoes till within fifty yards of the higher ground. The people here chew the pith of the papyrus, which is three inches in diameter, and as white as snow: it has very little sweetness or any thing else in it. The head man of the village to which we went was out cutting wood for a garden, and his wife refused us a hut; but when Kansabala came in the evening he scolded his own spouse roundly, and all the wives of the village, and then pressed me to come indoors; but I was well enough in my mosquito curtain without, and declined. I was free from insects and vermin, and few huts are so.

April 25th.—Off early west, and then on to an elevated forest-land, in which our course was south-south-west to the great bend of the rivulet Kifurwa, which enters Moero near to the mouth of the Kalungosi.

April 26th.—Here we spent Sunday in our former wood-cutters' huts. Yesterday we were met by a party of the same occupation, laden with bark-cloth, which they had just been stripping off the trees. Their leader would not come along the path because I was sitting near it: I invited him to do so, but it would have been disrespectful to let his shadow fall on any part of my person, so he went a little out of the way: this politeness is common.

April 27th.—But a short march to Fungafunga's village: we could have gone on to the Muatizé, but no village exists there, and here we could buy food. Fungafunga's wife gave a handsome supper to the stranger: on afterward acknowledging it to her husband, he said, "That is your village; always go that way, and eat my provisions." He is a Monyamwezi, trading in the country for copper, hoes, and slaves. Parrots are here in numbers stealing Holcus sorghum, in spite of the shouts of the women.

We cross Muatizé by a bridge of one large tree, getting a good view of Moero from a hill near Kabukwa, and sleep at Chirongo River.

April 29th.—At the Mandapala River. Some men here from the Chungu, one of whom claimed to be a relative of Casembe, made a great outcry against our coming a second time to Casembe without waiting at the Kalungosi for permission. One of them, with his ears cropped short off, asked me, when I was departing north, if I should come again. I replied, "Yes, I think I shall." They excited themselves by calling over the same thing again and again. "The English come the second time!" "The second time—the second time—the country spoiled! Why not wait at the Kalungosi? Let him return thither." "Come from Mpamari too, and from the Bagaraganza or Banyamwezi!" "The second time—the second time!" Then all the adjacent villagers were called in to settle this serious affair. I look up to that higher Power to influence their minds as He has often done before. I persuaded them to refer the matter to Casembe himself, by sending a man with one of mine up to the town. They would not consent to go on to the Chungu, as the old cropped-eared man would have been obliged to come back the distance again, he having been on the way to the Kalungosi as a sentinel of the ford. Casembe is reasonable and fair, but his people are neither,

and will do any thing to mulct either strangers or their own countrymen.

April 30th.—The cold of winter has begun, and dew is deposited in great quantities; but all the streams are very high in flood, though the rains have ceased here some time.

May 1st, 1868.—At the Mandapala River. I sent a request to Mohamad Bogharib to intercede with Casembe for me for a man to show the way to Chikumbi, who is near to Bangweolo. I fear that I have become mixed up in the Lunda mind with Mpamari (Mohamad bin Saleh), from having gone off with him and returning ere we reached Ujiji, whither ostensibly we were bound. I may be suspected of being in his confidence, and of forwarding his plans by coming back. A deaf and dumb man appears among the people here, making signs exactly as I have seen such do in England, and occasionally emitting a low, unmodulated, guttural drawl like them.

May 3d.—Abraham, my messenger, came back, while we were at afternoon prayers, with good news for us; but what made Cropped-ears quite chopfallen was that Casembe was quite gracious! He did not wish me to go away, and now I am welcome back; and as soon as we hear of peace at Chikumbi's, we shall have a man to conduct us thither. The Mazitu were reported to have made an inroad into Chikumbi's country; and it was said that chief had fled, and Casembe had sent messengers to hear the truth. Thanks to the Most High for his kindness and influence.

May 4th.—We leave the Mandapala. Cropped-ears, whose name I never heard, collapsed at once on hearing the message of Casembe: before that I never heard such a babbler; to every one passing, man or woman, he repeated the same insinuations about the English, and Mpamari, and the Banyamwezi—conspiracy—guilt—return a second time; till, like a meddling lawyer, he thought that he had really got an important case in hand!

The River Chungu we found to be from fifteen to eighteen yards broad, and breast-deep, with at least one hundred yards of flood, before we reached the main stream, the Mandapala. The Chungu and the Lundi join in the country called Kimbafuma, about twelve miles from our crossing-place of Mandapala, and about west of it. The Lundi was now breast-deep too, and twelve yards broad.

On reaching Casembe's, on the Mofwé, we found Mohamad Bogharib digging and fencing up a well, to prevent his slaves being taken away by the crocodiles, as three had been eaten al-

ready. A dog bit the leg of one of my goats so badly that I was obliged to kill it: they are nasty curs here, without courage, and yet they sometimes bite people badly. I met some old friends, and Mohamad Bogharib cooked a supper, and from this time forward never omitted sharing his victuals with me.

May 6th.—Manoel Caetano Pereira visited Casembe in 1796, or seventy-two years ago: his native name was Moendo-mondo, or the world's leg—"world-wide traveler!" He came to Mandapala, for there the Casembe of the time resided, and he had a priest, or "kasisé," with him, and many people with guns. Pérémbé, the oldest man now in Lunda, had children even then: If Pérémbé were thirty years of age at that period, he would now be one hundred and two years old, and he seems quite that; for when Dr. Lacerda came he had forty children. He says that Pereira fired off all his guns on his arrival; and Casembe asking him what he meant by that, he replied, "These guns ask for slaves and ivory," both of which were liberally given.

I could not induce Pérémbé to tell any thing of times previous to his own. Moendo-mondo, the world's leg (Pereira), told Dr. Lacerda that the natives called him "The Terror!"—a bit of vanity, for they have no such word, or abstract term, in their language.

When Major Monteiro was here, the town of Casembe was on the same spot as now; but the mosumba, or inclosure of the chief, was about five hundred yards south-east of the present one. Monteiro went nowhere and did nothing, but some of his attendants went over to the Luapula, some six miles distant. He complains in his book of having been robbed by the Casembe of the time. On asking the present occupant of the office why Monteiro's goods were taken from him, he replied that he was then living at another village, and did not know of the affair. Mohamad bin Saleh was present, and he says that Monteiro's statement is false; no goods were forced from him; but it was a year of scarcity, and Monteiro had to spend his goods in buying food instead of slaves and ivory, and made up the tale of Casembe plundering him to appease his creditors.

A number of men were sent with Monteiro as an honorary escort. Kapika, an old man now living, was the chief, or one of the chiefs, of this party, and he says that he went to Tette, Senna, and Quillimane with Monteiro: this honorary escort seems confirmatory of Mohamad's explanation; for had Casembe robbed the major none would have been granted or received.

It is warmer here than we found it in the way; clouds cover

the sky, and prevent radiation. The sorghum is now in full ear. People make very neat mats of the leaves of the shuaré-palm. I got lunars this time.

May 9th.—Eight or ten men went past us this morning, sent by the chief to catch people whom he intends to send to his paramount chief, Matiamvo, as a tribute of slaves. Pérémbé gives the following list of the Casembes:

1. KANYIMBE, came from Lunda, attracted by the fish of Mofwé and Moero, and conquered Pérémbé's forefather, Katéré, who planted the first palm-oil palms here from seeds got in Lunda. It is probable that the intercourse then set afoot led to Kanyimbé's coming and conquest.

2. KINYANTA.

3. NGUANDA MILONDA.

4. KANYEMBO.

5. LÉKWISA.

6. KIRÉKA.

7. KAPUMBA.

8. KINYANTA.

9. LEKWISA, still alive, but a fugitive at Nsama's.

10. MUONGA, the present ruler, who drove Lékwisa away.

The Portuguese came to Kiréka, who is said to have been very liberal with presents of ivory, slaves, and cattle. The present man has good sense, and is very fair in his judgments, but stingy toward his own people as well as strangers; nevertheless, I have had good reason to be satisfied with his conduct to me. Maiyé, not in the list, and 7, 8, 9, 10, are the children of Kiréka. Muonga is said by the others to be a slave "born out of the house;" that is, his mother was not of the royal line; she is an ugly old woman, and greedy. I got rid of her begging by giving her the beads she sought, and requesting her to cook some food for me; she begged no more, afraid that I would press my claim for provisions!

May 10th.—I sent to Casembe for a guide to Luapula. He replied that he had not seen me nor given me any food; I must come to-morrow; but next day he was occupied in killing a man for witchcraft, and could not receive us, but said that he would on the 12th. He sent fifteen fish (perch) from Mofwé, and a large basket of dried cassava. I have taken lunars several times, measuring both sides of the moon about one hundred and ninety times, but a silly map-maker may alter the whole for the most idiotic of reasons.

May 13th.—Mohamad Bogharib has been here some seven months, and bought three tusks only; the hunting, by Casembe's people, of elephants in the Mofwé has been unsuccessful.

We did not get an audience from Casembe; the fault lay with Kapika—Monteiro's escort—being afraid to annoy Casembe by putting him in mind of it; but on the 15th Casembe sent for me, and told me that as the people had all fled from Chikumbi's, he would therefore send guides to take us to Kabaia, where there was still a population: he wished me to wait a few days till he had looked out good men as guides, and ground some flour for us to use in the journey. He understood that I wished to go to Bangweolo; and it was all right to do what my own chief had sent me for, and then come back to him. It was only water—the same as Luapula, Mofwé, and Moero; nothing to be seen. His people must not molest me again, but let me go where I liked. This made me thank Him who has the hearts of all in His hand.

Casembe also admitted that he had injured Mpamari, but he would send him some slaves and ivory in reparation: he is better than his people, who are excessively litigious, and fond of milandos, or causes—suits. He asked if I had not the leopard's skin he gave me to sit on, as it was bad to sit on the ground; I told him it had so many holes in it people laughed at it and made me ashamed, but he did not take the hint to give me another. He always talks good sense when he has not swilled beer, or pombe: all the Arabs are loud in his praises, but they have a bad opinion of the Queen Moäri, or Ngombé, or Kifuta. The Garaganza people at Katanga killed a near relative of Casembe and herself, and when the event happened, Fungafunga, one of the Garaganza, or Banyamwezi, being near the spot, fled and came to the Mofwé: he continued his flight as soon as it was dark, without saying any thing to any one, until he got north to Kabiuré. The queen and Casembe suspected Mpamari of complicity with the Banyamwezi, and believed that Fungafunga had communicated the news to him before fleeing farther. A tumult was made, Mpamari's eldest son was killed, and he was plundered of all his copper, ivory, and slaves: the queen loudly demanded his execution; but Casembe restrained his people as well as he was able, and it is for this injury that he now professes to be sorry.

The queen only acted according to the principles of her people. "Mpamari killed my son, kill his son—himself." It is difficult to get at the truth, for Mohamad or Mpamari never tells the whole truth. He went to fight Nsama with Muonga, and was

wounded in the foot and routed, and is now glad to get out of Lunda back to Ujiji.

May 16th.—Complete twenty sets of lunars.

May 17th.—Mohamad Bogharib told Casembe that he could buy nothing, and therefore was going away; Casembe replied that he had no ivory, and he might go: this was sensible. He sent far and near to find some, but failed, and now confesses a truth which most chiefs hide, from unwillingness to appear poor before foreigners.

May 18th, 19th.—It is hot here, though winter, but cold by night. Casembe has sent for fish for us. News came that one of Syde bin Habib's men had come to Chikumbi, on his way to Zanzibar.

May 20th.—A thunder-shower from the east laid the dust and cooled the ground: the last shower of this season, as a similar slight shower was the finish up of the last on the 12th of May.

May 21st.—This can not be called a rainy month: April is the last month of the wet season, and November the first.

May 22d.—Casembe is so slow with his fish, meal, and guides, and his people so afraid to hurry him, that I think of going off as soon as Mohamad Bogharib moves. He is going to Chikumbi's to buy copper, and thence he will proceed to Uvira to exchange that for ivory; but this is at present kept as a secret from his slaves. The way seems thus to be opening for me to go to the large lake west of Uvira.

I told Casembe that we were going. He said to me that if, in coming back, I had found no traveling party, I must not risk going by Nsama's road with so few people, but must go to his brother Moenempanda, and he would send men to guide me to him, and thence he would send me safely by his path along Lake Moero: this was all very good.

May 25d.—The Arabs made a sort of sacrifice of a goat, which was cooked all at once; they sent a good dish of it to me. They read the Koran very industriously, and prayed for success or luck in leaving, and seem sincerely religious, according to the light that is in them. The use of incense and sacrifices brings back the old Jewish times to mind.

A number of people went off to the Kanengwa, a rivulet an hour south of this, to build huts; there they are to take leave of Casembe, for the main body goes off to-morrow, after we have seen the new moon. They are very particular in selecting lucky days; and any thing unpleasant that may have happened in one month is supposed to be avoided by choosing a different day for

beginning an enterprise in the next. Mohamad left Uvira on the third day of a new moon, and several fires happened in his camp; he now considers a third day inauspicious.

Casembe's dura or sorghum is ripe to-day: he has eaten mampemba or dura, and all may thereafter do the same. This is just about the time when it ripens and is reaped at Kolobeng; thus the difference in the seasons is not great.

May 24th.—Detained four days yet. Casembe's chief men refuse to escort Mohamad Bogharib: they know him to be in debt, and fear that he may be angry, but no dunning was intended. Casembe was making every effort to get ivory to liquidate it, and at last got a couple of tusks, which he joyfully gave to Mohamad: he has risen much in the estimation of us all.

May 26th.—Casembe's people killed five buffaloes by chasing them into the mud and water of Mofwé; so he is seeing to the division of the meat, and will take leave to-morrow.

May 28th.—We went to Casembe; he was as gracious as usual. A case of *crim. con.* was brought forward against an Arab's slave, and an attempt was made to arrange the matter privately by offering three cloths, beads, and another slave, but the complainant refused every thing. Casembe dismissed the case by saying to the complainant, "You send your women to entrap the strangers in order to get a fine, but you will get nothing:" this was highly applauded by the Arabs, and the owner of the slave heaped dust on his head, as many had done before for favors received. Casembe, still anxious to get ivory for Mohamad, proposed another delay of four days to send for it; but all are tired, and it is evident that it is not want of will that prevents ivory being produced.

His men returned without any, and he frankly confessed inability: he is evidently very poor.

May 30th.—We went to the Kanengwa rivulet at the south end of Mofwé, which forms a little lagoon there fifty yards broad and thigh-deep; but this is not the important feeder of the lagoon, which is from two to three miles broad, and nearly four long: that has many large, flat, sedgy islands in it, and its water is supplied by the Mbérézé from south-east.

May 31st.—Old Kapika sold his young and good-looking wife for unfaithfulness, as he alleged. The sight of a lady in the chain-gang shocked the ladies of Lunda, who ran to her, and having ascertained from her own mouth what was sufficiently apparent, that she was a slave now, clapped their hands on their mouths in the way that they express wonder, surprise, and horror: the hand

is placed so that the fingers are on one cheek and the thumb on the other.

The case of the chieftainess excited great sympathy among the people: some brought her food; Kapika's daughters brought her pombe and bananas; one man offered to redeem her with two, another with three slaves; but Casembe, who is very strict in punishing infidelity, said, "No; though ten slaves be offered, she must go." He is probably afraid of his own beautiful queen should the law be relaxed. Old Kapika came and said to her, "You refused me, and I now refuse you." A young wife of old Pérémbé was also sold as a punishment, but redeemed.

There is a very large proportion of very old and very tall men in this district. The slave-trader is a means of punishing the wives which these old fogies ought never to have had.

Casembe sent me about a hundred-weight of the small fish nsipo, which seems to be the white-bait of our country; it is a little bitter when cooked alone, but with ground-nuts is a tolerable relish: we can buy flour with these at Chikumbi's.

CHAPTER XII.

Prepares to examine Lake Bemba.—Starts from Casembe's, June 11th, 1868.—Dead Leopard.—Moenampanda's Reception.—The River Luongo.—Weird Death-song of Slaves.—The Forest Grave.—Lake Bembo changed to Lake Bangweolo.—Chikumbi's.—The Imbozwa People.—Kombokombo's Stockade.—Mazitu's Difficulties.—Discovers Lake Bangweolo on July 18th, 1868.—The Lake Chief Mapuni.—Description of the Lake.—Prepares to navigate it.—Embarks for Lifangé Island.—Immense Size of Lake.—Reaches Mpabala Island.—Strange Dream.—Fears of Canoe-men.—Return to Shore.—March back.—Sends Letters.—Meets Banyamwezi.—Reviews recent Explorations at length.—Disturbed State of the Country.

June 1st, 1868.—MOHAMAD proposes to go to Katanga to buy copper, and invites me to go too. I wish to see the Lufra River, but I must see Bemba or Bangweolo. Grant guidance from above!

June 2d.—In passing a field of cassava, I picked the pods of a plant called malumbi, which climbs up the cassava bushes; at the root it has a number of tubers with eyes exactly like the potato. One plant had sixteen of these tubers, each about two inches long and one and a half in diameter; another tuber was five inches long and two in diameter: it would be difficult for any one to distinguish them from English potatoes. When boiled they are a little waxy, and, compared with our potato, hard. There are colors inside, the outer part reddish, the inner whiter. At first none of the party knew them, but afterward they were recognized as cultivated at Zanzibar by the name "men," and very good when mashed with fish. If in Zanzibar, they are probably known in other tropical islands.

June 4th.—From what I see of slaving, even in its best phases, I would not be a slave-dealer for the world.

June 5th.—The Queen Moäri passed us this morning, going to build a hut at her plantation; she has a pleasant European countenance, clean, light-brown skin, and a merry laugh, and would be admired anywhere. I stood among the cassava to see her pass. She twirled her umbrella as she came near, borne by twelve men, and seemed to take up the laugh which made her and her maids bolt at my reception, showing that she laughs not with her mouth only, but with her eyes and cheeks. She said, "Yambo" (how are you)? To which I replied, "Yambo sana" (very well). One of her attendants said, "Give her something of what you

have at hand, or in the pockets." I said, "I have nothing here," and asked her if she would come back near my hut. She replied that she would, and I duly sent for two strings of red beads, which



Filed Teeth of Queen Moñri.

I presented. Being lower than she, I could see that she had a hole through the cartilage, near the point of her slightly aquiline nose; and a space was filed between the two front teeth, so as to leave a triangular hole.

After delay had grown vexatious, we march three hours on the 9th, and reach the Katofia River, covered with aquatic trees, and running into the Mbérézé: five yards wide and knee-deep.

June 10th.—Detained again, for business is not finished with the people of Casembe. The people can not esteem the slave-trader, who is used as a means of punishing those who have family differences, as those of a wife with her husband, or a servant with his master. The slaves are said to be generally criminals, and are sold in revenge or as punishment. Kapika's wife had an ornament of the end of a shell called the cone; it was borrowed, and she came away with it in her hair: the owner, without making any effort to recover it, seized one of Kapika's daughters as a pledge that Kapika would exert himself to get it back!

[At last the tedious delay came to an end, and we must now follow the doctor on his way south to discover Lake Bemba.]

June 11th.—Crossed the Mbérézé, ten yards broad and thigh-deep, ascending a range of low hills of hardened sandstone, covered, as the country generally is, with forest; our course south-east and south-south-east; then descended into a densely wooded valley, having a rivulet four yards wide and knee-deep; buffaloes and elephants very numerous.

June 12th.—We crossed the Mbérézé again twice; then a very deep, narrow rivulet, and stopped at another in a mass of trees, where we spend the night, and, killing an ox, remained next day to eat it. When at Kanengwa, a small party of men came past, shouting as if they had done something of importance: on going to them, I found that two of them carried a lion slung to a pole. It was a small maneless variety, called "the lion of Nyassi," or "long grass." It had killed a man, and they killed it. They had its mouth carefully strapped, and the paws tied across its chest, and were taking it to Casembe. *Nyassi* means long grass, such as towers overhead, and is as thick in the stalk as a goose-quill, and is erroneously applied to Nyassa. Other lions—Thambwé, Karamo, Simba—are said to stand five feet high, and some high-

er: this seemed about three feet high, but it was too dark to measure it.

June 13th.—The Arabs distinguish the Suaheli, or Arabs of mixed African blood, by the absence of beard and whiskers: these are usually small and stunted in the Suaheli.

Birds, as the Drongo shrike, and a bird very like the gray linnet, with a thick reddish bill, assemble in very large flocks, now that it is winter, and continue thus till November, or period of the rains.

A very minute bee goes into the common small holes in worm-eaten wood to make a comb and lay its eggs, with a supply of honey. There are seven or eight honey-bees of small size in this country.

A sphex may be seen to make holes in the ground, placing stupefied insects in them with her eggs; another species watches when she goes off to get more insects, and every now and then goes in too to lay her eggs, I suppose without any labor: there does not appear to be any enmity between them. We remained a day to buy food for the party, and eat our ox.

June 14th.—March over well-wooded highlands, with dolomite rocks cropping out, and trees all covered with lichens; the watershed then changed to the south.

June 15th.—Very cold in mornings now (43°). Found Moenempanda, Casembe's brother, on the Luluputa, a stream twenty yards wide, and flowing west. The Moenempanda visited by the Portuguese was grandfather to this one, and not at the same spot. It is useless to put down the names of chiefs as indicating geographical positions, for the name is often continued, but at a spot far distant from the dwelling of the original possessor. A slave tried to break out of his slave-stick, and actually broke half an inch of tough iron with his fingers: the end stuck in the wood, or he would have freed himself.

The chief gave me a public reception, which was like that of Casembe, but better managed. He is young, and very handsome but for a defect in his eyes, which makes him keep them half shut or squinting. He walked off in the jaunty way all chiefs do in this country, to show the weight of rings and beads on the legs, and many imitate this walk who have none, exactly as our fathers imitated the big cravat of George IV., who thereby hid defects in his neck: thousands carried their cravats over the chin who had no defects to hide. Moenempanda carried his back stiffly, and no wonder—he had about ten yards of a train carried behind it. About six hundred people were present. They kept

rank, but not step; were well armed; marimbas and square drums formed the bands, and one musician added his voice: "I have been to Syed" (the Sultan); "I have been to Meereput" (King of Portugal); "I have been to the sea." At a private reception, where he was divested of his train, and had only one umbrella instead of three, I gave him a cloth. The Arabs thought highly of him; but his graciousness had been expended on them in getting into debt: he now showed no inclination to get out of it, but offered about a twentieth part of the value of the goods in liquidation. He sent me two pots of beer, which I care not to drink except when very thirsty on a march, and promised a man to guide me to Chikumbi, and then refused. Casembe rose in the esteem of all as Moenempanda sank, and his people were made to understand how shabbily he had behaved.

The Lulaputa is said to flow into the Luéna, and that into the Luongo: there must be two Luénas.

June 22d.—March across a grassy plain southerly to the Luongo, a deep river embowered in a dense forest of trees, all covered with lichens—some flat, others long and thready, like old men's beards, and waving in the wind, just as they do on the mangrove-swamp trees on the coast. The Luongo here is fifty yards broad and three fathoms deep; near its junction with the Luapula it is one hundred yards; it rises here to eight fathoms' depth. A bridge of forty yards led us over to an island, and a branch of the river was ten yards beyond. The bridge had been broken, some thought on purpose, but it was soon mended with trees eighteen to twenty yards long. We went a little way beyond, and then halted for a day at a rivulet flowing into the Luongo, two hundred yards off.

June 23d.—We waited for copper here, which was at first refused as payment of debt. I saw now that the Luongo had steep clay banks fifteen feet down, and many meadows, which must be swimming during the rains. The Luéna is said to rise east of this.

[In a private letter Livingstone shows that he had seldom been more affected by the sufferings of slaves than at this time, and it would perhaps be difficult to imagine any scene more calculated to excite misery and distress of mind.

The following incident deals with the firm belief in a future state, which enters so largely into the minds of all Africans, and which for very lack of guidance assumes all the distorted growths of superstition.

He must be of a thankless spirit who does not long to substitute the great vision of future peace afforded by Christianity, in

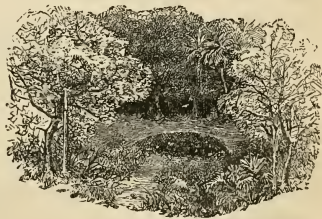
lieu of the ghastly satisfaction which cheered these men, when he sees by the light of this story the capacity that exists for realizing a life beyond the grave.]

June 24th.—Six men slaves were singing as if they did not feel the weight and degradation of the slave-sticks. I asked the cause of their mirth, and was told that they rejoiced at the idea “of coming back after death, and haunting and killing those who had sold them.” Some of the words I had to inquire about; for instance, the meaning of the words “to haunt and kill by spirit power;” then it was, “Oh, you sent me off to Manga (sea-coast), but the yoke is off when I die, and back I shall come to haunt and to kill you.” Then all joined in the chorus, which was the name of each vender. It told not of fun, but of the bitterness and tears of such as were oppressed, and on the side of the oppressors there was a power: there be higher than they.

Pérémbé was one of the culprits thus menaced. The slave-owner asked Kapika’s wife if she would return to kill Kapika. The others answered to the names of the different men with laughter. Her heart was evidently sore: for a lady to come so low down is to her grievous. She has lost her jaunty air, and is, with her head shaved, ugly; but she never forgets to address her captors with dignity, and they seem to fear her.

June 25th.—We went over flat forest, with patches of brown hematite cropping out; this is the usual iron ore, but I saw in a village pieces of specular iron ore which had been brought for smelting. The Luongo flowed away somewhat to our right or west, and the villagers had selected their site where only well-water could be found: we went ten minutes toward the Luongo, and got abundance.

The gardens had high hedges round, to keep off wild beasts. We came to a grave in the forest; it was a little rounded mound, as if the occupant sat in it in the usual native way: it was strewed over with flour, and a number of the large blue beads put on it: a little path showed that it



A Forest Grave.

had visitors. This is the sort of grave I should prefer: to lie in the still, still forest, and no hand ever disturb my bones. The graves at home always seemed to me to be miserable, especially those in the cold, damp clay, and without elbow-room: but I have

nothing to do but wait till He who is over all decides where I have to lay me down and die. Poor Mary lies on Shupanga brae, "and beeks fornent the sun."*

Came to the Chando River, which is the boundary between Casembe and Chikumbi; but Casembe is over all.

June 27th.—We crossed a flooded marsh, with the water very cold, and then the Chando itself, twelve feet broad and knee-deep; then on to another strong brook, Nsénga.

June 28th.—After service we went on up hills to a stockade of Banyamwezi, on the Kalomina River, and here we built our sheds: the spot is called Kizinga, and is on the top of a sandstone range, covered as usual with forest. The Banyamwezi beat off the Mazitu with their guns, while all the country people fled. The Banyamwezi are decidedly uglier than the Balonda and Baitawa: they eat no fish, though they come from the east side of Tanganyika, where fish are abundant and cheap; but though uglier, they have more of the sense of honor with traders than the aborigines.

June 29th.—Observed the "smokes" to-day, the first of the season:† they obscured the whole country.

July 1st, 1868.—I went over to Chikumbi, the paramount chief of this district, and gave him a cloth, begging a man to guide me to Bangweolo. He said that I was welcome to his country; all were so: I had better wait two days till he had selected a *good* man as a guide, and he would send some food for me to eat in the journey; he would not say ten days, but only two, and his man would take me to the smaller part of the Lake, and leave others to forward me to the greater, or Bangweolo. The smaller part is named Bemba; but that name is confusing, because Bemba is the name of the country in which a portion of the Lake lies. When asking for Lake Bemba, Kasongo's son said to me, "Bemba is not a lake, but a country:" it is, therefore, better to use the name BANGWEOLO, which is applied to the great mass of the water, though I fear that our English folks will boggle at it, or call it Bungyhollow! Some Arabs say Bambeolo, as easier of pronounciation, but Bangweolo is the correct word. Chikumbi's stockade is one hour and a half south-east of our camp at Kizinga.

July 2d.—Writing to the consul at Zanzibar to send supplies of cloth to Ujiji—one hundred and twenty pieces, forty

* The allusion is to Mrs. Livingstone's grave.

† At one season the long grass which covers the face of the country catches fire. For some three months the air is consequently filled with smoke.—ED.

kiniki; eighty merikano thirty-four inches broad, or samsam. Fine red beads—Talaka, twelve frasilas. I ask for soap, coffee, sugar, candles, sardines, French preserved meats, a cheese in tin, "Nautical Almanac" for 1869 and 1870, shoes (two or four pairs), ruled paper, pencils, sealing-wax, ink, powder, flannel-serve, twelve frasila beads, six of Talaka; added three F. pale red, three W. white.

July 3d.—The summary of the sources which I have resolved to report as flowing into the central line of drainage formed by the Chambezé, Luapula, and Lualaba are thirteen in all, and each is larger than the Isis at Oxford, or Avon at Hamilton. Five flow into the eastern line of drainage, going through Tanganyika, and five more into the western line of drainage or Lufira—twenty-three or more in all. The Lualaba and the Lufira unite in the Lake of the chief Kinkonza.

July 5th.—I borrowed some paper from Mohamad Bogharib, to write home by some Arabs going to the coast. I will announce my discovery to Lord Clarendon, but I reserve the parts of the Lualaba and Tanganyika for future confirmation. I have no doubts on the subject, for I receive the reports of natives of intelligence at first hand, and they have no motive for deceiving me. The best maps are formed from the same sort of reports at third or fourth hand. Cold north-east winds prevail at present.

July 6th.—Divided our salt, that each may buy provisions for himself: it is here of more value than beads. Chikumbi sent fine flour, a load for two stout men, carried in a large basket slung to a pole, and a fine fat sheep, carried too because it was too fat to walk the distance from his stockade.

July 7th, 8th, 9th.—After delaying several days to send our guide, Chikumbi said that he feared the country people would say that the Ingleza brought the Mazitu to them, and so blame will be given to him. I set this down as "words of pombe," beery babble; but after returning from Bangweolo, I saw that he must have been preparing to attack a stockade of Banyamwezi in our path; and had he given us a guide, that man would have been in danger in coming back: he therefore preferred the safety of his man to keeping his promise to me. I got a Banyamwezi guide, and left on the 10th of July, going over gently rising sandstone hills covered with forest, and seeing many deserted villages, the effects of the Mazitu foray: we saw also the Mazitu sleeping-places and paths. They neglect the common paths of the country as going from one village to another, and take straight courses in the direction they wish to go, treading down the grass so as to

make a well-marked route. The Banyamwezi expelled them, cutting off so many of them with their guns and arrows that the marauders retired. The effect of this success on the minds of the Imboshwa, or Imbozhwas, as Chikumbi's people are called, was not gratitude, but envy at the new power sprung up among them of those who came originally as traders in copper.

Kombokombo's stockade, the village to which we went this day, was the first object of assault, and when we returned he told us that Chikumbi had assaulted him on three sides, but was repulsed. The Banyamwezi were, moreover, much too sharp as traders for the Imboshwa, cheating them unmercifully, and lying like Greeks. Kombokombo's stockade was on the Chibérasé River, which flows briskly, eight yards broad, and deep, through a mile of sponge. We came in the midst of a general jollification, and were most bountifully supplied with pombe and food. The Banyamwezi acknowledge allegiance to the Sultan of Zanzibar, and all connected with him are respected. Kombokombo pressed food and drink on me, and when I told him that I had nothing to return for it, he said that he expected nothing: he was a child of the Sultan, and ought to furnish all I needed.

July 11th.—On leaving the Chibérasé, we passed up over a long line of hills with many villages and gardens, but mostly deserted during the Mazitu raid. The people fled into the forests on the hills, and were an easy prey to the marauders, who seem to have been unmerciful. When we descended into the valley beyond we came to a strong stockade, which had successfully resisted the onset of the Mazitu; we then entered on flat forest, with here and there sponges containing plenty of water; plains succeeded the hills, and continued all the way to Bangweolo. We made a fence in the forest; and next day, July 12th, reached the Rofuba, fifty yards broad and four and a half feet deep, full of aquatic plants, and flowing south-west into the Luongo: it had about a mile and a half of sponge on each side of it. We encamped a little south of the river.

July 13th.—On resting at a deserted spot, the men of a village in the vicinity came to us excited and apparently drunk, and began to work themselves up still more by running about, poisoning their spears at us, taking aim with their bows and arrows, and making as if about to strike with their axes: they thought that we were marauders, and some plants of ground-nuts strewn about gave color to the idea. There is usually one good soul in such rabbles. In this case a man came to me, and, addressing his fellows, said, "This is only your pombe.—White man, do not stand

among them, but go away;" and then he placed himself between me and a portion of the assailants, about thirty of whom were making their warlike antics. While walking quietly away with my good friend, they ran in front and behind bushes and trees, took aim with bow and arrow, but none shot: the younger men ran away with our three goats. When we had gone a quarter of a mile, my friend told me to wait and he would bring the goats, which he did: I could not feel the inebriates to be enemies; but in that state they are the worst one can encounter, for they have no fear as they have when sober. One snatched away a fowl from our guide; that, too, was restored by our friend. I did not load my gun, for any accidental discharge would have inflamed them to rashness. We got away without shedding blood, and were thankful. The Mazitu raid has produced lawlessness in the country: every one was taken as an enemy.

July 14th.—We remained a day at the stockade of *Moiéggéa*. A Banyamwezi or Garaganza man is settled here in *Kabaia's* district, and on the strong rivulet called *Mato*. We felt secure only among the strangers, and they were friendly with us.

July 15th.—At the village on the south bank of the *Mpanda* we were taken by the head man as *Mazitu*. He was evidently intoxicated, and began to shut his gates with frantic gesticulations. I offered to go away; but others of his people, equally intoxicated, insisted on my remaining. I sat down a little; but seeing that the chief was still alarmed, I said to his people, "The chief objects, and I can't stay:" they saw the reasonableness of this, but I could not get my cowardly attendants to come on, though one said to me, "Come, I shall show you the way: we must speak nice to them." This the wise boys think the perfection of virtue. Speaking nice means adopting a childish treble tone of voice, and words exactly similar to those of the little Scotch girl who, passing through a meadow, was approached by a cow, probably from curiosity. To appease this enemy, she said, "Oh, coo, coo, if you no hurt me, I no hurt you." I told them to come on and leave them quietly, but they remained babbling with them. The guide said that there was no water in front: this I have been told too often ever to believe, so I went on through the forest, and in an hour and a half came to a sponge where, being joined by my attendants, we passed the night.

July 16th.—Crossing this sponge, and passing through flat forest, we came to another named *Méshwé*, when there, as a contrast, the young men volunteered to carry me across; but I had got off my shoes and was in the water, and they came along with

me, showing the shallower parts. We finished the day's march by crossing the Molongosi spongy ooze, with one hundred and fifty paces of deep water flowing north-east. The water in these oozes, or sponges, felt very cold, though only 60° in the mornings, and 65° at midday. The Molongosi people invited us into the village; but the forest, unless when infested with leopards and lions, is always preferable, for one is free from vermin, and free from curiosity-gazers, who in the village think they have a right to stare, but in the forest feel that they are not on an equality with strangers.

[It was on the 18th of July, 1868, we see that Dr. Livingstone discovered one of the largest of the Central African lakes. It is extraordinary to notice the total absence of all pride and enthusiasm, as—almost parenthetically—he records the fact.]

July 17th, 18th.—Reached the chief village of Mapuni, near the north bank of Bangweolo. On the 18th I walked a little way out, and saw the shores of the Lake for the first time, thankful that I had come safely hither.

I told the chief that my goods were all expended, and gave him a fathom of calico as all I could spare: I told him that as soon as I had seen and measured the Lake I would return north. He replied that, seeing our goods were done, he could say nothing; he would give me guides, and what else he should do was known to himself. He gave a public reception at once. I asked if he had ever seen any one like me, and he said, "Never." A Babisa traveler asked me why I had come so far: I said I wished to make the country and people better known to the rest of the world; that we were all children of one Father, and I was anxious that we should know each other better, and that friendly visits should be made in safety. I told him what the queen had done to encourage the growth of cotton on the Zambesi, and how we had been thwarted by slave-traders and their abettors: they were pleased with this. When asked, I showed them my note-book, watch, compass, burning-glass, and was loudly drummed home.

I showed them the Bible, and told them a little of its contents. I shall require a few days more at Bangweolo than I at first intended. The moon, being in its last stage of waning, I can not observe till it is of some size.

July 19th.—Went down to Masantu's village, which is on the shore of the Lake, and by a spring called Chipoka, which comes out of a mass of disintegrated granite. It is seldom that we see

a spring welling out beneath a rock: they are covered by oozing sponges, if indeed they exist. Here we had as a spectator a man walking on stilts tied to his ankles and knees. There are a great many Babisa among the people. The women have their hair ornamented with strings of cowries, and well oiled with the oil and fat from the seeds of the mosikisi-trees. I sent the chief a fathom of calico, and got an audience at once. Masantu is an oldish man; had never prayed to the Great Father of all, though he said the footsteps of "Mungu," or Mulungu, could be seen on a part of Lifungé Island: a large footprint may also be seen on the rock at the Chambezé, about fifteen inches long. He informed us that the Lake is much the largest at the part called Bangweolo.

The country around the Lake is all flat, and very much denuded of trees, except the motsikiri, or mosikisi, which has fine dark, dense foliage, and is spared for its shade and the fatty oil yielded by its seeds: we saw the people boiling large pots of the dark brown fat, which they use to lubricate their hair. The islands, four in number, are all flat, but well peopled. The men have many canoes, and are all expert fishermen; they are called Mboghwa, but are marked on the forehead and chin as Babisa, and file the teeth to points. They have many children, as fishermen usually have.

July 21st.—Canoe-men are usually extortionate, because one can not do without them. Mapuni claims authority over them, and sent to demand another fathom, that he may give orders to them to go with us. I gave a hoe and a string of beads instead, but he insisted on the cloth, and kept the hoe too, as I could not afford the time to haggle.

Chipoka spring water at 9 A.M.,	75°	} air, 72°.
Lake water at same time,	71°	
Chipoka spring at 4 P.M.,	74° 5'	} air, 71° 5'; wet bulb, 70°.
Lake water at same time,	75°	

No hot fountains or earthquakes are known in this region. The bottom of the Lake consists of fine white sand, and a broad belt of strong rushes, say one hundred yards wide, shows shallow water. In the afternoons quite a crowd of canoes anchor at its outer edge to angle: the hooks are like ours, but without barbs. The fish are perch chiefly, but others similar to those that appear in the other lakes are found, and two which attain the large size of four feet by one and a half in thickness: one is called sampa.

July 22d.—A very high wind came with the new moon, and prevented our going, and also the fishermen from following their

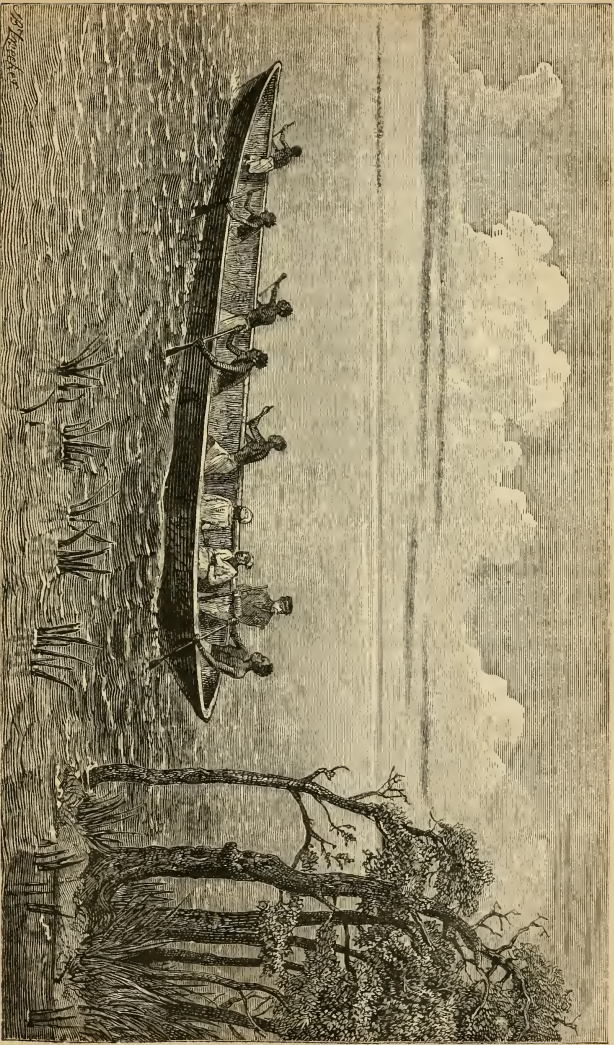
calling. Mapuni thought that we meant to make an escape from him to the Babisa on the south, because we were taking our goats; I therefore left them and two attendants at Masantu's village to assure him.

July 23d.—Wind still too strong to go. Took lunars.

July 24th.—Wind still strong.

July 25th.—Strong south-east wind still blowing; but having paid the canoe-men amply for four days with beads, and given Masantu a hoe and beads too, we embarked at 11.40 A.M. in a fine canoe, forty-five feet long, four feet deep, and four feet broad. The waves were high, but the canoe was very dry, and five stout men propelled her quickly toward an opening in Lifungé Island, on our south-east. Here we stopped to wood, and I went away to look at the island, which had the marks of hippopotami and a species of jackal on it: it had hard, wiry grass, some flowers, and a species of capparidaceous tree. The trees showed well the direction of the prevailing wind to be south-east, for the branches on that side were stunted or killed, while those on the north-west ran out straight, and made the trees appear, as sailors say, lapsed; the trunks, too, were bent that way.

The canoe-men now said that they would start; then that they would sleep here, because we could not reach the island Mpabala before dark, and would not get a hut. I said that it would be sleeping out-of-doors only in either case, so they went. We could see the island called Kisi on our east, apparently a double island, about fifteen miles off, and the tops of the trees barely visible on Mpabala, on our south-east. It was all sea horizon on our south and north, between Lifungé and Mpabala, and between Lifungé and Kisi. We could not go to Kisi, because, as the canoe-men told us, they had stolen their canoe thence. Though we decided to go, we remained a while to let the sea go down. A hammer-head's nest on one of the trees was fully four feet high. Coarse rushes show the shoals near the islands. Only one shell was seen on the shores. The canoe ships much less water in this surf than our boat did in that of Nyassa. The water is of a deep sea-green color, probably from the reflection of the fine white sand of the bottom. We saw no part having the deep dark blue of Nyassa, and conjecture that the depth is not great; but I had to leave our line when Amoda absconded. On Kisi we observed a dark square mass, which at first I took to be a low hill: it turned out to be a mass of trees (probably the place of sepulture, for the grave-yards are always untouched), and shows what a dense forest this land would become were it not for the influence of men.



DISCOVERY OF LAKE BANGWEBOLO.

1871

We reached Mpabala after dark. It was bitterly cold, from the amount of moisture in the air. I asked a man who came to see what the arrival was, for a hut; he said, "Do strangers require huts, or ask for them at night?" He then led us to the public place of meeting, called Nsaka, which is a large shed, with planks around and open spaces between, instead of walls. Here we cooked a little porridge, and ate it; then I lay down on one side, with the canoe-men and my attendants at the fire in the middle, and was soon asleep, and dreamed that I had apartments in Mivart's hotel. This made me feel much amused next day, for I never dream unless I am ill, or going to be ill; and of all places in the world, I never thought of Mivart's hotel in my waking moments: a freak of the fancy surely, for I was not at all discontented with my fare, or apartment; I was only afraid of getting a stock of vermin from my associates.

July 26th.—I have to stand the stare of a crowd of people at every new place for hours: all usually talk as quickly as their glib tongues can: these certainly do not belong to the tribes who are supposed to eke out their language by signs! A few indulge their curiosity in sight-seeing, but go on steadily weaving nets, or beating bark-cloth, or spinning cotton; others smoke their big tobacco-pipes, or nurse a baby, or enjoy the heat of the bright morning sun. I walked across the north end of the island, and found it to be about one mile broad; I also took bearings of Chirubi Island from the eastern point of Mpabala, and found from the south-east point of Chirubi that there are one hundred and eighty-three degrees of sea horizon from it to the point of departure of the Luapula. Chirubi is the largest of the islands, and contains a large population, possessing many sheep and goats. At the highest part of Mpabala we could see the tops of the trees on Kasango, a small, uninhabited islet, about thirty miles distant: the tops of the trees were evidently lifted up by the mirage, for near the shore and at other parts they were invisible, even with a good glass. This uninhabited islet would have been our second stage had we been allowed to cross the Lake, as it is of the people themselves. It is as far beyond it to the main-land, called Manda, as from Masantu's to Mpabala.

July 27th.—Took lunars and stars for latitude.

The canoe-men now got into a flurry, because they were told here that the Kisi men had got an inkling that their canoe was here, and were coming to take it; they said to me that they would come back for me, but I could not trust thieves to be so honest. I thought of seizing their paddles, and appealing to the

head men of the island; but aware from past experience how easy it is for acknowledged thieves like them to get up a tale to secure the cheap sympathy of the soft-headed or tender-hearted, I resolved to bear with meekness, though groaning inwardly, the loss of two of the four days for which I had paid them. I had only my coverlet to hire another canoe, and it was now very cold; the few beads left would all be required to buy food on the way back. I might have got food by shooting buffaloes, but that on foot, and through grass with stalks as thick as a goose-quill, is dreadfully hard work; I had thus to return to Masantu's, and trust to the distances as deduced from the time taken by the natives in their canoes for the size of the Lake.

We had come to Mpabala at the rate of six knots an hour, and returned in the same time with six stout paddlers. The latitude was $12'$ in a south-east course, which may give $24'$ as the actual distance. To the sleeping-place, the islet Kasango, there was at least $28'$ more, and from thence to the main-land "Manda," other $28'$. This $24 + 28 + 28 = 80'$ as the breadth from Masantu village, looking south-east. It lies in $11^{\circ} 0'$ S. If we add on the half distance to this, we have $11^{\circ} 40'$ as the latitude of Manda. The main-land to the south of Mpabala is called Kabendé. The land's end running south of Masantu's village is the entrance to the Luapula: the clearest eye can not see across it there. I saw clouds as if of grass burning, but they were probably "kungu," an edible insect, whose masses have exactly the same appearance as they float above and on the water. From the time the canoes take to go to Kabendé, I believe the southern shore to be a little into 12° of south latitude: the length, as inferred from canoes taking ten days to go from Mpabala to the Chambezé, I take to be one hundred and fifty miles, probably more. No one gave a shorter time than that. The Luapula is an arm of the Lake for some twenty miles, and beyond that is never narrower than from one hundred and eighty to two hundred yards, generally much broader, and may be compared with the Thames at London Bridge: I think that I am considerably within the mark in setting down Bangweolo as one hundred and fifty miles long by eighty broad.

When told that it contained four large islands, I imagined that these would considerably diminish the watery acreage of the whole, as is said to be the case with five islands in Ukerewé; but even the largest island, Chirubi, does not in the least dwarf the enormous mass of the water of Bangweolo. A range of mountains, named Lokinga, extends from the south-east to the south-west:

some small burns come down from them, but no river. This range joins the Koné, or Mokoné range, west of Katanga, from which on one side rises the Lufira, and on the other the Liambai, or Zambesi. The river of Manda, called Matanga, is only a departing and re-entering branch of the Lake, also the Luma and Loela rivers—some thirty yards broad—have each to be examined as springs on the south of the Lake.

July 29th.—Not a single case of Derbyshire neck, or of *elephantiasis*, was observed anywhere near the Lake, consequently the report we had of its extreme unhealthiness was erroneous: no muddy banks did we see, but in the way to it we had to cross so many sponges, or oozes, that the word *matopé* (mud) was quite applicable; and I suspect, if we had come earlier, that we should have experienced great difficulty in getting to the Lake at all.

July 30th.—We commenced our march back, being eager to get to Chikumbi's in case Mohamad should go thence to Katanga. We touched at Mapuni's, and then went on to the Molongosi. Clouds now began to cover the sky to the Mpanda, which has fifteen yards of flood, though the stream itself is only five yards wide; then on to the Mato and Moiéggé's stockade, where we heard of Chikumbi's attack on Kombokombo's. Moiéggé had taken the hint, and was finishing a second line of defense around his village: we reached him on the 1st of August, 1868, and stopped for Sunday, the 2d: on the 3d, back to the Rofubu, where I was fortunate enough to hire a canoe to take me over.

It examining a tsetse fly very carefully, I see that it has a receptacle at the root of the piercer, which is of a black or dark-red color; and when it is squeezed, a clear fluid is pressed out at its point: the other two parts of the proboscis are its shield, and have no bulb at the base. The bulb was pronounced at the Royal Society to be only muscle, but it is curious that muscle should be furnished where none is needed, and withheld in the movable parts of the shield, where it is decidedly needed.

August 5th, 1868.—Reach Kombokombo, who is very liberal, and pressed us to stay a day with him as well as with others; we complied, and found that Mohamad had gone nowhere.

August 7th.—We found a party starting from Kizinga for the coast, having our letters with them: it will take five months to reach the sea. The disturbed state of the country prevented parties of traders proceeding in various directions, and one that set off on the same day with us was obliged to return. Mohamad has resolved to go to Manyuema as soon as parties of his men now out return: this is all in my favor; it is in the way I want

to go to see the Lualaba and Lufira to Chowambé. The way seems opening out before me, and I am thankful. I resolved to go north by way of Casembe, and guides were ready to start, so was I; but rumors of war where we were going induced me to halt to find out the truth: the guides (Banyamwezi) were going to divine, by means of a cock, to see if it would be lucky to go with me at present. The rumors of danger became so circumstantial that our fence was needed: a well was dug inside, and the Banyamwezi were employed to smelt copper as for the market of Manyuema, and balls for war. Syde bin Omar soon came over the Luapula from Iramba, and the state of confusion induced the traders to agree to unite their forces and make a safe retreat out of the country. They objected very strongly to my going away down the right bank of the Luapula with my small party, though it was in sight; so I resolved to remain till all went.

August 13th.—The Banyamwezi use a hammer shaped like a cone, without a handle. They have both kinds of bellows, one of goat-skin the other of wood, with a skin over the mouth of a drum, and a handle tied to the middle of it; with these they smelt pieces of the large bars of copper into a pot, filled nearly full of wood ashes. The fire is surrounded by masses of ant-hills, and in these there are hollows made to receive the melted metal: the metal is poured while the pot is held with the hands, protected by wet rags.

August 15th.—Bin Omar, a Suaheli, came from Muaboso, on Chambezé, in six days, crossing in that space twenty-two burns, or oozes, from knee to waist deep.

Very high and cold winds prevail at present. It was proposed to punish Chikumbi when Syde bin Omar came, as he is in debt, and refuses payment; but I go off to Casembe.

I learn that there is another hot fountain in the Baloba country, called Fungwé; this, with Kapira and Vana, makes three hot fountains in this region.

Some people were killed in my path to Casembe, so this was an additional argument against my going that way.

Some Banyamwezi report a tribe—the Bonyolo—that extract the upper front teeth, like Batoka; they are near Loanda, and Lake Chipokola is there, probably the same as Kinkonza. Feeling my way. All the trees are now pushing out fresh young leaves of different colors: winds, south-east; clouds of upper stratum, north-west.

August 29th.—Kaskas began to-day hot and sultry. This will continue till rains fall. Rumors of wars perpetual and near;

and one circumstantial account of an attack made by the Bausé. That again contradicted.

August 31st.—Rain began here this evening, quite remarkable and exceptional, as it precedes the rains generally off the watershed by two months at least: it was a thunder-shower, and it and another on the evening of the second were quite partial.

[As we shall see, he takes advantage of his late experience to work out an elaborate treatise on the climate of this region, which is exceedingly important, bearing, as it does, upon the question of the periodical floods on the rivers which drain the enormous cistern-lakes of Central Africa.]

The notion of a rainy zone, in which the clouds deposit their treasures in perpetual showers, has received no confirmation from my observations. In 1866–67, the rain-fall was forty-two inches. In 1867–68, it amounted to fifty-three inches: this is nearly the same as falls in the same latitudes on the West Coast. In both years the rains ceased entirely in May, and with the exception of two partial thunder-showers on the middle of the watershed, no rain fell till the middle and end of October, and then, even in November, it was partial, and limited to small patches of country; but scarcely a day passed between October and May without a good deal of thunder. When the thunder began to roll or rumble, that was taken by the natives as an indication of the near cessation of the rains. The middle of the watershed is the most humid part: one sees the great humidity of its climate at once in the trees, old and young, being thickly covered with lichens; some flat, on the trunks and branches; others long and thready, like the beards of old men waving in the wind. Large orchids on the trees in company with the profusion of lichens are seen nowhere else, except in the mangrove swamps of the sea-coast.

I can not account for the great humidity of the watershed as compared with the rest of the country, but by the prevailing winds and the rains being from the south-east, and thus from the Indian Ocean. With this wind generally on the surface one can observe an upper strong wind from the north-west; that is, from the low humid West Coast and Atlantic Ocean. The double strata of winds can easily be observed when there are two sheets of clouds, or when burning grass over scores of square miles sends up smoke sufficiently high to be caught by the upper or north-west wind. These winds probably meet during the heavy rains: now in August they overlap each other. The probability

arises from all continued rains within the tropics coming in the opposite direction from the prevailing wind of the year. Partial rains are usually from the south-east.

The direction of the prevailing wind of this region is well marked on the islands in Lake Bangweolo: the trunks are bent away from the south-east, and the branches on that side are stunted or killed; while those on the north-west run out straight, and make the trees appear lapsided. The same bend away from the south-east is seen on all exposed situations, as in the trees covering the brow of a hill. At Kizinga, which is higher than the Lake, the trees are covered with lichens, chiefly on the south-east sides, and on the upper surfaces of branches running away horizontally to or from the north-west. Plants and trees, which elsewhere in Africa grow only on the banks of streams and other damp localities, are seen flourishing all over the country: the very rocks are covered with lichens, and their crevices with ferns.

But that which demonstrates the humidity of the climate most strikingly is the number of earthen sponges, or oozes, met with. In going to Bangweolo from Kizinga, I crossed twenty-nine of these reservoirs in thirty miles of latitude, on a south-east course: this may give about one sponge for every two miles. The word "bog" conveys much of the idea of these earthen sponges; but it is inseparably connected in our minds with peat, and these contain not a particle of peat: they consist of black, porous earth, covered with a hard, wiry grass, and a few other damp-loving plants. In many places the sponges hold large quantities of the oxide of iron, from the big patches of brown hematite that crop out everywhere, and streams of this oxide, as thick as treacle, are seen moving slowly along in the sponge-like, small red glaciers. When one treads on the black earth of the sponge, though little or no water appears on the surface, it is frequently squirted up the limbs, and gives the idea of a sponge. In the paths that cross them the earth readily becomes soft mud, but sinks rapidly to the bottom again, as if of great specific gravity: the water in them is always circulating and oozing. The places where the sponges are met with are slightly depressed valleys, without trees or bushes, in a forest country where the grass being only a foot or fifteen inches high, and thickly planted, often looks like a beautiful glade in a gentleman's park in England. They are from a quarter of a mile to a mile broad, and from two to ten or more miles long. The water of the heavy rains soaks into the level forest-lands: one never sees runnels leading it off, unless

occasionally a footpath is turned to that use. The water, descending about eight feet, comes to a stratum of yellow sand, beneath which there is another stratum of fine white sand, which at its bottom cakes, so as to hold the water from sinking farther.

It is exactly the same as we found in the Kalahari Desert, in digging sucking-places for water for our oxen. The water, both here and there, is guided by the fine sand stratum into the nearest valley, and here it oozes forth on all sides through the thick mantle of black porous earth which forms the sponge. There, in the desert, it appears to damp the surface sands in certain valleys, and the Bushmen, by a peculiar process, suck out a supply. When we had dug down to the caked sand there years ago, the people begged us not to dig farther, as the water would all run away; and we desisted, because we saw that the fluid poured in from the fine sand all round the well, but none came from the bottom or cake. Two stupid Englishmen afterward broke through the cake in spite of the entreaties of the natives, and the well and the whole valley dried up hopelessly. Here the water, oozing forth from the surface of the sponge mantle, collects in the centre of the slightly depressed valley which it occupies, and near the head of the depression forms a sluggish stream; but farther down, as it meets with more slope, it works out for itself a deeper channel, with perpendicular banks, with, say, a hundred or more yards of sponge on each side, constantly oozing forth fresh supplies to augment its size. When it reaches rocky ground it is a perennial burn, with many aquatic plants growing in its bottom. One peculiarity would strike any one—the water never becomes discolored or muddy. I have seen only one stream muddied in flood, the Choma, flowing through an alluvial plain in Lopéré. Another peculiarity is very remarkable; it is, that after the rains have entirely ceased, these burns have their largest flow, and cause inundations. It looks as if toward the end of the rainy season the sponges were lifted up by the water off their beds, and the pores and holes, being enlarged, are all employed to give off fluid. The waters of inundation run away. When the sponges are lifted up by superabundance of water, all the pores therein are opened: as the earthen mantle subsides again, the pores act like natural valves, and are partially closed, and by the weight of earth above them the water is thus prevented from running away altogether; time also being required to wet all the sand through which the rains soak, the great supply may only find its way to the sponge a month or so after the great rains have fallen.

I traveled in Lunda, when the sponges were all supersaturated. The grassy sward was so lifted up that it was separated into patches or tufts, and if the foot missed the row of tufts of this wiry grass which formed the native path, down one plumped up to the thigh in slush. At that time we could cross the sponge only by the native paths, and the central burn only where they had placed bridges; elsewhere they were impassable, as they poured off the waters of inundation: our oxen were generally bogged—all four legs went down up to the body at once. When they saw the clear sandy bottom of the central burn they readily went in, but usually plunged right overhead, leaving their tail up in the air to show the nervous shock they had sustained.

These sponges are a serious matter in traveling. I crossed the twenty-nine already mentioned at the end of the fourth month of the dry season, and the central burns seemed then to have suffered no diminution: they were then from calf to waist deep, and required from fifteen to forty minutes in crossing; they had many deep holes in the paths, and when one plumps therein every muscle in the frame receives a painful jerk. When past the stream, and apparently on partially dry ground, one may jog in a foot or more, and receive a squirt of black mud up the thighs: it is only when you reach the trees, and are off the sour land, that you feel secure from mud and leeches. As one has to strip the lower part of the person in order to ford them, I found that often four were as many as we could cross in a day. Looking up these sponges, a bird's-eye view would closely resemble the lichen-like vegetation of frost on window-panes; or that vegetation in Canada-balsam which mad philosophical instrument-makers *will* put between the lenses of the object-glasses of our telescopes. The flat, or nearly flat, tops of the subtending and transverse ridges of this central country give rise to a great many: I crossed twenty-nine, a few of the feeders of Bangweolo, in thirty miles of latitude in one direction. Burns are literally innumerable: rising on the ridges, or, as I formerly termed them, mounds, they are undoubtedly the primary or ultimate sources of the Zambesi, Congo, and Nile: by their union are formed streams of from thirty to eighty or one hundred yards broad, and always deep enough to require either canoes or bridges. These I propose to call the secondary sources; and as, in the case of the Nile, they are drawn off by three lines of drainage, they become the headwaters (the *caput Nili*) of the river of Egypt.

Thanks to that all-embracing Providence which has watched over and enabled me to discover what I have done. There is

still much to do, and, if health and protection be granted, I shall make a complete thing of it.

[Then he adds in a note a little farther on:]

But few of the sponges on the water-shed ever dry; elsewhere many do; the cracks in their surface are from fifteen to eighteen inches deep, with lips from two to three inches apart. Crabs and other animals, in clearing out their runs, reveal what I verified by actually digging wells at Kizinga and in Kabuiré, and also observed in the ditches, fifteen feet deep, dug by the natives round many of their stockades, that the sponge rests on a stratum of fine whitewashed sand. These cracks afford a good idea of the effect of the rains: the partial thunder-showers of October, November, December, and even January, produce no effect on them; it is only when the sun begins to return from his greatest southern declination that the cracks close their large lips. The whole sponge is borne up, and covers an enormous mass of water, oozing forth in March and April, forming the inundations. These floods in the Congo, Zambesi, and Nile require different times to reach the sea. The bulk of the Zambesi is further augmented by the greater rains finding many pools in the beds of its feeders filled in February, as soon as the sun comes north.

Mem.—In apparent contradiction of the foregoing, so far as touches the sources of the Zambesi, Syde bin Habib informed me a few days ago that he visited the sources of the Liambai and of the Lufira. Each comes out of a fountain; the Lufira one is called Changozi, and is small, and in a wood of large trees southwest of Katanga; the fountain of the Liambai is so large that one can not call to a person on the other side, and he appears also very small there: the two fountains are just five hours distant from each other. He is well acquainted with the Liambai (Leeambyc), where I first met him. Lunga, another river, comes out of nearly the same spot which goes into the Leuñge, Kafué (?). Lufira is less than Kalongosi up there; that is less than eighty or two hundred yards, and it has deep water-falls in it. The Koné range comes down north, nearly to Mpméto's. Mkana is the chief of the stone houses in the Baloba, and he may be reached by three days of hard traveling from Mpwéto's; Lufira is then one long day west. As Muabo refuses to show me his "mita," "miengelo," or "mpamankanana," as they are called, I must try and get to those of the Baloba of Mkana.

Senegal swallows pair in the beginning of December.

Note.—Inundation.

The inundation I have explained in the note on the climate as owing to the sponges being supersaturated in the greater rains, when the sun returns from his greatest southern declination; the pores are then all enlarged and the water of inundation flows in great volume even after the rains have entirely ceased. Something has probably to be learned from the rain-fall at or beyond the equator, as the sun pursues his way north beyond my beat; but the process I have named accounts undoubtedly for the inundations of the Congo and Zambesi. The most acute of the ancients ascribed the inundation with Strabo to summer rains in the south; others, to snows melting on the mountains of the Moon; others, to the northern wind—the Etesian breezes blowing directly against the mouth of the river and its current: others, with less reason, ascribed the inundation to its having its source in the ocean: Herodotus and Pliny, to evaporation following the course of the sun.

September 1st, 1868.—Two men come from Casembe—I am reported killed. The miningo-tree distills water, which falls in large drops. The Luapula seen when the smoke clears off. Fifty of Syde bin Omar's people died of small-pox in Usafa.

Mem.—VACCINE VIRUS. We leave on the 25th the east bank of Moisi River, and cross the Luongo on the 28th, the Lofubu on the 1st of October, and the Kalongoisi on the 7th.

[Dr. Livingstone seems to have been unable to find opportunity to make daily entries at this period. All was turmoil and panic, and his life appears to have been in imminent danger. Briefly we see that, on his way back from the Lake, he found that his Arab associates of the last few months had taken up Casembe's cause against the devastating hordes of Mazitu, who had swept down on these parts, and had repulsed them. But now a fresh complication arose! Casembe and Chikumbi became alarmed lest the Arabs, feeling their own power, should turn upon them and possess the whole country; so they joined forces and stormed Kombokombo, one of the leading Arabs, and with what success we shall see. It is a fair specimen of the unaccountable complications which dog the steps of the traveler where war is afoot, and render life a misery. He writes as follows on the 5th of October:]

I was detained in the Imbozhwa country much longer than I relished. The inroad of the Mazitu, of which Casembe had just heard when we reached the Mofwé, was the first cause of delay:

he had at once sent off men to verify the report, and requested me to remain till his messengers should return. This foray produced a state of lawlessness in the country, which was the main reason of our further detention.

The Imbozhwa fled before the marauders, and the Banyamwezi, or Garaganza, who had come in numbers to trade in copper, took on themselves the duty of expelling the invaders, and this, by means of their muskets, they did effectually; then, building stockades, they excited the jealousy of the Imbozhwa lords of the soil, who, instead of feeling grateful, hated the new power thus sprung up among them! They had suffered severely from the sharp dealing of the strangers already, and Chikumbi made a determined assault on the stockade of Kombokombo in vain.

Confusion prevailed all over the country. Some Banyamwezi assumed the offensive against the Baüsi, who resemble the Imbozhwa, but are farther south, and captured and sold some prisoners: it was in this state of things that, as already mentioned, I was surrounded by a party of furious Imbozhwa. A crowd stood within fifteen or twenty yards, with spears poised, and arrows set in the bowstrings, and some took aim at me: they took us for plunderers, and some plants of ground-nuts thrown about gave color to their idea. One good soul helped us away—a blessing be on him and his! Another chief man took us for Mazitu! In this state of confusion Casembe heard that my party had been cut off. He called in Moenempanda, and took the field in person, in order to punish the Banyamwezi, against whom he has an old grudge for killing a near relative of his family, selling Baüsi, and setting themselves up as a power in his country.

The two Arab traders now in the country felt that they must unite their forces, and thereby effect a safe retreat. Chikumbi had kept twenty-eight tusks for Syde bin Omar safely; but the coming of Casembe might have put it out of his power to deliver up his trust in safety, for an army here is often quite lawless: each man takes to himself what he can. When united, we marched from Kizinga on September 23d together, built fences every night to protect ourselves and about four hundred Banyamwezi, who took the opportunity to get safely away. Kombokombo came away from his stockade, and also part of the way, but cut away by night across country to join the parties of his countrymen, who still love to trade in Katanga copper. We were not molested, but came nearly north to the Kalongosi. Syde parted from us, and went away east to Mozamba, and thence to the coast.

CHAPTER XIII.

Cataracts of the Kalongosi.—Passage of the River disputed.—Leeches, and Method of detaching them.—Syde bin Habib's Slaves escape.—Enormous Collection of Tusks.—Ill.—Theory of the Nile Sources.—Tribute to Miss Tinné.—Notes on Climate.—Separation of Lake Nyassa from the Nile System.—Observations on Victoria Nyanza.—Slaves dying.—Repentant Deserters.—Mohamad Bogharib.—Enraged Imbozhwa.—An Attack.—Narrow Escape.—Renewed Attack.—A Parley.—Help arrives.—Bin Juma.—March from the Imbozhwa Country.—Slaves escape.—Burial of Syde bin Habib's Brother.—Singular Custom.—An Elephant killed.—Native Game-laws.—Rumor of Baker's Expedition.—Christmas Dinners.

October 11th, 1868.—FROM Kizinga north the country is all covered with forest, and thrown up into ridges of hardened sandstone, capped occasionally with fine-grained clay schist. Trees often appear of large size, and of a species closely resembling the gum-copal-tree; on the heights masukos and rhododendrons are found, and, when exposed, they are bent away from the south-east. Animals, as buffaloes and elephants, are plentiful, but wild. Rivulets numerous, and running now as briskly as brooks do after much rain in England. All on the south-western side of Kalongosi are subjects of Casembe; that is, Balunda, or Imbozhwa.

It was gratifying to see the Banyamwezi carrying their sick in cots slung between two men: in the course of time they tired of this, and one man, who was carried several days, remained with Chuma. We crossed the Luongo far above where we first became acquainted with it, and near its source in Urungu or Usungu hills; then the Lobubu, a goodly stream thirty yards broad, and rapid, with fine falls above our ford, which goes into Kalongosi.

October 6th.—Cross the Papusi, and a mile beyond the Luéna, of forty yards and knee-deep. Here we were met by about four hundred of Kabanda's men, as if they were come to dispute our passage at the ford. I went over: all were civil; but had we shown any weakness they would no doubt have taken advantage of it.

October 7th.—We came to the Kalongosi, flowing over five cataracts made by five islets in a place called Kabwérumé. Near the Mebamba a goodly rivulet joins it.

October 12th.—We came to the Kalongosi at the ford named Mosolo: by pacing, I found it to be two hundred and forty yards

broad, and thigh-deep at the end of the dry season: it ran so strongly that it was with difficulty I could keep my feet. Here five hundred at least of Nsama's people stood on the opposite shore to know what we wanted. Two fathoms of calico were sent over, and then I and thirty guns went over to protect the people in the ford: as we approached, they retired. I went to them, and told them that I had been to Nsama's, and he gave me a goat and food, and we were good friends. Some had seen me there, and they now crowded to look till the Arabs thought it unsafe for me to be among them: if I had come with bared skin they would have fled. All became friendly: an elephant was killed, and we remained two days buying food. We passed down between the ranges of hills on the east of Moero, the path we followed when we first visited Casembe.

October 20th, 21st.—From the Luao I went over to the chief village of Muabo, and begged him to show me the excavations in his country. He declined, by saying that I came from a crowd of people, and must go to Kabwabwata, and wait a while there; meanwhile he would think what he should do—whether to refuse or invite me to come. He evidently does not wish me to see his strongholds. All his people could go into them, though over ten thousand: they are all abundantly supplied with water, and they form the store-houses for grain.

October 22d.—We came to Kabwabwata, and I hope I may find a way to other under-ground houses. It is probable that they are not the workmanship of the ancestors of the present occupants, for they ascribe their formation invariably to the Deity, Mulungu or Réza: if their forefathers had made them, some tradition would have existed of them.

October 23d.—Syde bin Habib came over from Mpwéto's: he reports Lualaba and Lufira flowing into the Lake of Kiñkonza. Lungabalé is paramount chief of Rua.

Mparahala horns measured three feet long, and three inches in diameter at the base: this is the yellow kualata of Makololo, bastard gemsbok of the Dutch.

October 27th, 29th, 30th.—Salem bin Habib was killed by the people in Rua: he had put up a tent, and they attacked it in the night, and stabbed him through it. Syde bin Habib waged a war of vengeance all through Rua after this for the murder of his brother. Sef's raid may have led the people to the murder.

October 29th.—In coming north in September and October, the last months of the dry season, I crossed many burns flowing quite in the manner of our brooks at home, after a great deal of rain;

here, however, the water was clear, and the banks not abraded in the least. Some rivulets had a tinge of white in them, as if of feldspar in disintegrating granite: some nearly stagnant burns had as if milk and water in them, and some red oxide of iron.

Where leeches occur, they need no coaxing to bite, but fly at the white skin like furies, and refuse to let go: with the fingers benumbed, though the water is only 60°, one may twist them round the finger and tug, but they slip through. I saw the natives detaching them with a smart slap of the palm, and found it quite effectual.

Swifts, Senegal swallows, and common dark-bellied swallows appeared at Kizinga in the beginning of October: other birds, as Drongo shrikes—a bird with a reddish bill, but otherwise like a gray linnet—keep in flocks yet. (December 5th.) They pair now. The kite came sooner than the swallows; I saw the first at Bangweolo on July 20th, 1868.

November 1st, 1868.—At Kabwabwata: we are waiting till Syde comes up, that we may help him. He has an enormous number of tusks and bars of copper, sufficient, it seems, for all his people to take forward, going and returning three times over. He has large canoes on the Lake, and will help us in return.

November 2d.—News came yesterday from Mpwéto's that twenty-one slaves had run away from Syde bin Habib at one time: they were Rua people, and out of the chains, as they were considered safe when fairly over the Lualaba, but they showed their love of liberty on the first opportunity. Mpwéto is suspected to have harbored them, or helped them over the river; this will probably lead to Syde attacking him, as he has done to so many chiefs in Rua. In this case Mpwéto will have no sympathy; he is so wanting in the spirit of friendliness to others.

November 3d.—Sent off men to hasten Syde onward. We start in two or three days.

The oldest map known to be in existence is the map of the Ethiopian Gold Mines, dating from the time of Sethos I., the father of Rameses II., long enough before the time of the bronze tablet of Aristagoras, on which was inscribed the circuit of the whole earth, and all the sea and all rivers. (Tylor, p. 90, quoted from Birch's "Archæologia," vol. xxxiv., p. 382.) Sesostris was the first to distribute his maps.

November 8th.—Syde bin Habib is said to have amassed 150 frasilahs of ivory = 5250 pounds, and 300 frasilahs of copper = 10,500 pounds. With one hundred carriers he requires to make four relays, or otherwise make the journey four times over at

every stage. Twenty-one of his slaves ran away in one night, and only four were caught again; they were not all bought, nor was the copper and ivory come at by fair means: the murder of his brother was a good excuse for plunder, murder, and capture. Mpwéto is suspected of harboring them as living on the banks of the Lualaba, for they could not get over without assistance from his canoes and people. Mpwéto said, "Remove from me, and we shall see if they come this way." They are not willing to deliver fugitives up. Syde sent for Elmas, the only thing of the Mullam or clerical order here, probably to ask if the Koran authorizes him to attack Mpwéto. Mullam will reply, "Yes, certainly. If Mpwéto won't restore your slaves, take what you can by force." Syde's bloodshed is now pretty large, and he is becoming afraid for his own life; if he ceases not, he will himself be caught some day.

Ill of fever two days. Better, and thankful.

[While waiting to start for Ujiji, Livingstone was intently occupied on the great problem of the Nile, and the important part he had taken so recently in solving it: he writes at this date as follows:]

The discovery of the sources of the Nile is somewhat akin in importance to the discovery of the North-west Passage, which called forth, though in a minor degree, the energy, the perseverance, and the pluck of Englishmen; and any thing that does that is beneficial to the nation and to its posterity. The discovery of the sources of the Nile possesses, moreover, an element of interest which the North-west Passage never had. The great men of antiquity have recorded their ardent desires to know the fountains of what Homer called "*Egypt's heaven-descending spring.*" Sesostris, the first who in camp with his army, made and distributed maps; not to Egyptians only, but to the Seythians, naturally wished to know the springs, says Eustathius, of the river on whose banks he flourished. Alexander the Great, who founded a celebrated city at this river's mouth, looked up the stream with the same desire, and so did the Cæsars. The great Julius Cæsar is made by Lucan to say that he would give up the civil war if he might but see the fountains of this far-famed river. Nero Cæsar sent two centurions to examine the "*Caput Nili.*" They reported that they saw the river rushing with great force from two rocks, and beyond that it was lost in immense marshes. This was probably "native information" concerning the cataracts of the Nile and a long space above them, which had already been

enlarged by others into two hills, with sharp, conical tops, called Crophî and Mophî, midway between which lay the fountains of the Nile—fountains which it was impossible to fathom, and which gave forth half their water to Ethiopia in the south, and the other half to Egypt in the north. That which these men failed to find, and that which many great minds in ancient times longed to know, has in this late age been brought to light by the patient toil and laborious perseverance of Englishmen.*

In laying a contribution to this discovery at the feet of his countrymen, the writer desires to give all the honor to his predecessors which they deserve. The work of Speke and Grant is deserving of the highest commendation, inasmuch as they opened up an immense tract of previously unexplored country, in the firm belief they were bringing to light the head of the Nile. No one can appreciate the difficulties of their feat, unless he has gone into new country. In association with Captain Burton, Speke came much nearer to the "coy fountains" than at the Victoria Nyanza, but they all turned their backs on them. Mr. Baker showed courage and perseverance worthy of an Englishman, in following out the hints given by Speke and Grant. But none rises higher in my estimation than the Dutch lady, Miss Tinné, who, after the severest domestic afflictions, nobly persevered in the teeth of every difficulty, and only turned away from the object of her expedition after being assured by Speke and Grant that they had already discovered in Victoria Nyanza the sources she sought. Had they not given their own mistaken views, the wise foresight by which she provided a steamer would inevitably have led her to pull up, and by canoes to reach Lake Bangweôlo's sources, full five hundred miles south of the most southerly part of Victoria Nyanza. She evidently possesses some of the indomitable pluck of Van Tromp, whose tomb every Englishman who goes to Holland must see.† Her doctor was made a baron—were she not a Dutch lady already, we think she ought to be made a *duchess*.

By way of contrast with what, if I live through it, I shall have to give, I may note some of the most prominent ideas entertained

* In 1827, Linnæus reached 13° 30' N. on the White Nile. In 1841, the second Egyptian, under D'Arnauld and Sabatier, explored the river to 4° 42' N., and Jomard published his work on Limmoo and the River Habaiiah. Dr. Beke and Mr. D'Abbadie contributed their share to making the Nile better known. Brun Rollet established a trading station in 1854 at Belema, on the Nile, at 5° N. lat.

† Miss Tinné succumbed to the dangers of African traveling before Livingstone penned these just words of appreciation.

of this world-renowned river. Ptolemy, a geographer who lived in the second century, and was not a king of Egypt, with the most ancient maps made the Nile rise from the "Montes Lunæ," between 10° and 12° S. lat., by six several streams which flowed north into two lakes, situated east and west of each other. These streams flowed about west of his River Rhapta, or Raptus, which is probably our Rovuma, or Louma. This was very near the truth, but the Mountains of the Moon can not be identified with the Lokinga, or mountains of Bisa, from which many of the springs do actually arise; unless, indeed, we are nearer to the great alterations in climate which have taken place, as we are supposed to be nearer the epoch of the mammoth, aurochs, and others. Snow never lay in these latitudes on altitudes of six thousand feet above the sea.

Some of the ancients supposed the river to have its source in the ocean. This was like the answer we received long ago from the natives on the Liambai, or Upper Zambesi, when inquiring for its source. "It rises in Leoatlé, the white man's sea, or Mét-séhula." The second name means the "grazing water," from the idea of the tides coming in to graze: as to the freshness of the Liambai waters, they could offer no explanation.

Some, again, thought that the Nile rose in Western Africa, and, after flowing eastward across the continent, turned northward to Egypt; others, still, thought that it rose in India! and others, again, from vague reports collected from their slaves, made it and several other rivers rise out of a great inland sea. *Achelunda* was said to be the name of this lake, and in the language of Angola it meant the "sea." It means only "of," or "belonging to, *Lunda*," a country. It might have been a sea that was spoken of on a whole, or any thing. "*Nyassi, or the sea*," was another name, and another blunder. "Nyassi" means long grass, and nothing else. Nyanza, contracted into Nyassa, means lake, marsh, any piece of water, or even the dry bed of a lake. The *N* and *y* are joined in the mouth, and never pronounced separately. The "Naianza!"—it would be nearer the mark to say the Nancy!

Of all theoretical discoverers, the man who ran in two hundred miles of lake and placed them on a height of some four thousand feet at the north-west end of Lake Nyassa, deserves the highest place. Dr. Beke, in his guess, came nearer the sources than most others, but, after all, he pointed out where they would not be found. Old Nile played the theorists a pretty prank by having his springs five hundred miles south of them all! I call mine a contribution, because it is just a hundred years (1769) since Bruce,

a greater traveler than any of us, visited Abyssinia, and having discovered the sources of the Blue Nile, he thought that he had then solved the ancient problem. Am I to be cut out by some one discovering southern fountains of the river of Egypt, of which I have now no conception? DAVID LIVINGSTONE.

[The tiresome procrastination of Mohamad and his horde was not altogether an unmixed evil. With so many new discoveries in hand, Livingstone had an opportunity for working out several problems, and instituting comparisons between the phenomena of Inner Africa and the well-marked changes which go on in other parts of the world. We find him at this time summing them up as follows:]

The subject of change of climate from alteration of level has not received the investigation it deserves. Mr. Darwin saw reason to believe that very great alterations of altitude, and of course of climate, had taken place in South America and the islands of the Pacific. The level of a country above the sea I believe he thought to be as variable as the winds. A very great alteration of altitude has also taken place in Africa; this is apparent on the sea-coast of Angola, and all through the centre of the country, where large rivers which once flowed southward and westward are no longer able to run in these directions: the general desiccation of the country, as seen in the beds of large rivers and of enormous lakes, tells the same tale. Portions of the East Coast have sunk, others have risen, even in the Historic Period. The upper, or northern, end of the Red Sea has risen, so that the place of the passage of the children of Israel is now between forty and fifty miles from Suez, the modern head of the Gulf. This upheaval, and not the sand from the desert, caused the disuse of the ancient canal across the Isthmus: it took place since the Mohammedan conquest of Egypt. The women of the Jewish captivities were carried past the end of the Red Sea and along the Mediterranean in ox-wagons, where such cattle would now all perish for want of water and pasture; in fact, the route to Assyria would have proved more fatal to captives than the middle passage has been to Africans since. It may be true that, *as the desert is now*, it could not have been traversed by the multitude under Moses—the German strictures put forth by Dr. Colenso, under the plea of the progress of science, assume that no alteration has taken place in either desert or climate—but a scientific examination of the subject would have ascertained what the country was then when it afforded pasture to “flocks and herds, and even

very much cattle." We know that Ezion-geber was, with its docks, on the sea-shore, with water in abundance for the ship-carpenters: it is now far from the head of the Euxine Gulf, in a parched desert. Aden, when visited by the Portuguese Balthazar less than three hundred years ago, was a perfect garden; but it is now a vast conglomeration of black volcanic rocks, with so little vegetation, that, on seeing flocks of goats driven out, I thought of the Irish cabman at an ascent slamming the door of his cab, and whispering to his fare, "Whish! it's to desave the baste: he thinks that you are out walking." Gigantic tanks in great numbers and the ruins of aqueducts appear as relics of the past, where no rain now falls for three or more years at a time. They have all dried up by a change of climate, possibly similar and contemporaneous with that which has dried up the Dead Sea.

The journey of Ezra was undertaken after a fast at the River Abava. With nearly fifty thousand people, he had only about eight thousand beasts of burden. He was ashamed to ask a band of soldiers and horsemen for protection in the way. It took about four months to reach Jerusalem; this would give five and a half or six miles a day, as the crow flies, which is equal to twelve or fifteen miles of surface traveled over: this bespeaks a country capable of yielding both provisions and water, such as can not now be found. Ezra would not have been ashamed to ask for camels to carry provisions and water had the country been as dry as it is now. The prophets, in telling all the woes and miseries of the captivities, never allude to suffering or perishing by thirst in the way, or being left to rot in the route, as African slaves are now, in a well-watered country. Had the route to Assyria been then as it is now, they could scarcely have avoided referring to the thirst of the way; but every thing else is mentioned except that.

Respecting this system of lakes in the centre of Africa, it will possibly occur to some that Lake Nyassa may give a portion of its waters off from its northern end to the Nile, but this would imply a lake giving off a river at both ends; the country, too, on the north-north-west and north-east rises to from four to six thousand feet above the sea, and there is not the smallest indication that Nyassa and Tanganyika were ever connected. Lake Liemba is the most southerly part of Tanganyika; its latitude is $8^{\circ} 46' S.$; the most northerly point of Lake Nyassa is probably $10^{\circ} 56' - 8^{\circ} 46' = 2^{\circ} 10'$. Longitude of Liemba, $34^{\circ} 57' - 31^{\circ} 57' = 3^{\circ} 00' = 180'$ of longitude. Of latitude, $130' + 180' = 310'$, two-thirds of which is about $206'$, the distance between two lakes;

and no evidence of fissure, rent, or channel now appears on the highland between.

Again, Liemba is three thousand feet above the sea. The altitude of Nyassa is $\frac{12}{2} \frac{000}{8000}$ feet. Tanganyika would thus go to Nyassa—down the Shiré into the Zambesi and the sea, if a passage existed even below ground.

The large lake said to exist to the north-west of Tanganyika might, however, send a branch to the Nile; but the land rises up into a high ridge east of this lake.

It is somewhat remarkable that the impression which intelligent Suaheli, who have gone into Karagwé, have received is, that the Kitangulé flows from Tanganyika into Lake Ukerewé. One of Syde bin Omar's people put it to me very forcibly the other day by saying, "Kitangulé is an arm of Tanganyika!" He had not followed it out; but that Dagara, the father of Rumanyika, should have in his lifetime seriously proposed to deepen the upper part of it, so as to allow canoes to pass from his place to Ujiji, is very strong evidence of the river being large on the Tanganyika side. We know it to be of good size, and requiring canoes on the Ukerewé side. Burton came to the very silly conclusion that when a native said a river ran one way, he meant that it flowed in the opposite direction. Ujiji, in Rumanyika's time, was the only mart for merchandise in the country. Garaganza, or Galaganza, has most trade and influence now. (September 14th, 1868.)

Okara is the name by which Victoria Nyanza is known on the eastern side, and an arm of it, called Kavirondo, is about forty miles broad. Lake Baringo is a distinct body of water, some fifty miles broad, and giving off a river called Ngardabash, which flows eastward into the Somauli country. Lake Naibash is more to the east than Kavirondo, and about fifty miles broad too: it gives off the River Kidété, which is supposed to flow into Lufu. It is south-east of Kavirondo, and Kilimanjaro can be seen from its shores: in the south-east, Okara, Naibash, and Baringo seem to have been run by Speke into one lake. Okara, in the south, is full of large islands, and has but little water between them; that little is encumbered with aquatic vegetation called "tikatika," on which, as in lakelet Gumadona, a man can walk. Water-lilies and duck-weed are not the chief part of this floating mass. In the north Okara is large. Burukineggé land is the boundary between the people of Kavirondo and the Gallahs, with camels and horses.

November 9th.—Copied several notes written at Kizinga and

elsewhere, and at Kabwabwata resume journal. Some slight showers have cooled the air a little: this is the hottest time of the year.

November 10th.—A heavier shower this morning will have more of the same effect.

November 11th.—Muabo visited this village, but refuses to show his under-ground houses.

November 13th.—I was on the point of starting without Mohamad Bogharib, but he begged me not to go till he had settled some weighty matter about a wife he is to get at Ujiji from Mpamari. We must have the new moon, which will appear in three days, for lucky starting, and will leave Syde bin Habib at Chisabi's. Meanwhile two women slaves ran away, and Syde has got only five back of his twenty-one fugitives. Mullam was mild with his decisions, and returned here; he informed me that many of Syde's slaves, about forty, fled. Of those who can not escape many die, evidently broken-hearted; they are captives, and not, as slaves often are, criminals sold for their guilt; hence the great mortality caused by being taken to the sea to be, as they believe, fatted and eaten. Poor things! Heaven help them!

Ujiji is the pronunciation of the Banyamwezi; and they call the people Wayeiye, exactly as the same people styled themselves on the River Zougha, near Ngami.

[It will be remembered that several of his men refused to go to Lake Bangweolo with him: they seem now to have thought better of it, and on his return are anxious to come back to their old master, who, for his part, is evidently willing to overlook a good deal.]

I have taken all the runaways back again: after trying the independent life, they will behave better. Much of their ill conduct may be ascribed to seeing that after the flight of the Johanna men I was entirely dependent on them. More enlightened people often take advantage of men in similar circumstances; though I have seen pure Africans come out generously to aid one abandoned to their care. I have faults myself.

November 15th.—The Arabs have some tradition of the Emir Musa coming as far south as the Jaggá country. Some say he lived north-east of Sunna, now Mtéza; but it is so mixed up with fable and tales of the Genii (Mageni), that it can not refer to the great Moses, concerning whose residence at Meröe and marriage of the king of Ethiopia's daughter there is also some vague tradi-

tion farther north. The only thing of interest to me is the city of Meröe, which is lost, and may, if built by ancient Egyptians, still be found.

The Africans all beckon with the hand, to call a person, in a different way from what Europeans do. The hand is held, as surgeons say, *prone*, or palm down, while we beckon with the hand held *supine*, or palm up: it is quite natural in them, for the idea in their mind is to lay the hand on the person and draw him toward them. If the person wished for is near, say forty yards off, the beckoner puts out his right hand on a level with his breast, and makes the motion of catching the other by shutting the fingers and drawing him to himself: if the person is farther off, this motion is exaggerated by lifting up the right hand as high as he can; he brings it down with a sweep toward the ground, the hand being still held prone as before. In nodding assent, they differ from us by lifting up the chin, instead of bringing it down as we do. This lifting up the chin looks natural after a short usage therewith, and is perhaps purely conventional, not natural, as the other seems to be.

November 16th.—I am tired out by waiting after finishing the journal, and will go off to-morrow north. Simon killed a zebra after I had taken the above resolution, and this supply of meat makes delay bearable; for besides flesh, of which I had none, we can buy all kinds of grain and pulse for the next few days. The women of the adjacent villages crowd into this as soon as they hear of an animal killed, and sell all the produce of their plantations for meat.

November 17th.—It is said that on the road to the Great Salt Lake in America the bones and skulls of animals lie scattered everywhere, yet travelers are often put to great straits for fuel: this, if true, is remarkable among a people so apt in turning every thing to account as the Americans. When we first steamed up the River Shiré our fuel ran out in the elephant marsh, where no trees exist, and none could be reached without passing through many miles on either side of impassable swamp, covered with reeds, and intersected everywhere with deep branches of the river. Coming to a spot where an elephant had been slaughtered, I at once took the bones on board, and these, with the bones of a second elephant, enabled us to steam briskly up to where wood abounded. The Scythians, according to Herodotus, used the bones* of the animal sacrificed to boil the flesh; the Guachos

* Ezek. xxiv., 5.

of South America do the same when they have no fuel: the ox thus boils himself.

November 18th.—A pretty little woman ran away from her husband, and came to Mpamari. Her husband brought three hoes, a checked cloth, and two strings of large neck beads to redeem her; but this old fellow wants her for himself, and by native law he can keep her as his slave-wife. Slave-owners make a bad neighborhood, for the slaves are always running away, and the head men are expected to restore the fugitives for a bit of cloth. An old woman of Mpmari fled three times; she was caught yesterday, and tied to a post for the young slaves to plague her. Her daughter burst into an agony of tears on seeing them tying her mother, and Mpamari ordered her to be tied to the mother's back for crying. I interceded for her, and she was let go. He said, "You don't care, though Syed Majid loses his money." I replied, "Let the old woman go; she will be off again to-morrow." But they can not bear to let a slave have freedom. I do not understand what effect his long prayers and prostrations toward the "Kibla" have on his own mind; they can not affect the minds of his slaves favorably, nor do they mine, though I am as charitable as most people.

November 19th.—I prepared to start to-day, but Mohamad Bogharib has been very kind, and indeed cooked meals for me from my arrival at Casembe's, May 6th last, till we came here, October 22d: the food was coarse enough, but still it was food; and I did not like to refuse his genuine hospitality. He now begged of me not to go for three days, and then he would come along with me! Mpamari also entreated. I would not have minded him, but they have influence with the canoe-men on Tanganyika, and it is well not to get a bad name if possible.

November 20th.—Mohamad Bogharib purposed to attack two villages near to this, from an idea that the people there concealed his runaway slaves. By remaining I think that I have put a stop to this, as he did not like to pillage while I was in company. Mpamari also turned round toward peace, though he called all the riff-raff to muster, and caracoled among them like an old broken-winded horse. One man became so excited with yelling that the others had to disarm him, and he then fell down as if in a fit: water poured on his head brought him to calmness. We go on the 22d.

November 22d.—This evening the Imbozhwa, or Babemba, came at dusk, and killed a Wanyamwezi woman on one side of the village, and a woman and child on the other side of it. I

took this to be the result of the warlike demonstration mentioned above; but one of Mohamad Bogharib's people, named Bin Juma, had gone to a village on the north of this and seized two women and two girls, in lieu of four slaves who had run away. The head man, resenting this, shot an arrow into one of Bin Juma's party, and Bin Juma shot a woman with his gun.

This, it turned out, had roused the whole country, and next morning we were assailed by a crowd of Imbozhwa on three sides. We had no stockade, but the men built one as fast as the enemy allowed, cutting down trees and carrying them to the line of defense, while others kept the assailants at bay with their guns. Had it not been for the crowd of Banyamwezi which we have, who shot vigorously with their arrows, and occasionally chased the Imbozhwa, we should have been routed. I did not go near the fighting, but remained in my house to defend my luggage if necessary. The women went up and down the village with sieves, as if winnowing, and singing songs and lullilooing, to encourage their husbands and friends who were fighting; each had a branch of the *Ficus Indica* in her hand, which she waved, I suppose as a charm. About ten of the Imbozhwa are said to have been killed, but dead and wounded were at once carried off by their countrymen. They continued the assault from early dawn till 1 P.M., and showed great bravery, but they wounded only two with their arrows. Their care to secure the wounded was admirable: two or three at once seized the fallen man, and ran off with him, though pursued by a great crowd of Banyamwezi with spears, and fired at by the Suaheli—Victoria-cross fellows truly many of them were! Those who had a bunch of animals' tails, with medicine, tied to their waists, came sidling and ambling up to near the unfinished stockade, and shot their arrows high up into the air, to fall among the Wanyamwezi, then picked up any arrows on the field, ran back, and returned again. They thought that by the ambling gait they avoided the balls, and when these whistled past them they put down their heads, as if to allow them to pass over: they had never encountered guns before. We did not then know it, but Muabo, Phuta, Ngurué, Sandaruko, and Chapi were the assailants, for we found it out by the losses each of these five chiefs sustained.

It was quite evident to me that the Suaheli Arabs were quite taken aback by the attitude of the natives. They expected them to flee as soon as they heard a gun fired in anger; but instead of this we were very nearly being cut off, and should have been but for our Banyamwezi allies. It is fortunate that the attacking

party had no success in trying to get Mpwéto and Karembwó to join them against us, or it would have been more serious still.

November 24th.—The Imbozhwa, or Babemba rather, came early this morning, and called on Mohamad to come out of his stockade if he were a man who could fight; but the fence is now finished, and no one seems willing to obey the taunting call. I have nothing to do with it, but feel thankful that I was detained, and did not, with my few attendants, fall into the hands of the justly infuriated Babemba. They kept up the attack to-day, and some went out to them, fighting till noon. When a man was killed and not carried off, the Wanyamwezi brought his head and put it on a pole on the stockade: six heads were thus placed. A fine young man was caught and brought in by the Wanyamwezi; one stabbed him behind, another cut his forehead with an axe. I called in vain to them not to kill him. As a last appeal, he said to the crowd that surrounded him, "Don't kill me, and I shall take you to where the women are." "You lie," said his enemies; "you intend to take us where we may be shot by your friends;" and they killed him. It was horrible. I protested loudly against any repetition of this wickedness, and the more sensible agreed that prisoners ought not to be killed; but the Banyamwezi are incensed against the Babemba because of the women killed on the 22d.

November 25th.—The Babemba kept off on the third day, and the Arabs are thinking it will be a good thing if we get out of the country unscathed. Men were sent off on the night of the 23d to Syde bin Habib for powder and help. Mohamad Bo-gharib is now unwilling to take the onus of the war: he blames Mpamari, and Mpamari blames him. I told Mohamad that the war was undoubtedly his work, inasmuch as Bin Juma is his man, and he approved of his seizing the women.

He does not like this, but it is true; he would not have entered a village of Casembe, or Moamba, or Chikumbi, as he did Chapi's man's village. The people here are simply men of more mettle than he imagined, and his folly in beginning a war in which, if possible, his slaves will slip through his hands, is apparent to all, even to himself. Syde sent four barrels of gun-powder and ten men, who arrived during last night.

November 27th.—Two of Muabo's men came over to bring on a parley: one told us that he had been on the south side of the village before, and heard one man say to another, "Mo pigé" (shoot him). Mpamari gave them a long oration in exculpation, but it was only the same everlasting story of fugitive slaves.

The slave-traders can not prevent them from escaping, and impudently think that the country people ought to catch them, and thus be their humble servants, and also the persecutors of their own countrymen! If they can not keep them, why buy them? why put their money into a bag with holes?

It is exactly what took place in America—slave-owners are bad neighbors everywhere. Canada was threatened, England brow-beaten, and the Northerners all but kicked on the same score, and all as if property in slaves had privileges which no other goods have. To hear the Arabs say of the slaves after they are fled, "Oh, they are bad, bad, very bad!" (and they entreated me too to free them from the yoke), is, as the young ladies say, "too absurd." The chiefs also who do not apprehend fugitives, they, too, are "bad."

I proposed to Mohamad Bogharib to send back the women seized by Bin Juma, to show the Babemba that he disapproved of the act and was willing to make peace, but this was too humiliating; I added that their price as slaves was four barrels of gunpowder, or one hundred and sixty dollars, while slaves lawfully bought would have cost him only eight or ten yards of calico each. At the conclusion of Mpamari's speech the four barrels of gunpowder were exhibited, and so was the Koran, to impress them (Muabo's people) with an idea of their great power.

November 28th, 29th.—It is proposed to go and force our way, if we can, to the north; but all feel that that would be a fine opportunity for the slaves to escape, and they would not be loath to embrace it: this makes it a serious matter, and the Koran is consulted at hours which are auspicious.

November 30th.—Messengers sent to Muabo to ask a path, or, in plain words, protection from him: Mpamari protests his innocence of the whole affair.

December 1st, 1868.—Muabo's people over again; would fain send them to make peace with Chapi!

December 2d.—The detention is excessively vexatious to me. Muabo sent three slaves as offers of peace—a fine self-imposed, but he is on our south side, and we wish to go north.

December 3d.—A party went to-day to clear the way to the north, but were warmly received by Babemba with arrows: they came back with one woman captured, and they say that they killed one man: one of themselves is wounded, and many others in danger: others who went east were shot at, and wounded too.

December 4th.—A party went east, and were fain to flee from the Babemba; the same thing occurred on our west, and to-day

(5th) all were called to strengthen the stockade for fear that the enemy may enter uninvited. The slaves would certainly flee, and small blame to them though they did. Mpamari proposed to go off north by night; but his people objected, as even a child crying would arouse the Babemba, and reveal the flight; so finally he sent off to ask Syde what he ought to do—whether to retire by day or by night; probably entreating Syde to come and protect him.

A sort of idol is found in every village in this part; it is of wood, and represents the features, markings, and fashion of the hair of the inhabitants: some have little huts built for them, others are in common houses. The Babemba call them *Nkisi* ("San-can" of the Arabs): the people of Rua name one *Kalubi*, the plural *Tulubi*; and they present pombe, flour, bhang, tobacco, and light a fire for them to smoke by. They represent the departed father or mother, and it is supposed that they are pleased with the offerings made to their representatives, but all deny that they pray to them. Casembe has very many of these nkisi: one, with long hair, and named *Motombo*, is carried in front when he takes the field; names of dead chiefs are sometimes given to them. I have not met with any one intelligent enough to explain if prayers are ever made to any one. The Arabs, who know their language, say they have no prayers, and think that at death there is an end of the whole man, but other things lead me to believe this is erroneous. Slaves laugh at their countrymen, in imitation of their masters, and will not reveal their real thoughts. One said that they believed in two Superior Beings—Réza above, who kills people, and Réza below, who carries them away after death.

December 6th.—Ten of Syde bin Habib's people came over, bringing a letter, the contents of which neither Mpamari nor Mohamad care to reveal. Some think, with great probability, that he asks, "Why did you begin a war if you wanted to leave so soon? Did you not know that the country people would take advantage of your march, encumbered as you will be by women and slaves?" Mohamad Bogharib called me to ask what advice I could give him, as all his own advice, and devices too, had been lost, or were useless, and he did not know what to do. The Banyamwezi threatened to go off by night and leave him, as they are incensed against the Babemba, and offended because the Arabs do not aid them in wreaking their vengeance upon them.

I took care not to give any advice, but said if I had been or was in his place, I would have sent, or would send back, Bin

Juma's captives to show that I disapproved of his act—the first in the war—and was willing to make peace with Chapi. He said that he did not know that Bin Juma would capture these people; that Bin Juma had met some natives with fish, and took ten by force; that the natives, in revenge, caught three Banyamwezi slaves, and Bin Juma then gave one slave to them as a fine, but Mohamad did not know of this affair either. I am of opinion, however, that he was fully aware of both matters, and Mpmari's caracoling showed that he knew it all, though now he denies it.

Bin Juma is a long, thin, lanky Suaheli, six feet two high, with a hooked nose and large lips. I told Mohamad that if he were to go with us to Manyéma, the whole party would be cut off. He came here, bought a slave-boy, and allowed him to escape; then browbeat Chapi's man about him (and, he says, three others); and caught ten in lieu of him, of which Mohamad restored six: this was the origin of the war. Now that we are in the middle of it, I must do as Mohamad does in going off either by day or by night. It is unreasonable to ask my advice now, but it is felt that they have very unjustifiably placed me in a false position, and they fear that Syed Majid will impute blame to them; meanwhile Syde bin Habib sent a private message to me to come with his men to him, and leave this party.

I perceive that the plan now is to try and clear our way of Chapi, and then march; but I am so thoroughly disgusted with this slave-war, that I think of running the risk of attack by the country people, and go off to-morrow without Mohamad Bogharib, though I like him much more than I do Mpmari or Syde bin Habib. It is too glaring hypocrisy to go to the Koran for guidance while the stolen women, girls, and fish are in Bin Juma's hands.

December 8th, 9th.—I had to wait for the Banyamwezi preparing food: Mohamad has no authority over them, or indeed over any one else. Two Babemba men came in and said that they had given up fighting, and begged for their wives, who had been captured by Syde's people on their way here. This reasonable request was refused at first, but better counsels prevailed, and they were willing to give something to appease the anger of the enemy, and sent back six captives, two of whom were the wives prayed for.

[At last he makes a start, on the 11th of December, with the Arabs, who are bound eastward for Ujiji. It is a motley group,

composed of Mohamad and his friends, a gang of Unyamwezi hangers-on, and strings of wretched slaves yoked together in their heavy slave-sticks. Some carry ivory, others copper, or food for the march, while hope and fear, misery and villainy, may be read off on the various faces that pass in line out of this country, like a serpent dragging its accursed folds away from the victim it has paralyzed with its fangs.]

December 11th.—We marched four hours unmolested by the natives, built a fence, and next day crossed the Lokinda River and its feeder, the Mookosi: here the people belonged to Chisabi, who had not joined the other Babemba. We go between two ranges of tree-covered mountains, which are continuations of those on each side of Moero.

December 12th.—The tiresome tale of slaves running away was repeated again last night by two of Mpamari's making off, though in the yoke, and they had been with him from boyhood. Not one good-looking slave-woman is now left of Mohamad Bogharib's fresh slaves: all the pretty ones obtain favor by their address, beg to be unyoked, and then escape. Four hours brought us to many villages of Chisabi and the camp of Syde bin Habib, in the middle of a set-in rain, which marred the demonstration at meeting with his relative, Mpamari; but the women braved it through, wet to the skin, and danced and lullilooed with "draigled" petticoats with a zeal worthy of a better cause, as the "penny-a-liners" say. It is the custom for the trader who receives visitors to slaughter goats, and feed all his guests for at least two days, nor was Syde wanting in this hospitality; though, the set-in rain continuing, we did not enjoy it as in fine weather.

December 14th.—Cotton-grass and brackens all over the country show the great humidity of Marungu. Rain daily; but this is not the great rain which falls when the sun comes back south over our heads.

December 15th.—March two hours only to the range of Tamba. A pretty little light-gray owl, called "nkwékwé," was killed by a native as food: a black ring round its face and its black ears gave it all the appearance of a cat, whose habits it follows.

December 16th–18th.—A brother of Syde bin Habib died last night: I had made up my mind to leave the whole party, but Syde said that Chisabi was not to be trusted, and the death of his brother having happened, it would not be respectful to leave him to bury his dead alone. Six of his slaves fled during the night—one, the keeper of the others. A Mobemba man, who had been to the coast twice with him, is said to have wished a

woman who was in the chain, so he loosed five out, and took her off; the others made clean heels of it, and, now that the grass is long and green, no one can trace their course.

Syde told me that the slaves would not have detained him, but his brother's death did. We buried the youth, who has been ill three months. Mpmari descended into the grave with four others. A broad cloth was held over them horizontally, and a little fluctuation made, as if to fan those who were depositing the body in the side excavation made at the bottom: when they had finished they pulled in earth, and all shoved it toward them till the grave was level: Mullam then came and poured a little water into and over the grave, mumbled a few prayers, at which Mpmari said aloud to me, "Mullam does not let his voice be heard;" and Mullam smiled to me, as if to say, "Loud enough for all I shall get." During the ceremony the women were all wailing loudly. We went to the usual sitting-place, and shook hands with Syde, as if receiving him back again into the company of the living.

Syde told me previously to this event that he had fought the people who killed his elder brother Salem bin Habib, and would continue to fight them till all their country was spoiled and a desolation: there is no forgiveness with Moslems for bloodshed. He killed many, and took many slaves, ivory, and copper: his tusks number over two hundred, many of large size.

December 19th, 20th.—To Chisabi's village stockade, on the left bank of the Lofunso, which flows in a marshy valley three miles broad. Eight of Mohamad Bogharib's slaves fled by night, one with his gun and wife: a large party went in search, but saw nothing of them.

To-day an elephant was killed, and they sent for the meat, but Chisabi ordered the men to let his meat alone: experience at Kabwabwata said, "Take the gentle course;" so two fathoms of calico and two hoes were sent to propitiate the chief. Chisabi then demanded half the meat and one tusk: the meat was given, but the tusk was mildly refused: he is but a youth, and this is only the act of his counselors. It was replied that Casembe, Chikumbi, Nsama, Mereré, made no demand at all. His counselors have probably heard of the Portuguese self-imposed law, and wish to introduce it here, but both tusks were secured.

December 22d.—We crossed the Lofunso River, wading three branches, the first of forty-seven yards, then the river itself, fifty yards, and neck-deep to men and women of ordinary size. Two were swept away and drowned; other two were rescued by men

leaping in and saving them, one of whom was my man Susi. A crocodile bit one person badly, but was struck and driven off. Two slaves escaped by night; a woman loosed her husband's yoke from the tree, and got clear off.

December 24th.—Five sick people detain us to-day: some can not walk from febleness and purging, brought on by sleeping on the damp ground without clothes.

Syde bin Habib reports a peculiar breed of goats in Rua, remarkably short in the legs; so much so that they can not travel far: they give much milk, and become very fat, but the meat is indifferent. Gold is found at Katanga in the pool of a water-fall only: it probably comes from the rocks above this. His account of the Lofu, or, as he says, West Lualaba, is identical with that of his cousin, Syde bin Omar: it flows north, but west of Lufira, into the Lake of Kinkonza, so named after the chief. The East Lualaba becomes very large, often as much as six or eight miles broad, with many inhabited islands, the people of which, being safe from invasion, are consequently rapacious and dishonest, and their chiefs, Moengé and Nyamakunda, are equally lawless. A hunter belonging to Syde, named Kabwebwa, gave much information gleaned during his hunting trips; for instance, the Lufira has nine feeders of large size; and one, the Lekulwé, has also nine feeders; another, the Kisungu, is covered with "tikatika," by which the people cross it, though it bends under their weight; he also ascribes the origin of the Lufira and the Lualaba West, or Lofu, with the Liambai to one large earthen mound, which he calls "segulo," or an ant-hill!

December 25th.—Christmas-day. We can buy nothing except the very coarsest food—not a goat or fowl—while Syde, having plenty of copper, can get all the luxuries. We marched past Mount Katanga, leaving it on our left, to the River Kapéta, and slaughtered a favorite kid to make a Christmas dinner. A trading-party came up from Ujiji: they said that we were ten camps from Tanganyika. They gave an erroneous report that a steamer with a boat in tow was on Lake Chowambé—an English one, too, with plenty of cloth and beads on board. A letter had come from Abdullah bin Salem, Moslem missionary at Mtésa's, to Ujiji three months ago with this news.

December 26th.—We marched up an ascent two hours and a half, and got on to the top of one of the mountain ridges, which generally run north and south. Three hours along this level top brought us to the Kibawé River, a roaring rivulet beside villages. There were no people on the height over which we came, though

the country is very fine—green and gay with varying shades of that color. We passed through patches of brackens five feet high and gingers in flower, and were in a damp cloud all day. Now and then a drizzle falls in these parts, but it keeps all damp only, and does not show in the rain-gauge. Neither sun nor stars appear.

December 27th, 28th.—Remain on Sunday, then march, and cross five rivulets about four yards wide and knee-deep, going to the Lofunso. The grass now begins to cover and hide the paths: its growth is very rapid: blobs of water lie on the leaves all day, and keep the feet constantly wet by falling, as we pass.

December 29th.—We kept well on the ridge between two ranges of hills; then went down, and found a partially burned native stockade, and lodged in it: the fires of the Ujiji party had set the huts on fire after the party left. We are in the Itandé district, at the Nswiba River.

December 30th.—We now went due east, and made a good deal of easting too from Mount Katanga, on the Lofunso, and crossed the River Lokivwa, twelve yards wide, and very deep, with villages all about. We ascended much as we went east. Very high mountains appeared on the north-west. The woods dark-green, with large patches of a paler hue.

December 31st.—We reached the Lofuko yesterday in a pelting rain. Not knowing that the camp with huts was near, I stopped and put on a burnoose, got wet, and had no dry clothes. Remain to-day to buy food. Clouds cover all the sky from north-west. The river, thirty yards wide, goes to Tanganyika east of this. Scenery very lovely.

CHAPTER XIV.

Bad beginning of the New Year.—Dangerous Illness.—Kindness of Arabs.—Complete Helplessness.—Arrive at Tanganyika.—The Doctor is conveyed in Canoes.—Kasanga Islet.—Cochin-China Fowls.—Reaches Ujiji.—Receives some Stores.—Plundering Hands.—Slow Recovery.—Writes Dispatches.—Refusal of Arabs to take Letters.—Thani bin Suellim.—A Den of Slavers.—Puzzling Current in Lake Tanganyika.—Letters sent off at last.—Contemplates visiting the Manyema.—Arab Depredations.—Starts for new Explorations in Manyema, July 12th, 1869.—Voyage on the Lake.—Kabogo East.—Crosses Tanganyika.—Evil Effects of last Illness.—Elephant-hunter's Superstition.—Dugumbé.—The Lualaba reaches the Manyema.—Sons of Moenckuss.—Sokos first heard of.—Manyema Customs.—Illness.

[THE new year opened badly enough ; and from letters he wrote subsequently, concerning the illness which now attacked him, we gather that it left evils behind from which he never quite recovered. The following entries were made after he regained sufficient strength, but we see how short they necessarily were, and what labor it was to make the jottings which relate to his progress toward the western shore of Lake Tanganyika. He was not able at any time during this seizure to continue the minute maps of the country in his pocket-books, which for the first time fail here.]

January 1st, 1869.—I HAVE been wet times without number, but the wetting of yesterday was once too often : I felt very ill, but fearing that the Lofuko might flood, I resolved to cross it. Cold up to the waist, which made me worse, but I went on for two and a half hours east.

January 3d.—I marched one hour, but found I was too ill to go farther. Moving is always good in fever ; now I had a pain in the chest, and rust of iron sputa : my lungs, my strongest part, were thus affected. We crossed a rill and built sheds, but I lost count of the days of the week and month after this. Very ill all over.

About January 7th.—Can not walk : Pneumonia of right lung, and I cough all day and all night : sputa rust of iron and bloody : distressing weakness. Ideas flow through the mind with great rapidity and vividness, in groups of twos and threes : if I look at any piece of wood, the bark seems covered over with figures and faces of men, and they remain, though I look away and turn to

the same spot again. I saw myself lying dead in the way to Ujiji, and all the letters I expected there useless. When I think of my children and friends, the lines ring through my head perpetually :

“I shall look into your faces,
And listen to what you say,
And be often very near you
When you think I'm far away.”

Mohamad Bogharib came up, and I have got a cupper, who cupped my chest.

January 8th, 9th.—Mohamad Bogharib offered to carry me. I am so weak I can scarcely speak. We are in Marungu proper now—a pretty but steeply-undulating country. This is the first time in my life I have been carried in illness, but I can not raise myself to the sitting posture. No food except a little gruel. Great distress in coughing all night long; feet swelled, and sore. I am carried four hours each day on a kitanda, or frame, like a cot; carried eight hours one day. Then sleep in a deep ravine. Next day six hours, over volcanic tufa—very rough. We seem near the brim of Tanganyika. Sixteen days of illness. May be 23d of January; it is the 5th of the lunar month. Country very undulating; it is perpetually up and down. Soil red, and rich knolls of every size and form. Trees few. Erythrinæ abound; so do elephants. Carried eight hours yesterday to a chief's village. Small sharp thorns hurt the men's feet, and so does the roughness of the ground. Though there is so much slope, water does not run quickly off Marungu. A compact mountain-range flanks the undulating country through which we passed, and may stop the water flowing. Mohamad Bogharib is very kind to me in my extreme weakness; but carriage is painful: head down and feet up alternates with feet down and head up; jolted up and down and sideways—changing shoulders involves a toss from one side to the other of the kitanda. The sun is vertical, blistering any part of the skin exposed, and I try to shelter my face and head as well as I can with a bunch of leaves, but it is dreadfully fatiguing in my weakness.

I had a severe relapse after a very hot day. Mohamad gave me medicines; one was a sharp purgative, the others intended for the cure of the cough.

February 14th, 1869.—Arrived at Tanganyika. Parra is the name of the land at the confluence of the River Lofuko: Syde bin Habib had two or three large canoes at this place. Our beads were nearly done, so I sent to Syde to say that all the

Arabs had served me except himself. Thani bin Suallim, by his letter, was anxious to send a canoe as soon as I reached the Lake, and the only service I wanted of Syde was to inform Thani, by one of his canoes, that I was here very ill, and if I did not get to Ujji to get proper food and medicine I should die: Thani would send a canoe as soon as he knew of my arrival, I was sure. He replied that he too would serve me, and sent some flour and two fowls: he would come in two days and see what he could do as to canoes.

February 15th.—The cough and chest-pain diminished, and I feel thankful: my body is greatly emaciated. Syde came to-day, and is favorable to sending me up to Ujji. Thanks to the Great Father in heaven.

February 24th.—We had remarkably little rain these two months.

February 25th.—I extracted twenty *funyés*, an insect like a maggot, whose eggs had been inserted on my having been put into an old house infested by them: as they enlarge they stir about, and impart a stinging sensation; if disturbed, the head is drawn in a little. When a poultice is put on they seem obliged to come out, possibly from want of air: they can be pressed out, but the large pimple in which they live is painful: they were chiefly in my limbs.

February 26th.—Embark, and sleep at Katonga, after seven hours' paddling.

February 27th.—Went one hour and three-quarters to Bondo, or Thembwé, to buy food. Shore very rough, like shores near Caprera, but here all is covered with vegetation. We were to cross to Kabogo, a large mass of mountains on the eastern side, but the wind was too high.

February 28th.—Syde sent food back to his slaves.

March 2d, 1869.—Waves still high, so we got off only on the 3d, at half-past 1 A.M., six hours and a half, and came to M. Bougharib, who cooked bountifully.

March 6th.—5 P.M. Off to Toloka Bay—three hours; left at 6 A.M., and came, in four hours, to Uguha, which is on the west side of Tanganyika.

March 7th.—Left at 6 P.M., and went on till two canoes ran on rocks in the way to Kasanga Islet. Rounded a point of land, and made for Kasanga with a storm in our teeth; fourteen hours in all. We were received by a young Arab Muscat, who dined us sumptuously at noon. There are seventeen islets in the Kasanga group.

March 8th.—On Kasanga Islet. Cochin-china fowls* and Muscovy ducks appear, and plenty of a small milkless breed of goats. Tanganyika has many deep bays, running in four or five miles: they are choked up with aquatic vegetation, through which canoes can scarcely be propelled. When the bay has a small rivulet at its head the water in the bay is decidedly brackish, though the rivulet be fresh: it made the Zanzibar people remark on the Lake water, "It is like that we get near the sea-shore—a little salt;" but as soon as we get out of the shut-in bay, or lagoon, into the Lake proper, the water is quite sweet, and shows that a current flows through the middle of the Lake lengthways.

Patience was never more needed than now: I am near Ujiji, but the slaves who paddle are tired, and no wonder. They keep up a roaring song all through their work night and day. I expect to get medicine, food, and milk at Ujiji, but dawdle and do nothing. I have a good appetite, and sleep well; these are the favorable symptoms; but am dreadfully thin, bowels irregular, and I have no medicine. Sputa increases; hope to hold out to Ujiji. Cough worse. Hope to go to-morrow.

March 9th.—The whydah birds have at present light breasts and dark necks. Zahor is the name of our young Arab host.

March 11th.—Go over to Kibizé Islet, one hour and a half from Kasanga. Great care is taken not to encounter foul weather: we go a little way, then wait for fair wind in crossing to east side of Lake.

March 12th.—People of Kibizé dress like those in Rua, with cloth made of the muabé, or wild-date leaves; the same is used in Madagascar for the "lamba."† Their hair is collected up to the top of the head.

From Kibizé Islet to Kabogo River, on east side of Lake, ten hours: sleep there. Syde slipped past us at night, but we made up to him in four hours next morning.

March 13th.—At Rombolé: we sleep, then on.

[At last he reached the great Arab settlement at Ujiji, on the eastern shore of Tanganyika. It was his first visit, but he had arranged that supplies should be forwarded thither by caravans bound inland from Zanzibar. Most unfortunately, his goods were made away with in all directions, not only on this, but on several other occasions. The disappointment to a man shatter-

* On showing Chuma and Susi some immense Cochin-China fowls at a poultry show, they said that they were not larger than those which they saw when with Dr. Livingstone on these islands. Muscovy ducks abound throughout Central Africa.—ED.

† The natural dress of the Malagash.

ed in health, and craving for letters and stores, must have been severe indeed.]

March 14th.—Go past Malagarazi River, and reach Ujiji in three hours and a half. Found Haji Thani's agent in charge of my remaining goods. Medicines, wine, and cheese had been left at Unyanyembé, thirteen days east of this. Milk not to be had, as the cows had not calved; but a present of Assam tea from Mr. Black, the inspector of the Peninsular and Oriental Company's affairs, had come from Calcutta, besides my own coffee and a little sugar. I bought butter (two large pots are sold for two fathoms of blue calico), and four-year-old flour, with which we made bread. I found great benefit from the tea and coffee, and still more from flannel to the skin.

March 15th.—Took account of all the goods left by the plunderer; sixty-two out of eighty pieces of cloth (each of twenty-four yards) were stolen, and most of my best beads. The road to Unyembé* is blocked up by a Mazitu or Watuta war, so I must wait till the governor there gets an opportunity to send them. The Musa sent with the buffaloes is a genuine specimen of the ill-conditioned English-hating Arab. I was accosted, on arriving; by, "You must give me five dollars a month for all my time;" this though he had brought nothing—the buffaloes all died—and did nothing but receive stolen goods. I tried to make use of him to go a mile every second day for milk, but he shammed sickness so often on that day I had to get another to go; then he made a regular practice of coming into my house, watching what my two attendants were doing, and going about the village with distorted statements against them.

I clothed him, but he tried to make bad blood between the respectable Arab who supplied me with milk and myself, telling him that I abused him, and then he would come back, saying that he abused me! I can account for his conduct only by attributing it to that which we call ill-conditioned: I had to expel him from the house.

I repaired a house to keep out the rain, and on the 23d moved into it. I gave our Kasanga host a cloth and blanket: he is ill of pneumonia of both lungs.

March 28th.—Flannel to the skin and tea very beneficial in the cure of my disease; my cough has ceased, and I walk half a mile. I am writing letters for home.

* The same as Unyanyembé, the half-way settlement on the great caravan road from the coast to the interior.

April 8th, 1869.—Visited Moené Mokaia, who sent me two fowls and rice; gave him two cloths. He added a sheep.

April 13th.—Employed Suleiman to write notes to the Governor of Unyembé, Syde bin Salem Burashid, to make inquiries about the theft of my goods, as I meant to apply to Syed Majid, and wished to speak truly about his man Musa bin Salem, the chief depredator.

Wrote also to Thani for boat and crew to go down Tanganika.

Syde bin Habib refused to allow his men to carry my letters to the coast, as he suspected that I would write about his doings in Rua.

April 27th.—Syde had three canoes smashed in coming up past Thembwé; the wind and waves drove them on the rocks, and two were totally destroyed: they are heavy, unmanageable craft, and at the mercy of any storm if they can not get into a shut bay, behind the reeds and aquatic vegetation. One of the wrecks is said to have been worth two hundred dollars (£40).

The season called Masika commenced this month with the usual rolling thunder, and more rain than in the month preceding.

I have been busy writing letters home, and finished forty-two, which in some measure will make up for my long silence. The Ujjians are unwilling to carry my letters, because, they say, Syed Majid will order the bearer to return with others: he may say, "You know where he is, go back to him;" but I suspect they fear my exposure of their ways more than any thing else.*

May 16th, 1869.—Thani bin Suellim sent me a note yesterday to say that he would be here in two days, or say three; he seems the most active of the Ujjians, and I trust will help me to get a canoe and men.

The malachite at Katañga is loosened by fire, then dug out of four hills: four manehs of the ore yield one maneh of copper; but those who cultivate the soil get more wealth than those who mine the copper.

[No change of purpose was allowed to grow out of sickness and disappointment. Here and there, as in the words written on the next day, we find Livingstone again with his back turned to the coast and gazing toward the land of the Manyema and the great rivers reported there.]

* These letters must have been destroyed purposely by the Arabs, for they never arrived at Zanzibar.—Ed.

May 17th.—Syde bin Habib arrived to-day with his cargo of copper and slaves. I have to change house again, and wish I were away, now that I am getting stronger. Attendants arrive from Parra or Mparra.

[The old slave-dealer, whom he met at Casembe's, and who seems to have been set at liberty through Livingstone's instrumentality, arrives at Ujiji at last.]

May 18th.—Mohamad bin Saleh arrived to-day. He left this when comparatively young, and is now well advanced in years.

The Bakatala at Lualaba West killed Salem bin Habib. *Mem.*—Keep clear of them. Makwamba is one of the chiefs of the rock-dwellers, Ngulu is another, and Masika-Kitobwé on to Baluba. Sef attacked Kilolo N'tambwé.

May 19th.—The emancipation of our West Indian slaves was the work of but a small number of the people of England—the philanthropists and all the more advanced thinkers of the age. Numerically they were a very small minority of the population, and powerful only from the superior abilities of the leading men, and from having the right, the true, and just on their side. Of the rest of the population an immense number were the indifferent, who had no sympathies to spare for any beyond their own fireside circles. In the course of time sensation writers came up on the surface of society, and by way of originality they condemned almost every measure and person of the past. "Emancipation was a mistake;" and these fast writers drew along with them a large body, who would fain be slave-holders themselves. We must never lose sight of the fact that, though the majority perhaps are on the side of freedom, large numbers of Englishmen are not slave-holders only because the law forbids the practice. In this proclivity we see a great part of the reason of the frantic sympathy of thousands with the rebels in the great Black war in America. It is true that we do sympathize with brave men, though we may not approve of the objects for which they fight. We admired Stonewall Jackson as a modern type of Cromwell's Ironsides; and we praised Lee for his generalship, which, after all, was chiefly conspicuous by the absence of commanding abilities in his opponents; but unquestionably there existed, besides, an eager desire that slavocracy might prosper, and the Negro go to the wall. The would-be slave-holders showed their leanings unmistakably in reference to the Jamaica outbreak; and many a would-be Colonel Hobbs, in lack of revolvers, dipped his pen in gall and railed against all niggers who could not be made

slaves. We wonder what they thought of their hero, when informed that, for very shame at what he had done and written, he had rushed unbidden out of the world.

May 26th.—Thani bin Suellim came from Unyanyembé on the 20th. He is a slave who has risen to freedom and influence; he has a disagreeable outward squint of the right eye, teeth protruding from the averted lips, is light-colored, and of the nervous type of African. He brought two light boxes from Unyembé, and charged six fathoms for one and eight fathoms for the other, though the carriage of both had been paid for at Zanzibar. When I paid him he tried to steal, and succeeded with one cloth by slipping it into the hands of a slave. I gave him two cloths and a double blanket as a present. He discovered afterward, what he knew before, that all had been injured by the wet on the way here, and sent two back openly, which all saw to be an insult. He asked a little coffee, and I gave a plateful; and he even sent again for more coffee after I had seen reason to resent his sending back my present. I replied, "He won't send coffee back, for I shall give him none." In revenge he sends round to warn all the Ujijians against taking my letters to the coast: this is in accordance with their previous conduct, for, like the Kilwa people on the road to Nyassa, they have refused to carry my correspondence.

This is a den of the worst kind of slave-traders; those whom I met in Urungu and Itawa were gentlemen slavers: the Ujiji slavers, like the Kilwa and Portuguese, are the vilest of the vile. It is not a trade, but a system of consecutive murders; they go to plunder and kidnap, and every trading-trip is nothing but a foray. Moené Mokaia, the head man of this place, sent canoes through to Nzigé; and his people, feeling their prowess among men ignorant of guns, made a regular assault, but were repulsed, and the whole, twenty in number, were killed. Moené Mokaia is now negotiating with Syde bin Habib to go and revenge this for so much ivory, and all he can get besides. Syde, by trying to revenge the death of Salem bin Habib, his brother, on the Bakatala, has blocked up one part of the country against me, and will probably block Nzigé; for I can not get a message sent to Chowambé by any one, and may have to go to Karagwé on foot, and then from Rumanyika down to this water.

[In reference to the above, we may add that there is a vocabulary of Masai words at the end of a memorandum-book. Livingstone compiled this with the idea that it would prove useful on his way toward the coast, should he eventually pass through the

Masai country. No doubt some of the Arabs or their slaves knew the language, and assisted him at his work.]

May 29th.—Many people went off to Unyembé, and their houses were untenanted; I wished one, as I was in a lean-to of Zahor's, but the two head men tried to secure the rent for themselves, and were defeated by Mohamad bin Saleh. I took my packet of letters to Thani, and gave two cloths and four bunches of beads to the man who was to take them to Unyanyembé; an hour afterward, letters, cloths, and beads were returned: Thani said he was afraid of English letters; he did not know what was inside. I had sewed them up in a piece of canvas; that was suspicious, and he would call all the great men of Ujiji and ask them if it would be safe to take them; if they assented, he would call for the letters; if not, he would not send them. I told Mohamad bin Saleh, and he said to Thani that he and I were men of the Government, and orders had come from Syed Majid to treat me with all respect: was this conduct respectful? Thani then sent for the packet; but whether it will reach Zanzibar I am doubtful. I gave the rent to the owner of the house, and went into it on May 31st. They are nearly all miserable Suaheli at Ujiji, and have neither the manners nor the sense of Arabs.

[We see, in the next few lines, how satisfied Livingstone was concerning the current in the Lake: he almost wishes to call Tanganyika a river. Here, then, is a problem left for the future explorer to determine. Although the doctor proved by experiments, during his lengthy stay at Ujiji, that the set is toward the north, his two men get over the difficulty thus: "If you blow upon the surface of a basin of water on one side, you will cause the water at last to revolve round and round; so with Tanganyika, the prevailing winds produce a similar circulation." They feel certain there is no outlet, because at one time or another they virtually completed the survey of the coast-line, and listened to native testimony besides. How the phenomenon of sweet water is to be accounted for we do not pretend to say. The reader will see farther on that Livingstone grapples with the difficulty which this lake affords, and propounds an exceedingly clever theory.]

Tanganyika has encroached on the Ujiji side upward of a mile, and the bank, which was, in the memory of men now living, garden ground, is covered with about two fathoms of water. In this Tanganyika resembles most other rivers in this country, as the Upper Zambesi, for instance, which in the Barotsé country

has been wearing eastward for the last thirty years: this lake, or river, has worn eastward too.

June 1st, 1869.—I am thankful to feel getting strong again, and wish to go down Tanganyika, but can not get men: two months must elapse ere we can face the long grass and superabundant water in the way to Manyuema.

The green scum which forms on still water in this country is of vegetable origin—confervæ. When the rains fall they swell the lagoons, and the scum is swept into the Lake; here it is borne along by the current from south to north, and arranged in long lines, which bend from side to side as the water flows, but always north-north-west or north-north-east, and not driven, as here, by the winds, as plants floating above the level of the water would be.



Lines of green Scum.

June 7th.—It is remarkable that all the Ujiji Arabs who have any opinion on the subject believe that all the water in the north, and all the water in the south, too, flows into Tanganyika, but where it then goes they have no conjecture. They assert, as a matter of fact, that Tanganyika, Usigé water, and Loanda are one and the same piece of river.

Thani, on being applied to for men and a canoe to take me down this line of drainage, consented, but let me know that his people would go no farther than Uvira, and then return. He subsequently said Usigé, but I wished to know what I was to do when left at the very point where I should be most in need. He replied, in his silly way, "My people are afraid; they won't go farther; get country people," etc. Moenegheré sent men to Loanda to force a passage through, but his people were repulsed, and twenty killed.

Three men came yesterday from Mokamba, the greatest chief in Usigé, with four tusks as a present to his friend Moenegheré, and asking for canoes to be sent down to the end of Urundi country to bring butter and other things, which the three men could not bring: this seems an opening, for Mokamba being Moenegheré's friend, I shall prefer paying Moenegheré for a canoe to being dependent on Thani's skulkers. If the way beyond Mokamba is blocked up by the fatal skirmish referred to, I can go from Mokamba to Rumanyika, three or four or more days distant, and get guides from him to lead me back to the main river beyond Loanda, and by this plan only three days of the stream will be passed over unvisited. Thani would evidently like to receive the payment, but without securing to me the object for

which I pay. He is a poor thing, a slaveling: Syed Majid, Sheik Suleiman, and Korojé have all written to him, urging an assisting deportment in vain: I never see him but he begs something, and gives nothing: I suppose he expects me to beg from him. I shall be guided by Moenegheré.

I can not find any one who knows where the outflow of the unvisited Lake south-west of this goes; some think that it goes to the Western Ocean, or, I should say, the Congo. Mohamad Bogharib goes in a month to Manyuema, but if matters turn out as I wish, I may explore this Tanganyika line first. One who has been in Manyuema three times, and was of the first party that ever went there, says that the Manyuema are not cannibals, but a tribe west of them eats some parts of the bodies of those slain in war. Some people south of Moenékuss,* chief of Manyuema, build strong clay houses.

June 22d.—After listening to a great deal of talk, I have come to the conclusion that I had better not go with Moenegheré's people to Mokamba. I see that it is to be a mulcting, as in Spke's case: I am to give largely, though I am not thereby assured of getting down the river. They say, "You must give much, because you are a great man: Mokamba will say so," though Mokamba knows nothing about me! It is uncertain whether I can get down through by Loanda, and great risk would be run in going to those who cut off the party of Moenegheré; so I have come to the conclusion that it will be better for me to go to Manyuema about a fortnight hence, and, if possible, trace down the western arm of the Nile to the north—if this arm is indeed that of the Nile, and not of the Congo. Nobody here knows any thing about it, or, indeed, about the eastern or Tanganyika line either; they all confess that they have but one question in their minds in going anywhere; they ask for ivory, and for nothing else, and each trip ends as a foray. Moenegheré's last trip ended disastrously, twenty-six of his men being cut off; in extenuation, he says that it was not his war but Mokamba's: he wished to be allowed to go down through Loanda; and as the people in front of Mokamba and Usigé own his supremacy, he said, "Send your force with mine, and let us open the way;" so they went on land, and were killed. An attempt was made to induce Syde bin Habib to clear the way, and be paid in ivory; but Syde likes to battle with those who will soon run away, and leave the spoil to him.

* It is curious that this name occurs among the Zulu tribes south of the Zambesi, and, as it has no vowel at the end, appears to be of altogether foreign origin.—ED.

The Manyema are said to be friendly where they have not been attacked by Arabs. A great chief is reported as living on a large river flowing northward: I hope to make my way to him, and I feel exhilarated at the thought of getting among people not spoiled by contact with Arab traders. I would not hesitate to run the risk of getting through Loanda, the continuation of Usigé beyond Mokamba's, had blood not been shed so very recently there; but it would at present be a great danger, and to explore some sixty miles of the Tanganyika line only. If I return hither from Manyema, my goods and fresh men from Zanzibar will have arrived, and I shall be better able to judge as to the course to be pursued after that. Mokamba is about twenty miles beyond Uvira: the scene of Moenegheré's defeat is ten miles beyond Mokamba; so the unexplored part can not be over sixty miles, say thirty, if we take Baker's estimate of the southing of his water to be near the truth.

Salem or Palamotto told me that he was sent for by a head man near to this to fight his brother for him: he went and demanded prepayment; then the brother sent him three tusks to refrain: Salem took them, and came home. The Africans have had hard measures meted out to them in the world's history!

June 28th.—The current in Tanganyika is well marked when the lighter-colored water of a river flows in and does not at once mix: the Luishé at Ujiji is a good example; and it shows, by large light greenish patches on the surface, a current of nearly a mile an hour north. It begins to flow about February, and continues running north till November or December. Evaporation on three hundred miles of the south is then at its strongest, and water begins to flow gently south till arrested by the flood of the great rains there, which takes place in February and March. There is, it seems, a reflux for about three months in each year, flow and reflow being the effect of the rains and evaporation on a lacustrine river of some three hundred miles in length lying south of the equator. The flow northward I have myself observed, that again southward rests on native testimony; and it was elicited from the Arabs by pointing out the northern current: they attributed the southern current to the effect of the wind, which they say then blows south. Being cooled by the rains, it comes south into the hot valley of this great riverein lake, or lacustrine river.

In going to Moenékuss, the paramount chief of the Manyema, forty days are required. The head men of trading-parties remain with this chief (who is said by all to be a very good man), and send their people out in all directions to trade. Moenemo-

gaia says that, in going due north from Moenékuss, they come to a large river, the Robumba, which flows into, and is the Luama, and that this again joins the Lualaba, which retains its name after flowing, with the Lufira and Lofu, into the still unvisited lake south-south-west of this: it goes thence due north, probably into Mr. Baker's part of the eastern branch of the Nile. When I have gone as far north along Lualaba as I can this year, I shall be able to judge as to the course I ought to take after receiving my goods and men from Zanzibar, and may the Highest direct me, so that I may finish creditably the work I have undertaken. I propose to start for Manyuema on the 3d of July.

The dagala, or nsipé, a small fish caught in great numbers in every flowing water, and very like white-bait, is said to emit its eggs by the mouth, and these immediately burst, and the young fish manages for itself. The dagala never becomes larger than two or three inches in length. Some, putrefied, are bitter, as if the bile were in them in a good quantity. I have eaten them in Lunda of a pungent bitter taste, probably arising from the food on which the fish feeds. Men say that they have seen the eggs kept in the sides of the mouth till ready to go off as independent fishes. The nghédé-dégé, a species of perch, and another, the ndusi, are said to do the same. The Arabs imagine that fish in general fall from the skies; but they except the shark, because they can see the young when it is cut open.

July 10th, 1869.—After a great deal of delay and trouble about a canoe, we got one from Habee for ten dotis, or forty yards of calico, and a doti, or four yards, to each of nine paddlers, to bring the vessel back. Thani and Zabor blamed me for not taking their canoes for nothing; but they took good care not to give them, but made vague offers, which meant, "We want much higher pay for our dhows than Arabs generally get:" they showed such an intention to fleece me that I was glad to get out of their power, and save the few goods I had. I went a few miles, when two strangers I had allowed to embark (from being under obligations to their masters) worked against each other: so I had to let one land, and but for his master would have dismissed the other. I had to send an apology to the landed man's master for politeness' sake.

[It is necessary to say a few words here, so unostentatiously does Livingstone introduce this new series of explorations to the reader. The Manyuema country, for which he set out on the 12th of July, 1869, was hitherto unknown. As we follow him, we shall see that in almost every respect both the face of the country and

the people differ from other regions lying nearer to the East Coast. It appears that the Arabs had an inkling of the vast quantities of ivory which might be procured there, and Livingstone went into the new field with the foremost of those hordes of Ujijian traders, who, in all probability, will eventually destroy tribe after tribe by slave-trading and pillage, as they have done in so many other regions.]

Off at 6 A.M., and passed the mouth of the Luishé, in Kibwé Bay: three hours and a half took us to Rombola or Lombola, where all the building wood of Ujiji is cut.

July 12th.—Left at 1.30 A.M., and pulled seven hours and a half to the left bank of the Malagarasi River. We can not go by day, because about 11 A.M. a south-west wind commences to blow, which the heavy canoes can not face; it often begins earlier or later, according to the phases of the moon. An east wind blows from sunrise till 10 or 11 A.M., and the south-west begins. The Malagarasi is of considerable size at its confluence, and has a large islet covered with eschinomena, or pith-hat material, growing in its way.

Were it not for the current, Tanganyika would be covered with green scum, now rolling away in miles of length and breadth to the north; it would also be salt, like its shut-in bays. The water has now fallen two feet perpendicularly. It took us twelve hours to ascend to the Malagarasi River from Ujiji, and only seven to go down that distance. Prodigious quantities of confervæ pass us day and night in slow, majestic flow. It is called shuaré. But for the current, Tanganyika would be covered with "tikatika" too, like Victoria Nyauza.

July 13th.—Off at 3.15 A.M., and in five hours reached Kabogo River; from this point the crossing is always accomplished: it is about thirty miles broad. Tried to get off at 6 P.M., but after two miles the south wind blew; and as it is a dangerous wind, and the usual one in storms, the men insisted on coming back, for the wind, having free scope along the entire southern length of Tanganyika, raises waves perilous to their heavy craft: after this the clouds cleared all away, and the wind died off too; the full moon shone brightly, and this is usually accompanied by calm weather here. Storms occur at new moon most frequently.

July 14th.—Sounded in dark water, opposite the high mountain Kabogo, three hundred and twenty-six fathoms; but my line broke in coming up, and we did not see the armed end of the sounding-lead with sand or mud on it: this is one thousand nine hundred and sixty-five feet.

People awaking in fright utter most unearthly yells, and they are joined in them by all who sleep near. The first imagines himself seized by a wild beast, the rest roar because they hear him doing it: this indicates the extreme of helpless terror.

July 15th.—After pulling all night, we arrived at some islands and cooked breakfast; then we went on to Kasengé Islet, on their south, and came up to Mohamad Bogharib, who had come from Tongwé, and intended to go to Manyema. We cross over to the main-land, that is, to the western shore of the Lake, about three hundred yards off, to begin our journey on the 21st. Lunars on 20th. Delay to prepare food for journey. Lunars again 22d.

A strong wind from the east to-day. A current sweeps round this islet Kiséngé from north-east to south-east, and carries trees and duck-weed at more than a mile an hour, in spite of the breeze blowing across it to the west. The wind blowing along the Lake either way, raises up water, and in a calm it returns off the shore. Sometimes it causes the current to go southward. Tanganyika narrows at Uvira or Vira, and goes out of sight among the mountains there; then it appears as a water-fall into the Lake of Quando, seen by Banyamwezi.

July 23d.—I gave a cloth to be kept for Kasanga, the chief of Kasengé, who has gone to fight with the people of Goma.

August 1st, 1869.—Mohamad killed a kid as a sort of sacrifice, and they pray to Hadrajee before eating it. The cookery is of their very best, and I always get a share. I tell them that I like the cookery, but not the prayers, and it is taken in good part.

August 2d.—We embarked from the islet, and got over to the main-land, and slept in a hooked-thorn copse, with a species of black-pepper plant, which we found near the top of Mount Zomba, in the Manganja country,* in our vicinity: it shows humidity of climate.

August 3d.—Marched three hours and a quarter south, along Tanganyika, in a very undulating country: very fatiguing, in my weakness. Passed many screw-palms, and slept at Lobamba village.

August 4th.—A relative of Kasanga engaged to act as our guide, so we remained waiting for him, and employed a Banyamwezi smith to make copper balls with some bars of that metal presented by Syde bin Habib. A lamb was stolen, and all declared that the deed must have been done by Banyamwezi. "At Guha people never steal;" and I believe this is true.

* In 1859.

August 7th.—The guide having arrived, we marched two hours and a quarter west, and crossed the River Logumba, about forty yards broad and knee-deep, with a rapid current between deep cut banks: it rises in the western Kabogo range, and flows about south-west into Tanganyika. Much dura, or *Holcus sorghum*, is cultivated on the rich alluvial soil on its banks by the Guha people.

August 8th.—West, through open forest; very undulating, and the path full of angular fragments of quartz. We see mountains in the distance.

August 9th, 10th.—Westward to Makhato's village, and met a company of natives beating a drum as they came near: this is the peace signal; if war is meant, the attack is quiet and stealthy. There are plenty of masuko-trees laden with fruit, but unripe. It is cold at night, but dry, and the people sleep with only a fence at their heads; but I have a shed built at every camp, as a protection for the loads, and sleep in it.

Any ascent, though gentle, makes me blow since the attack of pneumonia; if it is inclined to an angle of 45° , a hundred or a hundred and fifty yards make me stop to pant in distress.

August 11th.—Came to a village of Ba Rua, surrounded by hills of some two hundred feet above the plain; trees sparse.

August 12th, 13th.—At villages of Mekhéto. Guha people. Remain to buy and prepare food, and because many are sick.

August 16th.—West and by north through much forest, and reach Kalalibébé; buffalo killed.

August 17th.—To a high mountain, Golu or Gulu, and sleep at its base.

August 18th.—Cross two rills flowing into River Mgoluyé. Kagoya and Moishé flow into Lobumba.

August 19th.—To the River Lobumba, forty-five yards wide, thigh-deep, and rapid current. Logumba and Lobumba are both from Kabogo mounts: one goes into Tanganyika, and the other, or Lobumba, into, and is, the Luamo: prawns are found in this river. The country east of the Lobumba is called Lobanda, that west of it, Kitwa.

August 21st.—Went on to the River Loungwa, which has worn for itself a rut in new red sandstone twenty feet deep, and only three or four feet wide at the lips.

August 25th.—We rest because all are tired; traveling at this season is excessively fatiguing. It is very hot at even 10 A.M., and two and a half or three hours tires the strongest—carriers especially so: during the rains five hours would not have



GUHA HEAD-DRESSES.

fatigued so much as three do now. We are now on the same level as Tanganyika. The dense mass of black smoke rising from the burning grass and reeds on the Lobumba, or Robumba, obscures the sun, and very sensibly lowers the temperature of the sultriest day: it looks like the smoke in Martin's pictures. The Manyema arrows here are very small, and made of strong grass stalks, but poisoned; the large ones, for elephants and buffaloes, are poisoned also.

August 31st.—Course north-west, among palmyras and hyphené palms, and many villages swarming with people. Crossed Kibila, a hot fountain about 120°, to sleep at Kolokolo River, five yards wide, and knee-deep: midway we passed the River Kanzazala. On asking the name of a mountain on our right, I got three names for it—Kaloba, Chingedi, and Kikomba—a fair specimen of the superabundance of names in this country!

September 1st, 1869.—West, in flat forest, then cross Kishila River, and go on to Kundé's villages. The Katamba is a fine rivulet. Kundé is an old man, without dignity or honor: he came to beg, but offered nothing.

September 2d.—We remained at Katamba to hunt buffaloes and rest, as I am still weak. A young elephant was killed, and I got the heart: the Arabs do not eat it, but that part is nice if well cooked.

A Lunda slave, for whom I interceded to be freed of the yoke, ran away; and as he is near the Barna, his countrymen, he will be hidden. He told his plan to our guide, and asked to accompany him back to Tanganyika, but he is eager to deliver him up for a reward: all are eager to press each other down in the mire into which they are already sunk.

September 5th.—Kundé's people refused the tusks of an elephant killed by our hunter, asserting that they had killed it themselves with a hoe: they have no honor here as some have elsewhere.

September 7th.—West and north-west, through forest and immense fields of cassava, some three years old, with roots as thick as a stout man's leg.

September 8th.—Across five rivers and through many villages. The country is covered with ferns and gingers, and miles and miles of cassava. On to village of Karungamagao.

September 9th.—Rest again to shoot meat, as elephants and buffaloes are very abundant. The Suaheli think that adultery is an obstacle to success in killing this animal: no harm can happen to him who is faithful to his wife, and has the proper charms inserted under the skin of his forearms.

September 10th.—North and north-west, over four rivers, and past the village of Makala, to near that of Pyana-mosindé.

September 12th.—We had wandered, and now came back to our path on hilly ground. The days are sultry and smoking. We came to some villages of Pyana-mosindé; the population prodigiously large. A sword was left at the camp, and at once picked up: though the man was traced to a village, it was refused, till he accidentally cut his foot with it, and became afraid that worse would follow: elsewhere it would have been given up at once. Pyana-mosindé came out, and talked very sensibly.

September 13th.—Along toward the Moloni or Mononi; cross seven rills. The people seized three slaves who lagged behind, but hearing a gun fired at guinea-fowls, let them go. Route north.

September 14th.—Up and down hills perpetually. We went down into some deep dells, filled with gigantic trees, and I measured one twenty feet in circumference, and sixty or seventy feet high to the first branches; others seemed fit to be ship's spars. Large lichens covered many, and numerous new plants appeared on the ground.

September 15th.—Got clear of the mountains after an hour and a half, and then the vast valley of Mamba opened out before us; very beautiful, and much of it cleared of trees. Met Dugumbé carrying eighteen thousand pounds of ivory, purchased in this new field very cheaply, because no traders had ever gone into the country beyond Bambarré, or Moenékuss's district before. We were now in the large bend of the Lualaba, which is here much larger than at Mpwéto's, near Moero Lake. River Késingwé.

September 16th.—To Kasangangazi's. We now came to the first palm-oil-trees (*Elveis guineensis*) in our way since we left Tanganyika. They had evidently been planted at villages. Light-gray parrots, with red tails, also became common, whose name, kuss or koos, gives the chief his name, Moenékuss ("Lord of the Parrot"); but the Manyema pronunciation is Monanjoosé. Much reedy grass, fully half an inch in diameter in the stalk, on our route, and over the top of the range Moloni, which we ascended: the valleys are impassable.

September 17th.—Remain to buy food at Kasanga's, and rest the carriers. The country is full of palm-oil palms, and very beautiful. Our people are all afraid to go out of sight of the camp for necessary purposes, lest the Manyema should kill them. Here was the barrier to traders going north, for the very people

among whom we now are murdered any one carrying a tusk, till last year, when Moene-mokaia, or Katomba, got into friendship with Moenékuss, who protected his people, and always behaved in a generous, sensible manner. Dilongo, now a chief here, came to visit us: his elder brother died, and he was elected; he does not wash in consequence, and is very dirty.

Two buffaloes were killed yesterday. The people have their bodies tattooed with new and full moons, stars, crocodiles, and Egyptian gardens.

September 19th.—We crossed several rivulets three to twelve yards wide, and calf-deep. The mountain where we camped is called Sangomélabé.

September 20th.—Up to a broad range of high mountains of light gray granite; there are deep dells on the top filled with gigantic trees, and having running rills in them. Some trees appear with enormous roots—buttresses, in fact—like mangroves in the coast swamps, six feet high at the trunk, and flattened from side to side to about three inches in diameter. There are many villages dotted over the slopes which we climbed: one had been destroyed, and revealed the hard clay walls and square forms of Manyema houses. Our path lay partly along a ridge, with a deep valley on each side: one on the left had a valley filled with primeval forests, into which elephants, when wounded, escape completely. The forest was a dense mass, without a bit of ground to be seen, except a patch on the south-west. The bottom of this great valley was two thousand feet below us; then ranges of mountains, with villages on their bases, rose as far as they could reach. On our right there was another deep but narrow gorge, and mountains much higher than on our ridge close adjacent. Our ridge looked like a glacier, and it wound from side to side, and took us to the edge of deep precipices, first on the right, then on the left, till down below we came to the villages of Chief Monandenda. The houses here are all well filled with fire-wood on shelves, and each has a bed on a raised platform in an inner room.

The paths are very skillfully placed on the tops of the ridges of hills, and all gullies are avoided. If the highest level were not in general made the ground for passing through the country, the distances would at least be doubled, and the fatigue greatly increased. The paths seem to have been used for ages: they are worn deep on the heights; and in hollows a little mound rises on each side, formed by the feet tossing a little soil on one side.

September 21st.—Cross five or six rivulets, and as many villages, some burned and deserted, or inhabited. Very many people come running to see the strangers. Gigantic trees all about the villages. Arrive at Bamarré or Moenékuss.

About eighty hours of actual traveling, say at 2' per hour = say 160' or 140'. Westing from August 3d to September 21st. My strength increased as I persevered. From Tanganyika, west bank, say =

$$\begin{array}{r} 29^{\circ} 30' \text{ east} - 140' = 2^{\circ} 20', \\ \underline{2^{\circ} 20'} \\ 27^{\circ} 10' \text{ long.} \end{array}$$

chief village of Moenékuss.

Observations show a little lower altitude than Tanganyika.

September 22d.—Moenékuss died lately, and left his two sons to fill his place. Moenembagg is the elder of the two, and the most sensible, and the spokesman on all important occasions, but his younger brother, Moenemgoi, is the chief, the centre of authority. They showed symptoms of suspicion, and Mohamad performed the ceremony of mixing blood, which is simply making a small incision on the forearm of each person, and then mixing the bloods, and making declarations of friendship. Moenembagg said, "Your people must not steal; we never do," which is true: blood in a small quantity was then conveyed from one to the other by a fig-leaf. "No stealing of fowls or of men," said the chief: "Catch the thief and bring him to me; one who steals a person is a pig," said Mohamad. Stealing, however, began on our side, a slave purloining a fowl; so they had good reason to enjoin honesty on us! They think that we have come to kill them: we light on them as if from another world: no letters come to tell who we are, or what we want. We can not conceive their state of isolation and helplessness, with nothing to trust to but their charms and idols—both being bits of wood. I got a large beetle hung up before an idol in the idol house of a deserted and burned village: the guardian was there, but the village destroyed.

I presented the two brothers with two table-cloths, four bunches of beads, and one string of neck-beads: they were well satisfied.

A wood here, when burned, emits a horrid fecal smell, and one would think the camp polluted if one fire was made of it. I had a house built for me because the village huts are inconvenient, low in roof, and low door-ways: the men build them, and help to cultivate the soil; but the women have to keep them well

filled with firewood and supplied with water. They carry the wood, and almost every thing else, in large baskets, hung to the shoulders, like the Edinburgh fish-wives. A man made a long, loud prayer to Mulungu last night after dark for rain.

The sons of Moenékuss have but little of their father's power, but they try to behave to strangers as he did. All our people are in terror of the Manyéma, or Manyuema, man-eating fame. A woman's child had crept into a quiet corner of the hut to eat a banana; she could not find him, and at once concluded that the Manyuema had kidnaped him to eat him, and with a yell she ran through the camp and screamed at the top of her shrill voice, "Oh, the Manyuema have stolen my child to make meat of him! Oh, my child eaten—oh, oh!"

September 26th–28th.—A Lunda slave girl was sent off to be sold for a tusk, but the Manyuema do not want slaves, as we were told in Lunda, for they are generally thieves and otherwise bad characters. It is now clouded over and preparing for rain, when sun comes overhead. Small-pox comes every three or four years, and kills many of the people. A soko alive was believed to be a good charm for rain; so one was caught, and the captor had the ends of two fingers and toes bitten off. The soko, or gorilla, always tries to bite off these parts, and has been known to overpower a young man and leave him without the ends of fingers and toes. I saw the nest of one: it is a poor contrivance; no more architectural skill shown than in the nest of our Cushat dove.

September 29th.—I visited a hot fountain an hour west of our camp, which has five eyes; temperature 150° , slightly saline taste, and steam issues constantly. It is called Kasugwé Colambu. Earthquakes are well known, and to the Manyuema they seem to come from the east to west: pots rattle, and fowls cackle on these occasions.

October 2d, 1869.—A rhinoceros was shot, and party sent off to the River Luamo to buy ivory.

October 5th.—An elephant was killed, and the entire population went off to get meat, which was given freely at first; but after it was known how eagerly the Manyuema sought it, six or eight goats were demanded for a carcass, and given.

October 9th.—The rite of circumcision is general among all the Manyuema; it is performed on the young. If a head man's son is to be operated on, it is tried on a slave first: certain times of the year are unpropitious, as during a drought, for instance; but having by this experiment ascertained the proper time, they go

into the forest, beat drums, and feast as elsewhere: contrary to all African custom, they are not ashamed to speak about the rite, even before women.

Two very fine young men came to visit me to-day. After putting several preparatory inquiries as to where our country lay, etc., they asked whether people died with us, and where they went to after death. "Who kills them?" "Have you no charm (buanga) against death?" It is not necessary to answer such questions save in a land never visited by strangers. Both had the "organs of intelligence" largely developed. I told them that we prayed to the Great Father, Mulungu, and He hears us all: they thought this to be natural.



Catching Ants.

October 14th.—An elephant killed was of the small variety, and only five feet eight inches high at the withers. The forefoot was in circumference three feet nine inches, which doubled gives seven feet six inches; this shows a deviation from the usual rule, "twice round the forefoot=the height of the animal." Heart one foot and a half long; tusks six feet eight inches in length.

October 15th.—Fever better, and thankful. Very cold and rainy.

October 18th.—Our Hassani returned from Moené Kirumbo's; then one of Dugumbé's party (also called Hassani) seized ten goats and ten slaves before leaving, though great kindness had been shown: this is genuine Suaheli or nigger-Moslem tactics. Four of his people were killed in revenge.

A whole regiment of soldier-ants in my hut were put into a panic by a detachment of driver-ants, called sirafu. The chungu, or black soldiers, rushed out with their eggs and young, putting them down and running for more. A dozen sirafu pitched on one chungu, and killed him. The chungu made new quarters for themselves. When the white ants cast off their colony of winged emigrants, a canopy is erected like an umbrella over the ant-hill. As soon as the ants fly against the roof, they tumble down in a shower, and their wings instantly become detached from their bodies. They are then helpless, and are swept up in baskets to be fried, when they make a very palatable food.

October 24th, 25th.—Making copper rings, as these are highly prized by Manyema. Mohamad's tembé fell. It had been begun on an unlucky day, the 26th of the moon; and on another occasion, on the same day, he had fifty slaves swept away by a sudden flood of a dry river in the Obena country: they are great observers of lucky and unlucky days.

CHAPTER XV.

Prepares to explore River Lualaba.—Beauty of the Manyema Country.—Irritation at Conduct of Arabs.—Dugumbé's Ravages.—Hordes of Traders arrive.—Severe Fever.—Elephant Trap.—Sickness in Camp.—A good Samaritan.—Reaches Mamohela, and is prostrated.—Beneficial Effects of Nyumbo-plant.—Long Illness.—An Elephant of three Tusks.—All Men desert except Susi, Chuma, and Gardner.—Starts with these to Lualaba.—Arab assassinated by outraged Manyema.—Returns baffled to Mamohela.—Long and dreadful Suffering from ulcerated Feet.—Questionable Cannibalism.—Hears of four River Sources close together.—Resumé of Discoveries.—Contemporary Explorers.—The Soko.—Description of its Habits.—Dr. Livingstone feels himself failing.—Intrigues of Deserters.

November 1st, 1869.—BEING now well rested, I resolved to go west to Lualaba, and buy a canoe for its exploration. Our course was west and south-west, through a country surpassingly beautiful, mountainous, and villages perched on the talus of each great mass for the sake of quick drainage. The streets often run east and west, in order that the bright blazing sun may lick up the moisture quickly from off them. The dwelling-houses are generally in line, with public meeting-houses at each end, opposite the middle of the street: the roofs are low, but well thatched with a leaf resembling the banana leaf, but more tough; it seems from its fruit to be a species of euphorbia. The leaf-stack has a notch made in it of two or three inches lengthways, and this hooks on to the rafters, which are often of the leaf-stalks of palms, split up so as to be thin: the water runs quickly off this roof, and the walls, which are of well-beaten clay, are screened from the weather. Inside, the dwellings are clean and comfortable, and before the Arabs came bugs were unknown. As I have before observed, one may know where these people have come by the presence or absence of these nasty vermin. The human tick, which infests all Arab and Suaheli houses, is to the Manyema unknown.

In some cases, where the south-east rains are abundant, the Manyema place the back side of the houses to this quarter, and prolong the low roof down, so that the rain does not reach the walls. These clay walls stand for ages, and men often return to the villages they left in infancy, and build again the portions that many rains have washed away. The country generally is of clayey soil, and suitable for building. Each housewife has from

twenty-five to thirty earthen pots slung to the ceiling by very neat cord-swinging tressels; and often as many neatly-made baskets hung up in the same fashion, and much fire-wood.

November 5th.—In going, we crossed the River Luella, of twenty yards in width, five times, in a dense dripping forest. The men of one village always refused to accompany us to the next set of hamlets: "They were at war, and afraid of being killed and eaten." They often came five or six miles through the forests that separate the districts; but when we drew near to the cleared spaces cultivated by their enemies they parted civilly, and invited us to come the same way back, and they would sell us all the food we required.

The Manyema country is all surpassingly beautiful. Palms crown the highest heights of the mountains, and their gracefully bended fronds wave beautifully in the wind; and the forests, usually about five miles broad, between groups of villages, are indescribable. Climbers of cable size in great numbers are hung among the gigantic trees; many unknown wild fruits abound, some the size of a child's head, and strange birds and monkeys are everywhere. The soil is excessively rich, and the people, although isolated by old feuds that are never settled, cultivate largely. They have selected a kind of maize that bends its fruit-stalk round into a hook, and hedges some eighteen feet high are made by inserting poles, which sprout, like Robinson Crusoe's hedge, and never decay. Lines of climbing plants are tied so as to go along from pole to pole, and the maize cobs are suspended to these by their own hooked fruit-stalk. As the corn-cob is forming, the hook is turned round, so that the fruit-leaves of it hang down and form a thatch for the grain beneath, or inside it. This upright granary forms a solid-looking wall round the villages, and the people are not stingy, but take down maize and hand it to the men freely.

The women are very naked. They bring loads of provisions to sell through the rain, and are eager traders for beads. Plantains, cassava, and maize are the chief food. The first rains had now begun, and the white ants took the hint to swarm and colonize.

November 6th–8th.—We came to many large villages, and were variously treated: one head man presented me with a parrot, and, on my declining it, gave it to one of my people: some ordered us off, but were coaxed to allow us to remain overnight. They have no restraint; some came and pushed off the door of my hut with a stick while I was resting, as we should do with a wild-beast cage.

Though reasonably willing to gratify curiosity, it becomes tiresome to be the victim of unlimited staring by the ugly as well as by the good-looking. I can bear the women, but ugly males are uninteresting; and it is as much as I can stand when a crowd will follow me wherever I move. They have heard of Dugumbé Hassani's deeds, and are evidently suspicious of our intentions: they say, "If you have food at home, why come so far and spend your beads to buy it here?" If it is replied, on the strength of some of Mohamad's people being present, "We want to buy ivory too;" not knowing its value, they think that this is a mere subterfuge to plunder them. Much palm-wine to-day at different parts made them incapable of reasoning further. They seemed inclined to fight, but, after a great deal of talk, we departed without collision.

November 9th.—We came to villages where all were civil, but afterward arrived where there were other palm-trees and palm-toddy, and people low and disagreeable in consequence. The mountains all around are grand, and tree-covered. I saw a man with two great toes: the double toe is usually a little one.

November 11th.—We had heard that the Manyema were eager to buy slaves, but that meant females only, to make wives of them: they prefer goats to men. Mohamad had bought slaves in Lunda in order to get ivory from these Manyema; but inquiry here and elsewhere brought it out plainly that they would rather let the ivory lie unused or rot, than invest in male slaves, who are generally criminals—at least in Lunda. I advised my friend to desist from buying slaves, who would all "eat off their own heads;" but he knew better than to buy copper, and on our return he acknowledged that I was right.

November 15th.—We came into a country where Dugumbé's slaves had maltreated the people greatly, and they looked on us as of the same tribe, and we had much trouble in consequence. The country is swarming with villages. Hassani, of Dugumbé, got the chief into debt, and then robbed him of ten men and ten goats to clear off the debt: the Dutch did the same in the south of Africa.

November 17th.—Copious rains brought us to a halt at Muana Balangé's, on the banks of the Luamo River. Moerekurambo had died lately, and his substitute took seven goats to the chiefs on the other side in order to induce them to come in a strong party, and attack us for Hassani's affair.

November 20th–25th.—We were now only about ten miles from the confluence of the Luamo and Lualaba, but all the people

had been plundered, and some killed by the slaves of Dugumbé. The Luamo is here some two hundred yards broad, and deep. The chiefs everywhere were begged to refuse us a passage. The women were particularly outspoken in asserting our identity with the cruel strangers; and when one lady was asked, in the midst of her vociferation, just to look if I were of the same color with Dugumbé, she replied, with a bitter little laugh, "Then you must be his father!"

It was of no use to try to buy a canoe, for all were our enemies. It was now the rainy season, and I had to move with great caution. The worst our enemies did, after trying to get up a war in vain, was to collect, as we went by, in force, fully armed with their large spears and huge wooden shields, and show us out of their districts. All are kind except those who have been abused by the Arab slaves. While waiting at Luamo, a man whom we sent over to buy food got into a panic and fled he knew not whither; all concluded that he had been murdered, but some Manyema whom we had never seen found him, fed him, and brought him home unscathed: I was very glad that no collision had taken place. We returned to Bamarré December 19th, 1869.

December 20th.—While we were away, a large horde of Ujjians came to Bamarré, all eager to reach the cheap ivory, of which a rumor had spread far and wide: they numbered five hundred guns, and invited Mohamad to go with them, but he preferred waiting for my return from the west. We now resolved to go due north; he to buy ivory, and I to reach another part of the Lualaba and buy a canoe.

Wherever the dense primeval forest has been cleared off by man, gigantic grasses usurp the clearances. None of the sylvan vegetation can stand the annual grass-burnings except a species of baubinia, and occasionally a large tree which sends out new wood below the burned places. The parrots build thereon, and the men make a stair up one hundred and fifty feet by tying climbing plants (called binayoba) around, at about four feet distance, as steps. Near the confluence of the Luamo, men build huts on this same species of tree for safety against the arrows of their enemies.

December 21st.—The strong thick grass of the clearances dries down to the roots at the surface of the soil, and fire does it no harm. Though a few of the great old burly giants brave the fires, none of the climbers do: they disappear, but the plants themselves are brought out of the forests and ranged along the plantations like wire fences, to keep wild beasts off: the poles

of these vegetable wire hedges often take root, as also those in stages for maize.

December 22d-24th.—Mohamad presented a goat, to be eaten on our Christmas. I got large copper bracelets made of my copper by Manyuema smiths, for they are considered very valuable, and have driven iron bracelets quite out of fashion.

December 25th.—We start immediately after Christmas: I must try with all my might to finish my exploration before next Christmas.

December 26th.—I get fever severely, and was down all day; but we march, as I have always found that moving is the best remedy for fever: I have, however, no medicine whatever. We passed over the neck of Mount Kinyima, north-west of Moené-kuss, through very slippery forest, and encamped on the banks of the Lulwa Rivulet.

December 28th.—Away to Monangoi's village, near the Luamo River, here one hundred and fifty or more yards wide, and deep. A man passed us, bearing a human finger wrapped in a leaf; it was to be used as a charm, and belonged to a man killed in revenge: the Arabs all took this as clear evidence of cannibalism: I hesitated, however, to believe it.

December 29th-31st.—Heavy rains. The Luamo is called the Luassé above this. We crossed in canoes.

January 1st, 1870.—May the Almighty help me to finish the work in hand, and retire through the Basango before the year is out. Thanks for all last year's loving-kindness.

Our course was due north, with the Luasse flowing in a gently undulating green country on our right, and rounded mountains in Mbongo's country on our left.

January 2d.—Rested a day at Mbongo's, as the people were honest.

January 3d.—Reached a village at the edge of a great forest, where the people were excited and uproarious, but not ill-bred; they ran alongside the path with us, shouting and making energetic remarks to each other about us. A newly-married couple stood in a village where we stopped to inquire the way, with arms around each other very lovingly, and no one joked or poked fun at them. We marched five hours through forest, and crossed three rivulets and much stagnant water, which the sun, by the few rays he darts in, can not evaporate. We passed several huge traps for elephants. They are constructed thus: a log of heavy wood, about twenty feet long, has a hole at one end for a climbing plant to pass through and suspend it; at the lower

end a mortice is cut out of the side, and a wooden lance about two inches broad by one and a half thick, and about four feet long, is inserted firmly in the mortice; a latch down on the ground, when touched by the animal's foot, lets the beam run down on to his body, and the great weight of the wood drives in the lance and kills the animal. I saw one lance which had accidentally fallen, and it had gone into the stiff clay soil two feet.

January 4th.—The villagers we passed were civil, but, like noisy children, all talked and gazed. When surrounded by three or four hundred, some who have not been accustomed to the ways of wild men think that a fight is imminent; but, poor things, no attack is thought of, if it does not begin on our side. Many of Mohamad's people were dreadfully afraid of being killed and eaten. One man out in search of ivory seemed to have lost sight of his companions, for they saw him running with all his might to a forest with no path in it: he was searched for for several days, and was given up as a murdered man, a victim of the cannibal Manyema! On the seventh day after he lost his head, he was led into camp by a head man, who not only found him wandering, but fed and lodged and restored him to his people.

[With reference to the above we may add that nothing can exceed the terror in which cannibal nations are held by other African tribes. It was common on the River Shiré to hear Manganja and Ajawa people speak of tribes far away to the north who eat human bodies, and on every occasion the fact was related with the utmost horror and disgust.]

The women here plait the hair into the form of a basket behind; it is first rolled into a very long coil, then wound round something till it is about eight or ten inches long, projecting from the back of the head.

January 5th-7th.—Wettings by rain, and grass overhanging our paths, with bad water, brought on choleraic symptoms, and opium from Mohamad had no effect in stopping it: he, too, had rheumatism. On suspecting the water as the cause, I had all I used boiled, and this was effectual; but I was greatly reduced in flesh, and so were many of our party.

We proceeded nearly due north, through wilderness and many villages and running rills. The paths are often left to be choked up by the overbearing vegetation, and then the course of the rill is adopted as the only clear passage; it has also this advantage,

it prevents foot-marks being followed by enemies: in fact, the object is always to make approaches to human dwellings as difficult as possible. Even the hedges around villages sprout out and grow a living fence, and this is covered by a great mass of a species of calabash with its broad leaves, so that nothing appears of the fence outside.

January 11th.—The people are civil, but uproarious from the excitement of having never seen strangers before: all visitors from a distance came with their large wooden shields. Many of the men are handsome and tall, but the women are plainer than at Bamarré.

January 12th.—Cross the Lolindé, thirty-five yards, and knee-deep, flowing to join Luamo far down: dark water.

January 13th.—Through the hills Chimunémuné; we see many albinos and partial lepers, and syphilis is prevalent. It is too trying to travel during the rains.

January 14th.—The muabé-palm had taken possession of a broad valley, and the leaf-stalks, as thick as a strong man's arm and twenty feet long, had fallen off and blocked up all passage except by one path, made and mixed up by the feet of buffaloes and elephants. In places like this the leg goes into elephants' holes up to the thigh, and it is grievous; three hours of this slough tired the strongest: a brown stream ran through the centre, waist-deep, and washed off a little of the adhesive mud. Our path now lay through a river covered with tikitika, a living vegetable bridge made by a species of glossy-leaved grass which felts itself into a mat capable of bearing a man's weight, but it bends in a foot or fifteen inches every step: a stick six feet long could not reach the bottom in certain holes we passed. The lotus, or sacred lily, which grows in nearly all the shallow waters of this country, sometimes spreads its broad leaves over the bridge so as to lead careless observers to think that it is the bridge-builder, but the grass mentioned is the real agent. Here it is called kin-téfwétéfwé; on Victoria Nyanza, titatika.

January 15th.—Choleraic purging again came on, till all the water used was boiled, but I was laid up by sheer weakness near the hill Chanza.

January 20th, 21st.—Weakness and illness goes on because we get wet so often: the whole party suffers, and they say that they will never come here again. The Manyango rivulet has fine sweet water, but the whole country is smothered with luxuriant vegetation.

January 27th–30th.—Rest from sickness in camp. The country

is indescribable, from rank jungle of grass, but the rounded hills are still pretty; an elephant alone can pass through it—these are his head-quarters. The stalks are from half an inch to an inch and a half in diameter: reeds clog the feet, and the leaves rub sorely on the face and eyes. The view is generally shut in by this megatherium grass, except when we come to a slope down to a valley or the bed of a rill.

We came to a village among fine gardens of maize, bananas, ground-nuts, and cassava, but the villagers said, "Go on to next village;" and this meant, "We don't want you here." The main body of Mohamad's people was about three miles before us; but I was so weak I sat down in the next hamlet, and asked for a hut to rest in. A woman with leprous hands gave me hers, a nice clean one, and very heavy rain came on: of her own accord she prepared dumplings of green maize, pounded and boiled, which are sweet, for she said that she saw I was hungry. It was excessive weakness from purging; and seeing that I did not eat for fear of the leprosy, she kindly pressed me: "Eat; you are weak only from hunger; this will strengthen you." I put it out of her sight, and blessed her motherly heart.

I had ere this come to the conclusion that I ought not to risk myself farther in the rains, in my present weakness, for it may result in something worse, as in Marungu and Liemba.

The horde mentioned as having passed Bamarré was now somewhere in our vicinity, and it was impossible to ascertain from the Manyema where the Lualaba lay.

In going north, on February 1st, we came to some of this horde belonging to Katomba or Moenemokaia, who stated that the leader was anxious for advice as to crossing Lualaba and future movements. He supposed that this river was seven days in front of him, and twelve days in front of us. It is a puzzle, from its north-westing and low level: it is possibly Petherick's Bahr Ghazal. Could get no latitude.

February 2d, 1870.—I propose to cross it, and buy an exploring canoe, because I am recovering my strength; but we now climb over the bold hills Bininango, and turn south-west toward Katomba to take counsel: he knows more than any one else about the country, and his people being now scattered everywhere seeking ivory, I do not relish their company.

February 3d.—Caught in a drenching rain, which made me fain to sit, exhausted as I was, under an umbrella for an hour trying to keep the trunk dry. As I sat in the rain, a little tree-frog, about half an inch long, leaped on to a grassy leaf, and be-

gan a tune as loud as that of many birds, and very sweet; it was surprising to hear so much music out of so small a musician. I drank some rain-water, as I felt faint; in the paths it is now calf-deep. I crossed a hundred yards of slush waist-deep, in mid-channel, and full of holes made by elephants' feet, the path hedged in by reedy grass, often intertwined and very tripping. I stripped off my clothes on reaching my hut in a village, and a fire during night nearly dried them. At the same time I rubbed my legs with palm-oil, and in the morning had a delicious breakfast of sour goat's milk and porridge.

February 5th.—The drenching told on me sorely, and it was repeated after we had crossed the good-sized rivulets Mulunkula and many villages, and I lay on an enormous boulder under a mubé palm, and slept during the worst of the pelting. I was seven days southing to Mamohela, Katomba's camp, and quite knocked up and exhausted. I went into winter-quarters on February 7th, 1870.

February 7th.—This was the camp of the head man of the ivory horde, now away for ivory. Katomba, as Moenemokaia is called, was now all kindness. We were away from his Ujijian associates, and he seemed to follow his natural bent without fear of the other slave-traders, who all hate to see me as a spy on their proceedings. Rest, shelter, and boiling all the water I used, and above all, the new species of potato called nyumbo, much famed among the natives as restorative, soon put me all to rights. Katomba supplied me liberally with nyumbo; and but for a slightly medicinal taste, which is got rid of by boiling in two waters, this vegetable would be equal to English potatoes.

February 11th.—First of all, it was proposed to go off to the Lualaba in the north-west, in order to procure *Holcus sorghum*, or dura flour, that being, in Arab opinion, nearly equal to wheat, or, as they say, "heating," while the maize-flour we were obliged to use was cold, or cooling.

February 13th.—I was too ill to go through mud waist-deep, so I allowed Mohamad (who was suffering much) to go away alone in search of ivory. As stated above, shelter and nyumbo proved beneficial.

February 22d.—Falls between Vira and Baker's Water seen by Wanyamwezi. This confirms my conjecture on finding Lualaba at a lower level than Tanganyika. Bin Habib went to fight the Batusi, but they were too strong, and he turned.

March 1st, 1870.—Visited my Arab friends in their camp for the first time to-day. This is Kasessa's country, and the camp is

situated between two strong rivulets, while Mamohela is the native name. Mount Bombola stands two miles from it north, and Mount Bolunkela is north-east the same distance. Wood, water, and grass, the requisites of a camp, abound, and the Manyema bring large supplies of food every day: forty large baskets of maize for a goat; fowls and bananas and nyumbo very cheap.

March 25th.—Iron bracelets are the common medium of exchange, and coarse beads and cowries: for a copper bracelet three large fowls are given, and three and a half baskets of maize: one basket three feet high is a woman's load, and they are very strong.

The Wachigoné are a scattered tribe among the Maarabo or Suaheli, but they retain their distinct identity as a people.

The Mamba fish has breasts with milk, and utters a cry; its flesh is very white. It is not the crocodile, which goes by the same name, but is probably the Dugong, or Peixe Mulher of the Portuguese (?). Full-grown leeches come on the surface in this wet country.

Some of Katomba's men returned with forty-three tusks. An animal with short horns and of a reddish color is in the north: it is not known to the Arabs (?).

Joseph, an Arab from Oman, says that the simoon is worse in Sham (Yemen?) than in Oman: it blows for three or four hours. Butter eaten largely is the remedy against its ill effects, and this is also smeared on the body. In Oman a wet cloth is put over the head, body, and legs, while this wind blows.

May 1st, 1870.—An elephant was killed which had three tusks, all of good size.*

Rains continued; and mud and mire from the clayey soil of Manyema were too awful to be attempted.

May 24th.—I sent to Bamarré for the cloth and beads I left there. A party of Thani's people came south and said that they had killed forty Manyema, and lost four of their own number: nine villages were burned, and all this about a single string of beads which a man tried to steal!

June, 1870.—Mohamad bin Nassur and Akila's men brought one hundred and sixteen tusks from the north, where the people are said to be all good and obliging. Akila's chief man had a large deep ulcer on the foot from the mud. When we had the people here, Kassessa gave ten goats and one tusk to hire them to avenge a feud in which his elder brother was killed, and they

* Susi and Chuma say that the third tusk grew out from the base of the trunk, that is, midway between the other two.—ED.

went; the spoils secured were thirty-one captives, sixty goats, and about forty Manyema killed: one slave of the attacking party was killed, and two badly wounded. Thani's man, Yahooo, who was leader in the other case of forty killed, boasted before me of the deed. I said, "You were sent here not to murder, but to trade;" he replied, "We are sent to murder." Bin Nassur said, "The English are always killing people;" I replied, "Yes, but only slavers who do the deeds that were done yesterday."

Various other tribes sent large presents to the Arabs to avert assaults, and tusks too were offered.

The rains had continued into June, and fifty-eight inches fell.

June 26th.—Now my people failed me; so, with only three attendants, Susi, Chuma, and Gardner, I started off to the north-west for the Lualaba. The numbers of running rivulets to be crossed were surprising, and at each, for some forty yards, the path had been worked by the feet of passengers into adhesive mud: we crossed fourteen in one day, some thigh-deep: most of them run into the Liya, which we crossed, and it flows to the Lualaba. We passed through many villages, for the paths all lead through human dwellings. Many people presented bananas, and seemed surprised when I made a small return gift; one man ran after me with a sugar-cane. I paid for lodgings too: here the Arabs never do.

June 28th.—The driver-ants were in millions in some part of the way: on this side of the continent they seem less fierce than I have found them in the west.

June 29th.—At one village musicians with calabashes, having holes in them, flute-fashion, tried to please me by their vigorous acting, and by beating drums in time.

June 30th.—We passed through the nine villages burned for a single string of beads, and slept in the village of Malola.

July, 1870.—While I was sleeping quietly here, some trading Arabs camped at Nasangwa's, and at dead of night one was pinned to the earth by a spear: no doubt this was in revenge for relations slain in the forty mentioned. The survivors now wished to run a muck in all directions against the Manyema.

When I came up I proposed to ask the chief if he knew the assassin, and he replied that he was not sure of him, for he could only conjecture who it was; but death to all Manyemas glared from the eyes of half-eastes and slaves. Fortunately, before this affair was settled in their way, I met Mohamad Bogharib coming back from Kasonga's, and he joined in enforcing peace: the traders went off, but let my three people know, what I knew long before,



CHUMA AND SUSL.

that they hated having a spy in me on their deeds. I told some of them who were civil-tongued that ivory obtained by bloodshed was unclean evil—"unlucky," as they say: my advice to them was, "Don't shed human blood, my friends; it has guilt not to be wiped off by water." Off they went; and afterward the blood-thirsty party got only one tusk and a half, while another party, which avoided shooting men, got fifty-four tusks!

From Mohamad's people I learned that the Lualaba was not in the north-west course I had pursued, for in fact it flows west-south-west in another great bend, and they had gone far to the north without seeing it; but the country was exceedingly difficult from forest and water. As I had already seen, trees fallen across the path formed a breast-high wall, which had to be climbed over: flooded rivers, breast and neck deep, had to be crossed. The mud was awful, and nothing but villages eight or ten miles apart.

In the clearances around these villages alone could the sun be seen. For the first time in my life my feet failed me; and now, having but three attendants, it would have been unwise to go farther in that direction. Instead of healing quietly, as heretofore, when torn by hard travel, irritable-eating ulcers fastened on both feet, and I limped back to Bambarré on the 22d.

The accounts of Ramadân (who was desired by me to take notes as he went in the forest) were discouraging, and made me glad I did not go. At one part, where the tortuous river was flooded, they were five hours in the water, and a man in a small canoe went before them sounding for places not too deep for them, breast and chin deep, and Hassani fell and hurt himself sorely in a hole. The people have goats and sheep, and love them as they do children.

[Fairly baffled by the difficulties in his way, and sorely troubled by the demoralized state of his men, who appear not to have been proof against the contaminating presence of the Arabs, the doctor turns back at this point.]

July 6th.—Back to Mamohela, and welcomed by the Arabs, who all approved of my turning back. Katomba presented abundant provisions for all the way to Bambarré. Before we reached this, Mohamad made a forced march, and Moenemokaia's people came out drunk: the Arabs assaulted them, and they ran off.

July 23d.—The sores on my feet now laid me up as irritable-eating ulcers. If the foot were put to the ground a discharge of bloody ichor flowed, and the same discharge happened every night with considerable pain, that prevented sleep. The wailing

of the slaves tortured with these sores is one of the night sounds of a slave-camp: they eat through every thing—musele, tendon, and bone, and often lame permanently, if they do not kill the poor things. Medicines have very little effect on such wounds: their periodicity seems to say that they are allied to fever. The Arabs make a salve of bees-wax and sulphate of copper, and this applied hot, and held on by a bandage, affords support, but the necessity of letting the ichor escape renders it a painful remedy: I had three ulcers, and no medicine. The native plan of support by means of a stiff leaf or bit of calabash was too irritating, and so they continued to eat in and enlarge in spite of every thing: the vicinity was hot, and the pain increased with the size of the wound.

August 2d.—An eclipse at midnight: the Moslems called loudly on Moses. Very cold.

On August 17th, Monanyembé, the chief who was punished by Mohamad Bogharib lately, came bringing two goats; one he gave to Mohamad, the other to Moenékuss's son, acknowledging that he had killed his elder brother: he had killed eleven persons over at Linamo in our absence, in addition to those killed in villages on our south-east, when we were away. It transpired that Kandahara, brother of old Moenékuss, whose village is near this, killed three women and a child, and that a trading-man came over from Kasangangayé, and was murdered too, for no reason but to eat his body. Mohamad ordered old Kandahara to bring ten goats and take them over to Kasangangayé to pay for the murdered man. When they tell of each other's deeds they disclose a horrid state of blood-thirsty callousness. The people over a hill north-north-east of this killed a person out hoeing: if a cultivator is alone, he is almost sure of being slain. Some said that people in the vicinity, or hyenas, stole the buried dead; but Posho's wife died, and, in Wanyamesi fashion, was thrown out of camp unburied. Mohamad threatened an attack if Manyema did not cease exhuming the dead. It was effectual; neither men nor hyenas touched her, though exposed now for seven days.

The head of Moenékuss is said to be preserved in a pot in his house, and all public matters are gravely communicated to it, as if his spirit dwelt therein: his body was eaten; the flesh was removed from the head and eaten too; his father's head is said to be kept also. The foregoing refers to Bambarré alone. In other districts graves show that sepulture is customary, but here no grave appears: some admit the existence of the practice here, others deny it. In the Metamba country adjacent to the Lua-

laba, a quarrel with a wife often ends in the husband killing her and eating her heart, mixed up in a huge mess of goats' flesh: this has the charm character. Fingers are taken as charms in other parts, but in Barbarré alone is the depraved taste the motive for cannibalism.

BAMBARRÉ, *August 18th.*—I learn from Josut and Moenepembé, who have been to Katañga and beyond, that there is a lake north-north-west of the copper mines, and twelve days distant; it is called Chibungo, and is said to be large. Seven days west of Katañga flows another Lualaba, the dividing line between Rua and Lunda, or Londa. It is very large; and as the Lufira flows into Chibungo, it is probable that the Lualaba West and the Lufira form the lake. Lualaba West and Lufira rise by fountains south of Katañga, three or four days off. Luumbai and Lunga fountains are only about ten miles distant from Lualaba West and Lufira fountains: a mound rises between them, the most remarkable in Africa. Were this spot in Armenia, it would serve exactly the description of the Garden of Eden in Genesis, with its four rivers, the Gihon, Pison, Hiddekel, and Euphrates. As it is, it possibly gave occasion to the story told to Herodotus by the Secretary of Minerva in the city of Saïs, about two hills with conical tops, Crophi and Mophi. "Midway between them," said he, "are the fountains of the Nile, fountains which it is impossible to fathom: half the water runs northward into Egypt; half to the south toward Ethiopia."

Four fountains rising so near to each other would readily be supposed to have one source; and half the water flowing into the Nile and the other half to the Zambesi, required but little imagination to originate, seeing the actual visitor would not feel bound to say how the division was effected. He could only know the fact of waters rising at one spot, and separating to flow north and south. The conical tops to the mound look like invention, as also do the names.

A slave, bought on Lualaba East, came from Lualaba West in about twelve days. These two Lualabas may form the loop depicted by Ptolemy, and upper and lower Tanganyika be a third arm of the Nile.

Patience is all I can exercise; these irritable ulcers hedge me in now, as did my attendants in June; but all will be for the best, for it is in Providence, and not in me.

The water-shed is between seven and eight hundred miles long from west to east, or say from 22° or 23° to 34° or 35° east longitude. Parts of it are enormous sponges; in other parts innu-

merable rills unite into rivulets, which again form rivers; Lufira, for instance, has nine rivulets, and Lekulwé other nine. The convex surface of the nose of a garden watering-can is a tolerably apt similitude, as the rills do not spring off the face of it, and it is seven hundred miles across the circle; but in the numbers of rills coming out at different heights on the slope there is a faint resemblance, and I can at present think of no other example.

I am a little thankful to old Nile for so hiding his head that all "theoretical discoverers" are left out in the cold. With all real explorers I have a hearty sympathy; and I have some regret at being obliged, in a manner compelled, to speak somewhat disparagingly of the opinions formed by my predecessors. The work of Speke and Grant is part of the history of this region; and since the discovery of the sources of the Nile was asserted so positively, it seems necessary to explain, not offensively, I hope, wherein their mistake lay in making a somewhat similar claim. My opinions may yet be shown to be mistaken too, but at present I can not conceive how. When Speke discovered Victoria Nyanza in 1858, he at once concluded that therein lay the sources of the Nile. His work after that was simply following a foregone conclusion, and as soon as he and Grant looked toward the Victoria Nyanza, they turned their backs on the Nile fountains; so every step of their splendid achievement of following the river down took them farther and farther away from the *Caput Nili*. When it was perceived that the little river that leaves the Nyanza, though they called it the White Nile, would not account for that great river, they might have gone west and found head-waters (as the Lualaba) to which it can bear no comparison. Taking their White Nile at eighty or ninety yards, or say one hundred yards broad, the Lualaba, far south of the latitude of its point of departure, shows an average breadth of from four to six thousand yards, and always deep.

Considering that more than sixteen hundred years have elapsed since Ptolemy put down the results of early explorers, and emperors, kings, philosophers—all the great men of antiquity, in short—longed to know the fountains whence flowed the famous river, and longed in vain, exploration does not seem to have been very becoming to the other sex either. Miss Tinné came farther up the river than the centurions sent by Nero Cæsar, and showed such indomitable pluck as to reflect honor on her race. I know nothing about her save what has appeared in the public papers; but taking her exploration along with what was done by Mrs. Baker, no long time could have elapsed before the laurels



MANYUEMA HUNTERS KILLING SOKOS. (FROM A SKETCH BY DR. LIVINGSTONE.)

for the modern rediscovery of the sources of the Nile should have been plucked by the ladies. In 1841 the Egyptian expedition under D'Arnauld and Sabatier reached lat. $4^{\circ} 42'$: this was a great advance into the interior, as compared with Linant in 1827, $13^{\circ} 30' N.$, and even on the explorations of Jomard (?); but it turned when nearly a thousand miles from the sources.

[The subjoined account of the soko—which is in all probability an entirely new species of chimpanzee, and *not* the gorilla, is exceedingly interesting, and no doubt Livingstone had plenty of stories from which to select. Neither Susi nor Chuma can identify the soko of Manyema with the gorilla, as we have it stuffed in the British Museum. They think, however, that the soko is quite as large and as strong as the gorilla, judging by the specimens shown to them, although they could have decided with greater certainty if the natives had not invariably brought in the dead sokos disemboweled; as they point out, and as we imagine from Dr. Livingstone's description, the carcass would then appear much less bulky. Livingstone gives an animated sketch of a soko-hunt.]

August 24th.—Four gorillas, or sokos, were killed yesterday: an extensive grass-burning forced them out of their usual haunt, and, coming on the plain, they were speared. They often go erect, but place the hand on the head, as if to steady the body. When seen thus, the soko is an ungainly beast. The most sentimental young lady would not call him a "dear," but a bandy-legged, pot-bellied, low-looking villain, without a particle of the gentleman in him. Other animals, especially the antelopes, are graceful, and it is pleasant to see them, either at rest or in motion: the natives also are well made, lithe and comely to behold; but the soko, if large, would do well to stand for a picture of the devil.

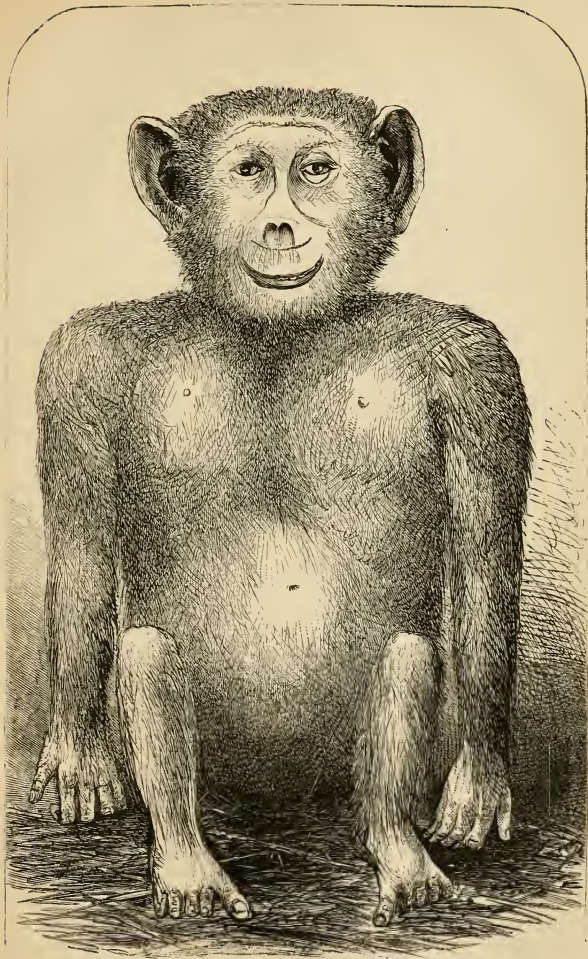
He takes away my appetite by his disgusting bestiality of appearance. His light-yellow face shows off his ugly whiskers and faint apology for a beard; the forehead, villainously low, with high ears, is well in the background of the great dog-mouth; the teeth are slightly human, but the canines show the beast by their large development. The hands, or rather the fingers, are like those of the natives. The flesh of the feet is yellow, and the eagerness with which the Manyema devour it leaves the impression that eating sokos was the first stage by which they arrived at being cannibals: they say the flesh is delicious. The soko is represented by some to be extremely knowing, successfully stalking men and women while at their work, kidnaping children and

running up trees with them: he seems to be amused by the sight of the young native in his arms, but comes down when tempted by a bunch of bananas, and, as he lifts that, drops the child: the young soko in such a case would cling closely to the armpit of the elder. One man was cutting out honey from a tree, and naked, when a soko suddenly appeared and caught him, then let him go. Another man was hunting, and missed in his attempt to stab a soko: it seized the spear and broke it, then grappled with the man, who called to his companions, "Soko has caught me:" the soko bit off the ends of his fingers and escaped unharmed. Both men are now alive at Bambarré.

The soko is so cunning, and has such sharp eyes, that no one can stalk him in front without being seen; hence, when shot, it is always in the back; when surrounded by men and nets, he is generally speared in the back too; otherwise he is not a very formidable beast: he is nothing, as compared in power of damaging his assailant, to a leopard or lion, but is more like a man unarmed, for it does not occur to him to use his canine teeth, which are long and formidable. Numbers of them come down in the forest within a hundred yards of our camp, and would be unknown but for giving tongue like fox-hounds: this is their nearest approach to speech. A man hoeing was stalked by a soko and seized; he roared out, but the soko giggled and grinned, and left him as if he had done it in play. A child caught up by a soko is often abused by being pinched and scratched, and let fall.

The soko kills the leopard occasionally by seizing both paws, and biting them so as to disable them; he then goes up a tree, groans over his wounds, and sometimes recovers, while the leopard dies: at other times both soko and leopard die. The lion kills him at once, and sometimes tears his limbs off, but does not eat him. The soko eats no flesh; small bananas are his dainties, but not maize. His food consists of wild fruits, which abound: one, staféné, or Manyema mamwa, is like large sweet sop, but indifferent in taste and flesh. The soko brings forth at times twins. A very large soko was seen by Mohamad's hunters sitting picking his nails: they tried to stalk him, but he vanished. Some Manyema think that their buried dead rise as sokos, and one was killed with holes in his ears, as if he had been a man. He is very strong, and fears guns, but not spears: he never catches women.

Sokos collect together, and make a drumming noise, some say with hollow trees, then burst forth into loud yells, which are well



PORTRAIT OF A YOUNG SOKO.

imitated by the natives' embryotic music. If a man has no spear the soko goes away satisfied; but if wounded, he seizes the wrist, lops off the fingers, and spits them out, slaps the cheeks of his victim, and bites without breaking the skin: he draws out a spear (but never uses it), and takes some leaves and stuffs them into his wound to staunch the blood: he does not wish an encounter with an armed man. He sees women do him no harm, and never molests them: a man without a spear is nearly safe from him. They beat hollow trees as drums with hands, and then scream as music to it: when men hear them, they go to the sokos; but sokos never go to men with hostility. Manyema say, "Soko is a man, and nothing bad in him."

They live in communities of about ten, each having his own female: an intruder from another camp is beaten off with their fists and loud yells. If one tries to seize the female of another, he is caught on the ground, and all unite in boxing and biting the offender. A male often carries a child, especially if they are passing from one patch of forest to another over a grassy space; he then gives it to the mother.

I now spoke with my friend Mohamad, and he offered to go with me to see Lualaba from Luamo; but I explained that merely to see and measure its depth would not do: I must see whither it went. This would require a number of his people in lieu of my deserters; and to take them away from his ivory trade, which at present is like gold digging, I must make amends, and I offered him two thousand rupees, and a gun worth seven hundred rupees—two thousand seven hundred rupees in all—or £270. He agreed, and should he enable me to finish up my work in one trip down Lualaba, and round to Lualaba West, it would be a great favor.

[How severely he felt the effects of the terrible illnesses of the last two years may be imagined by some few words here, and it must ever be regretted that the conviction which he speaks of was not acted up to.]

The severe pneumonia in Marunga, the choleraic complaint in Manyema, and now irritable ulcers, warn me to retire while life lasts. Mohamad's people went north, and east, and west, from Kasonga's: sixteen marches north, ten ditto west, and four ditto east and south-east. The average march was six hours and a half, say 12', about 200' N. and W., lat. of Kasongo, say 4° south. They may have reached 1°, 2° S. They were now in the Baléggé country, and turned. It was all dense forest: they

never saw the sun except when at a village, and then the villages were too far apart. The people were very fond of sheep, which they call ngombé, or ox, and tusks are never used. They went off to where an elephant had formerly been killed, and brought the tusks rotted and eaten or gnawed by "déré" (?)—a rodent, probably the *Aulocaudatus swinderianus*. Three large rivers were crossed, breast and chin deep; in one they were five hours, and a man in a small canoe went ahead sounding for water capable of being waded. Much water and mud in the forest. This report makes me thankful I did not go, for I should have seen nothing, and been worn out by fatigue and mud. They tell me that the River Metunda had black water, and took two hours to cross it, breast-deep. They crossed about forty smaller rivers over the River Mohunga, breast-deep. The river of Mbité also is large. All along Lualaba and Metumbé the sheep have hairy dewlaps, no wool, Tartar breed (?), small thin tails.

A broad belt of meadow-land, with no trees, lies along Lualaba; beyond that it is all dense forest, and trees so large that one lying across the path is breast-high: clearances exist only around the villages. The people are very expert smiths and weavers of the "lamba," and make fine large spears, knives, and needles. Market-places, called "tokos," are numerous all along Lualaba; to these the Barua of the other bank come daily in large canoes, bringing grass-cloth, salt, flour, cassava, fowls, goats, pigs, and slaves. The women are beautiful, with straight noses, and well clothed: when the men of the districts are at war, the women take their goods to market as if at peace, and are never molested. All are very keen traders, buying one thing with another, and changing back again, and any profit made is one of the enjoyments of life.

I knew that my deserters hoped to be fed by Mohamad Bogharib when we left the camp at Mamohela, but he told them that he would not have them; this took them aback; but they went and lifted his ivory for him; and when a parley was thus brought about, talked him over, saying that they would go to me, and do all I desired. They never came; but as no one else would take them, I gave them three loads to go to Bambarré; there they told Mohamad that I would not give them beads, and they did not like to steal; they were now trying to get his food by lies. I invited them three times to come and take beads; but having supplies of food from the camp women, they hoped to get the upper hand with me, and take what they liked by refusing to carry or work. Mohamad spoke long to them, but speaking

mildly makes them imagine that the spokesman is afraid of them. They kept away from my work, and would fain join Mohamad's, but he will not have them. I gave beads to all but the ringleaders. Their conduct looks as if a quarrel had taken place between us, but no such excuse have they.

I am powerless, as they have left me, and think that they may do as they like, and the "Manyuema are bad" is the song. Their badness consists in being dreadfully afraid of guns, and the Arabs can do just as they like with them and their goods. If spears alone were used, the Manyuema would be considered brave, for they fear no one, though he has many spears. They tell us truly "that, were it not for our guns, not one of us would return to our own country." Moenemokaia killed two Arab agents, and took their guns; this success led to their asserting, in answer to the remonstrances of the women, "We shall take their goats, guns, and women from them." The chief, in reporting the matter to Moenemger (?) at Luamo, said, "The Englishman told my people to go away, as he did not like fighting; but my men were filled with 'malofu,' or palm-toddy, and refused to their own hurt." Elsewhere they made regular preparation to have a fight with Dugumbé's people, just to see who was strongest—they with their spears and wooden shields, and the Arabs with what, in derision, they called tobacco-pipes (guns). They killed eight or nine Arabs.

No traders seem ever to have come in before this. Barma brought copper and skins for tusks, and the Babisa and Baguhá coarse beads. The Bavira are now enraged at seeing Ujijians pass into their ivory field, and no wonder. They took the tusks which cost them a few strings of beads, and received weight for weight in beads, thick brass wire, and loads of calico.

CHAPTER XVI.

Footsteps of Moses.—Geology of Manyema Land.—“A Drop of Comfort.”—Continued Sufferings.—A stationary Explorer.—Consequences of trusting to Theory.—Nomenclature of Rivers and Lakes.—Plunder and Murder in Ujijian Trading.—Comes out of Hut for first Time after eighty Days' Illness.—Arab Cure for ulcerated Sores.—Rumor of Letters.—The Loss of Medicines a great Trial now.—The broken-hearted Chief.—Return of Arab Ivory-traders.—Future Plans.—Thankfulness for Mr. Edward Young's Search Expedition.—The Horn-billed Phoenix.—Tedious Delays.—The Bargain for the Boy.—Sends Letters to Zanzibar.—Exasperation of Manyema against Arabs.—The “Sassassa Bird.”—The Disease “Safura.”

BAMBARRÉ, *August 25th*, 1870.—ONE of my waking dreams is that the legendary tales about Moses coming up into Inner Ethiopia with Merr, his foster-mother, and founding a city which he called in her honor “Meroe,” may have a substratum of fact. He was evidently a man of transcendent genius, and we learn from the speech of St. Stephen that “he was learned in all the wisdom of the Egyptians, and was mighty in words and in deeds.” His deeds must have been well known in Egypt, for “he supposed that his brethren would have understood how that God by his hand would deliver them, but they understood not.” His supposition could not be founded on his success in smiting a single Egyptian; he was too great a man to be elated by a single act of prowess; but his success on a large scale in Ethiopia afforded reasonable grounds for believing that his brethren would be proud of their countryman, and disposed to follow his leadership, but they were slaves. The notice taken of the matter by Pharaoh showed that he was eyed by the great as a dangerous, if not powerful, man. He “dwelt” in Midian for some time before his gallant bearing toward the shepherds by the well commended him to the priest or prince of the country. An uninteresting wife, and the want of intercourse with kindred spirits during the long forty years' solitude of a herdsman's life, seem to have acted injuriously on his spirits; and it was not till he had with Aaron struck terror into the Egyptian mind that the “man Moses” again became “very great in the eyes of Pharaoh and his servants.” The Ethiopian woman whom he married could scarcely be the daughter of Reuel or Jethro, for Midian was descended from Keturah, Abraham's concubine, and they were never considered Cushite or Ethiopian. If he left his wife in

Egypt, she would now be some fifty or sixty years old, and all the more likely to be despised by the proud prophetess Miriam as a daughter of Ham.

I dream of discovering some monumental relics of Merœ; and if any thing confirmatory of sacred history does remain, I pray to be guided thereunto. If the sacred chronology would thereby be confirmed, I would not grudge the toil and hardships, hunger and pain, I have endured—the irritable ulcers would only be discipline.

Above the fine yellow clay schist of Manyuema the banks of Tanganyika reveal fifty-feet of shingle mixed with red earth; above this at some parts great boulders lie; after this sixty feet of fine clay schist, then five strata of gravel underneath, with a foot stratum of schist between them. The first seam of gravel is about two feet, the second four feet, and the lowest of all about thirty feet thick. The fine schist was formed in still water; but the shingle must have been produced in stormy, troubled seas, if not carried hither and thither by ice, and at different epochs.

This Manyuema country is unhealthy, not so much from fever as from debility of the whole system, induced by damp, cold, and indigestion: this general weakness is ascribed by some to maize being the common food; it shows itself in weakness of bowels and choleraic purging. This may be owing to bad water, of which there is no scarcity; but it is so impregnated with dead vegetable matter as to have the color of tea. Irritable ulcers fasten on any part abraded by accident, and it seems to be a spreading fungus; for the matter settling on any part near becomes a fresh centre of propagation. The vicinity of the ulcer is very tender, and it eats in frightfully if not allowed rest. Many slaves die of it, and its periodical discharges of bloody ichor make me suspect it to be a development of fever. I have found lunar caustic useful: a plaster of wax and a little finely-ground sulphate of copper is used by the Arabs, and so is cocoa-nut oil and butter. These ulcers are excessively intractable; there is no healing them before they eat into the bone, especially on the shins.

Rheumatism is also common, and it cuts the natives off. The traders fear these diseases, and come to a stand if attacked, in order to use rest in the cure. "Taema," or tape-worm, is frequently met with, and no remedy is known among the Arabs and natives for it.

[Searching in his closely-written pocket-books, we find many little mementos of his travels; such, for instance, as two or three tsetse flies pressed between the leaves of one book; some bees,

some leaves, and moths in another; but, hidden away in the pocket of the note-book which Livingstone used during the longest and most painful illness he ever underwent, lies a small scrap of printed paper which tells a tale in its own simple way. On one side there is written in his well-known hand:]

“Turn over and see a drop of comfort found when suffering from irritable-eating ulcers on the feet in Manyuema, August, 1870.”

[On the reverse we see that the scrap was evidently snipped off a list of books advertised at the end of some volume which, with the tea and other things sent to Ujiji, had reached him before setting out on this perilous journey. The “drop of comfort” is as follows:]

“A NARRATIVE OF AN EXPEDITION TO THE ZAMBESI AND ITS TRIBUTARIES,

“AND THE DISCOVERY OF LAKES SHIRWA AND NYASSA.

“*Fifth Thousand. With Map and Illustrations. 8vo. 21s.*

“Few achievements in our day have made a greater impression than that of the adventurous missionary who, unaided, crossed the Continent of Equatorial Africa. His unassuming simplicity, his varied intelligence, his indomitable pluck, his steady religious purpose, form a combination of qualities rarely found in one man. By common consent, Dr. Livingstone has come to be regarded as one of the most remarkable travelers of his own or of any other age.’—*British Quarterly Review.*”

[The kindly pen of the reviewer served a good turn when there was “no medicine” but the following:]

I was at last advised to try malachite, rubbed down with water on a stone, and applied with a feather: this is the only thing that has any beneficial effect.

September 9th, 1870.—A Londa slave stole ten goats from the Manyuema: he was bound, but broke loose, and killed two goats yesterday. He was given to the Manyuema. The Balonda evidently sold their criminals only. He was shorn of his ears, and would have been killed, but Monangoi said, “Don’t let the blood of a freeman touch our soil.”

September 26th.—I am able now to report the ulcers healing. For eighty days I have been completely laid up by them, and it will be long ere the lost substance will be replaced. They kill

many slaves ; and an epidemic came to us which carried off thirty in our small camp.*

[We come to a very important note under the next date. It may be necessary to remind the reader that when Livingstone left the neighborhood of Lake Nyassa and bent his steps northward, he believed that the "Chambezé" River, which the natives reported to be ahead of him, was in reality the Zambesi, for he held in his hand a map manufactured at home, and so conveniently manipulated as to clear up a great difficulty by simply inserting "New Zambesi" in the place of the Chambezé. As we now see, Livingstone handed back this addled geographical egg to its progenitor, who, we regret to say, has not only smashed it in wrath, but has treated us to so much of its savor in a pamphlet written against the deceased explorer that few will care to turn over its leaves.

However, the African traveler has a warning held up before him which may be briefly summed up in a caution to be on the lookout for constant repetitions, in one form or another, of the same name. Endless confusion has arisen from Nyassas and Nyanzas, from Chiroas and Kiroas and Shirwas, to say nothing of Zambesis and Chambezés. The natives are just as prone to perpetuate Zambesi or Lufira in Africa as we are to multiply our Avons and Ouses in England.]

October 4th, 1870.—A trading-party from Ujiji reports an epidemic raging between the coast and Ujiji, and very fatal. Syde bin Habib and Dugumbé are coming, and they have letters and perhaps people for me ; so I remain, though the irritable ulcers are well-nigh healed. I fear that my packet for the coast may have fared badly, for the Lewale has kept Musa Kamaal by him, so that no evidence against himself or the dishonest man, Musa bin Saloom, should be given : my box and guns, with dispatches, I fear will never be sent. Zahor, to whom I gave calico to pay carriers, has been sent off to Lobemba.

Mohamad sowed rice yesterday, and has to send his people (who were unsuccessful among the Balégga) away to the Metambé, where they got ivory before.

I can not understand very well what a "theoretical discover-

* A precisely similar epidemic broke out at the settlement at Magomero, in which fifty-four of the slaves liberated by Dr. Livingstone and Bishop Mackenzie died. This disease is by far the most fatal scourge the natives suffer from, not even excepting small-pox. It is common throughout Tropical Africa. We believe that some important facts have recently been brought to light regarding it, and we can only trust sincerely that the true nature of the disorder will be known in time, so that it may be successfully treated : at present, change of air and high feeding on a meat diet are the best remedies we know.—ED.

er" is. If any one got up and declared in a public meeting that he was the theoretical discoverer of the philosopher's stone, or of perpetual motion for watches, should we not mark him as a little wrong in the head? So of the Nile sources. The Portuguese crossed the Chambezé some seventy years before I did, but to them it was a branch of the Zambesi, and nothing more. Cooley put it down as the New Zambesi, and made it run backward, uphill, between three and four thousand feet! I was misled by the similarity of names and a map, to think it the eastern branch of the Zambesi; I was told that it formed a large water in the south-west. This I readily believed to be the Liambai, in the Barotsé Valley, and it took me eighteen months of toil to come back again to the Chambezé, in Lake Bangweolo, and work out the error into which I was led; twenty-two months elapsed ere I got back to the point whence I set out to explore Chambezé, Bangweolo, Luapula, Moero, and Lualaba. I spent two full years at this work, and the chief Casembe was the first to throw light on the subject by saying, "It is the same water here as in the Chambezé, the same in Moero and Lualaba; and one piece of water is just like another. Will you draw out calico from it that you wish to see it? As your chief desired you to see Bangweolo, go to it, and if in going north you see a traveling party, join it; if not, come back to me, and I will send you safely by my path along Moero."

The central Lualaba I would fain call the Lake River Webb; the western, the Lake River Young. The Lufira and Lualaba West form a lake, the native name of which, "Chibungo," must give way to Lake Lincoln. I wish to name the fountain of the Liambai, or Upper Zambesi, Palmerston Fountain, and adding that of Sir Bartle Frere to the fountain of Lufira—three names of men who have done more to abolish slavery and the slave-trade than any of their contemporaries.

[Through the courtesy of the Earl of Derby, we are able to insert a paragraph here which occurs in a dispatch written to Her Majesty's Foreign Office by Dr. Livingstone a few weeks before his death. He treats more fully in it upon the different names that he gave to the most important rivers and lakes which he discovered, and we see how he cherished to the last the fond memory of old, well-tried friendships, and the great examples of men like President Lincoln and Lord Palmerston.]

"I have tried to honor the name of the good Lord Palmerston, in fond remembrance of his long and unwearied labor for the abolition of the slave-trade; and I venture to place the name of

the good and noble Lincoln on the Lake, in gratitude to him who gave freedom to four millions of slaves. These two great men are no longer among us; but it pleases me, here in the wilds, to place, as it were, my poor little garland of love on their tombs. Sir Bartle Frere having accomplished the grand work of abolishing slavery in Scindiah, Upper India, deserves the gratitude of every lover of human kind.

"Private friendship guided me in the selection of other names where distinctive epithets were urgently needed. 'Paraffin' Young, one of my teachers in chemistry, raised himself to be a merchant prince by his science and art, and has shed pure white light in many lowly cottages, and in some rich palaces. Leaving him and chemistry, I went away to try and bless others. I, too, have shed light of another kind, and am fain to believe that I have performed a small part in the grand revolution which our Maker has been for ages carrying on, by multitudes of conscious and many unconscious agents all over the world. Young's friendship never faltered.

"Oswell and Webb were fellow-travelers, and mighty hunters. Too much engrossed myself with mission-work to hunt, except for the children's larder, when going to visit distant tribes, I relished the sight of fair stand-up fights by my friends with the large denizens of the forest, and admired the true Nimrod class for their great courage, truthfulness, and honor. Being a warm lover of natural history, the entire butcher tribe, bent only on making 'a bag,' without regard to animal suffering, have not a single kindly word from me. An Ambonda man, named Mokantju, told Oswell and me in 1851 that the Liambai and Kafue rose as one fountain and then separated, but after a long course came together again in the Zambesi above Zumbo."

October 8th.—Mbarawa and party came yesterday from Katomba at Mamohela. He reports that Jangeongé (?), with Moeneokela's men, had been killing people of the Metamba, or forest, and four of his people were slain. He intended fighting; hence his desire to get rid of me when I went north: he got one tusk and a half, but little ivory, but Katomba's party got fifty tusks; Abdullah had got two tusks, and had also been fighting, and Katomba had sent a fighting-party down to Lolindé: plunder and murder is Ujijian trading. Mbarawa got his ivory on the Lindi, or, as he says, "Urindi," which has black water, and is very large: an arrow could not be shot across its stream, four or five hundred yards wide. It had to be crossed by canoes, and goes into Luabala. It is curious that all think it necessary to say to me, "The

Manyuema are bad, very bad:" the Balégga will be let alone, because they can fight, and we shall hear nothing of their badness.

October 10th.—I came out of my hut to-day, after being confined to it since the 22d of July, or eighty days, by irritable ulcers on the feet. The last twenty days I suffered from fever, which reduced my strength, taking away my voice, and purging me. My appetite was good, but the third mouthful of any food caused nausea and vomiting; purging took place, and profuse sweating: it was choleraic, and how many Manyuema died of it we could not ascertain. While this epidemic raged here, we heard of cholera terribly severe on the way to the coast. I am thankful to feel myself well.

Only one ulcer is open, the size of a split pea: malachite was the remedy most useful, but the beginning of the rains may have helped the cure, as it does to others; copper rubbed down is used when malachite can not be had. We expect Syde bin Habib soon: he will take to the river, and I hope so shall I. The native traders reached people who had horns of oxen, got from the left bank of the Lualaba. Katomba's people got most ivory, namely, fifty tusks; the others only four. The Metamba, or forest, is of immense extent, and there is room for much ivory to be picked up at five or seven bracelets of copper per tusk, if the slaves sent will only be merciful. The nine villages destroyed, and one hundred men killed, by Katomba's slaves at Nasangwa's, were all about a string of beads fastened to a powder-horn, which a Manyuema man tried in vain to steal!

Katomba gets twenty-five of the fifty tusks brought by his people. We expect letters, and perhaps men, by Syde bin Habib. No news from the coast had come to Ujiji, save a rumor that some one was building a large house at Bagamoio, but whether French or English no one can say: possibly the erection of a huge establishment on the main-land may be a way of laboriously proving that it is more healthy than the island. It will take a long time to prove by stone and lime that the higher lands, two hundred miles inland, are better still, both for longevity and work.* I am in agony for news from home. All I feel sure of

* Dr. Livingstone never ceased to impress upon Europeans the utter necessity of living on the high table-lands of the interior, rather than on the sea-board, or the banks of the great arterial rivers. Men may escape death in an unhealthy place, but the system is enfeebled, and energy reduced to the lowest ebb. Under such circumstances, life becomes a misery, and important results can hardly be looked for when one's vitality is preoccupied in wrestling with the unhealthiness of the situation day and night.—ED.

now is that my friends will all wish me to complete my task. I join in the wish now, as better than doing it in vain afterward.

The Manyema hoeing is little better than scraping the soil, and cutting through the roots of grass and weeds, by a horizontal motion of the hoe or knife; they leave the roots of maize, ground-nuts, sweet-potatoes, and dura to find their way into the rich, soft soil, and well they succeed, so there is no need for deep plowing: the ground-nuts and cassava hold their own against grass for years, and bananas, if cleared of weeds, yield abundantly. Mohamad sowed rice just outside the camp without any advantage being secured by the vicinity of a rivulet, and it yielded for one measure of seed one hundred and twenty measures of increase. This season he plants along the rivulet called Bondé, and on the damp soil.

The rain-water does not percolate far, for the clay retains it about two feet beneath the surface: this is a cause of unhealthiness to man. Fowls and goats have been cut off this year in large numbers by an epidemic.

The visits of the Ujijian traders must be felt by the Manyema to be a severe infliction; for the huts are appropriated, and no leave asked: fire-wood, pots, baskets, and food are used without scruple, and any thing that pleases is taken away: usually the women flee into the forest, and return to find the whole place a litter of broken food. I tried to pay the owners of the huts in which I slept, but often in vain, for they hid in the forest and feared to come near. It was common for old men to come forward to me with a present of bananas as I passed, uttering, with trembling accents, "Bolongo, bolongo!" (Friendship, friendship!); and if I stopped to make a little return present, others ran for plantains or palm-toddy. The Arabs' men ate up what they demanded, without one word of thanks, and turned round to me and said, "They are bad; don't give them any thing." "Why, what badness is there in giving food?" I replied. "Oh! they like you, but hate us." One man gave me an iron ring, and all seemed inclined to be friendly, yet they are undoubtedly blood-thirsty to other Manyema, and kill each other.

I am told that, journeying inland, the safe way to avoid tsetse in going to Meréré's is to go to Mdongé, Makindé, Zungoméro, Masapi, Irundu, Nyangoré, then turn north to the Nyannugams, and thence to Nyémbé, and so on south to Meréré's. A woman chief lies in the straight way to Meréré, but no cattle live in the land. Another insect lights on the animals, and when licked off bites the tongue, or breeds, and is fatal as well as

tsetse: it is larger in size. Tipo Tipo and Syde bin Ali come to Nyémbé, thence to Nsama's, cross Lualaba at Mpwéto's, follow the left bank of that river till they cross the next Lualaba, and so into Lunda of Matiamvo. Much ivory may be obtained by this course, and it shows enterprise. Syde bin Habib and Dugunbé will open up the Lualaba this year, and I am hoping to enter the West Lualaba, or Young's River, and, if possible, go up to Katanga. The Lord be my guide and helper. I feel the want of medicine strongly, almost as much as the want of men.

October 16th.—Moenemgoi, the chief, came to tell me that Monamyembo had sent five goats to Lohombo to get a charm to kill him. "Would the English and Kolokolo (Mohamad) allow him to be killed while they were here?" I said that it was a false report, but he believes it firmly. Monamyembo sent his son to assure us that he was slandered, but thus quarrels and bloodshed feuds arise!

The great want of the Manyuema is national life; of this they have none: each head man is independent of every other. Of industry they have no lack, and the villagers are orderly toward each other, but they go no farther. If a man of another district ventures among them, it is at his peril: he is not regarded with more favor as a Manyuema than one of a herd of buffaloes is by the rest, and he is almost sure to be killed.

Moenékuss had more wisdom than his countrymen: his eldest son went over to Monamyembo (one of his subjects), and was there murdered by five spear-wounds. The old chief went and asked who had slain his son. All professed ignorance, while some suggested "perhaps the Bahombo did it;" so he went off to them, but they also denied it, and laid it at the door of Monamenda, from whom he got the same reply when he arrived at his place: no one knew, and so the old man died. This, though he was heart-broken, was called witchcraft by Monamyembo. Eleven people were murdered, and after this cruel man was punished he sent a goat, with the confession that he had killed Moenékuss's son. This son had some of the father's wisdom: the others he never could get to act like men of sense.

October 19th.—Bambarré. The ringleading deserters sent Chuma to say that they were going with the people of Mohamad (who left to-day) to the Metamba, but I said that I had naught to say to them. They would go now to the Metamba, whom, on deserting, they said they so much feared; and they think nothing of having left me to go with only three attendants, and get my feet torn to pieces in mud and sand. They probably meant

to go back to the women at Mamohela, who fed them in the absence of their husbands. They were told by Mohamad that they must not follow his people, and he gave orders to bind them and send them back if they did. They think that no punishment will reach them, whatever they do: they are freemen, and need not work or do any thing but beg. "English," they call themselves, and the Arabs fear them, though the eagerness with which they engaged in slave-hunting showed them to be genuine niggers.

October 20th.—The first heavy rain of this season fell yesterday afternoon. It is observable that the permanent halt to which the Manyema have come is not affected by the appearance of superior men among them: they are stationary, and improvement is unknown. Moenékuss paid smiths to teach his sons, and they learned to work in copper and iron, but he never could get them to imitate his own generous and obliging deportment to others. He had to reprove them perpetually for mean short-sightedness, and when he died he virtually left no successor, for his sons are both narrow-minded, mean, short-sighted creatures, without dignity or honor. All they can say of their forefathers is that they came from Lualaba up Luamo, then to Luelo, and thence here. The name seems to mean "forest people"—*Manyema*.

The party under Hassani crossed the Logumba at Kanyingéré's and went north and north-north-east. They found the country becoming more and more mountainous, till at last, approaching Moreré, it was perpetually up and down. They slept at a village on the top, and could send for water to the bottom only once, it took so much time to descend and ascend. The rivers all flowed into Keréré or Lower Tanganyika. There is a hot fountain whose water could not be touched nor stones stood upon. The Balégga were very unfriendly, and collected in thousands. "We come to buy ivory," said Hassani, "and, if there is none, we go away." "Nay," shouted they, "you come to die here!" and then they shot with arrows; when musket-balls were returned they fled, and would not come to receive the captives.

October 25th.—Bambarré. In this journey I have endeavored to follow with unswerving fidelity the line of duty. My course has been an even one, turning neither to the right hand nor to the left, though my route has been tortuous enough. All the hardship, hunger, and toil were met with the full conviction that I was right in persevering to make a complete work of the exploration of the sources of the Nile. Mine has been a calm, hopeful endeavor to do the work that has been given me to do, whether I

succeed or whether I fail. The prospect of death in pursuing what I knew to be right did not make me veer to one side or the other. I had a strong presentiment during the first three years that I should never live through the enterprise, but it weakened as I came near to the end of the journey; and an eager desire to discover any evidence of the great Moses having visited these parts bound me, spell-bound me, I may say; for if I could bring to light any thing to confirm the Sacred Oracles, I should not grudge one whit all the labor expended. I have to go down the Central Lualaba, or Webb's Lake River, then up the Western, or Young's Lake River, to Katanga head-waters, and then retire. I pray that it may be to my native home.

Syde bin Habib, Dugumbé, Juma Merikano, Abdullah Masendi are coming in with seven hundred muskets, and an immense store of beads, copper, etc. They will cross Lualaba, and trade west of it: I wait for them because they may have letters for me.

October 28th.—Moenemokata, who has traveled farther than most Arabs, said to me, "If a man goes with a good-natured, civil tongue, he may pass through the worst people in Africa unharmed." This is true, but time also is required: one must not run through a country, but give the people time to become acquainted with you, and let their first fears subside.

October 29th.—The Manyema buy their wives from each other; a pretty girl brings ten goats. I saw one brought home today: she came jauntily, with but one attendant, and her husband walking behind. They stop five days, then go back and remain other five days at home; then the husband fetches her again. Many are pretty, and have perfect forms and limbs.

October 31st.—Monangoi, of Luamo, married to the sister of Moenékuss, came some time ago to beg that Kanyingeré might be attacked by Mohamad's people: no fault has he, "but he is bad." Monangoi, the chief here, offered two tusks to effect the same thing; on refusal, he sends the tusks to Katomba, and may get his countryman spoiled by him. "He is bad," is all they can allege as a reason. Meantime this chief here caught a slave who escaped, a prisoner from Moenemokia's, and sold him or her to Moenemokia for thirty spears and some knives; when asked about this captive, he said, "She died." It was simply theft, but he does not consider himself bad.

November 2d, 1870.—The plain without trees that flanks the Lualaba on the right bank, called Mbuga, is densely peopled, and the inhabitants are all civil and friendly. From fifty to sixty large canoes come over from the left bank daily to hold mark-

ets. These people, too, "are good;" but the dwellers in the Metamba, or dense forest, are treacherous, and murder a single person without scruple: the dead body is easily concealed, while on the plain all would become aware of it.

I long with intense desire to move on and finish my work; I have also an excessive wish to find any thing that may exist proving the visit of the great Moses and the ancient kingdom of Tirhaka; but I pray give me just what pleases Thee, my Lord, and make me submissive to Thy will in all things.

I received information about Mr. Young's search-trip up the Shiré and Nyassa only in February, 1870, and now take the first opportunity of offering hearty thanks in a dispatch to Her Majesty's Government, and all concerned in kindly inquiring after my fate.

Musa and his companions were fair average specimens, for heartlessness and falsehood, of the lower classes of Mohammedans in East Africa. When we were on the Shiré we used to swing the ship into mid-stream every night, in order to let the air which was put in motion by the water pass from end to end. Musa's brother-in-law stepped into the water one morning, in order to swim off for a boat, and was seized by a crocodile: the poor fellow held up his hand imploringly, but Musa and the rest allowed him to perish. On my denouncing his heartlessness, Musa replied, "Well, no one tell him go in there." When at Senna, a slave-woman was seized by a crocodile: four Makololo rushed in unbidden, and rescued her, though they knew nothing about her. From long intercourse with both Johanna men and Makololo, I take these incidents as typical of the two races. Those of mixed blood possess the vices of both races, and the virtues of neither.

A gentleman of superior abilities* has devoted life and fortune to elevate the Johanna men, but fears that they are "an unimprovable race."

The Sultan of Zanzibar, who knows his people better than any stranger, can not intrust any branch of his revenue to even the better class of his subjects, but places all his customs, income, and money affairs in the hands of Banians from India, and his father did before him.

When the Mohammedan gentlemen of Zanzibar are asked "why their sovereign places all his pecuniary affairs and fortune in the hands of aliens?" they frankly avow that if he allowed

* Mr. John Sunley, of Pomoné, Johanna, an island in the Comoro group.

any Arab to farm his customs, he would receive nothing but a crop of lies.

Burton had to dismiss most of his people at Ujiji for dishonesty; Speke's followers deserted at the first approach of danger; Musa fled in terror on hearing a false report from a half-caste Arab about the Mazitu, one hundred and fifty miles distant, though I promised to go due west, and not turn to the north till far past the beat of that tribe. The few liberated slaves with whom I went on had the misfortune to be Mohammedan slaves in boyhood, but did fairly till we came into close contact with Moslems again. A black Arab was released from a twelve years' bondage by Casembe, through my own influence and that of the Sultan's letter: we traveled together for a time, and he sold the favors of his female slaves to my people for goods which he perfectly well knew were stolen from me. He received my four deserters, and when I had gone off to Lake Bangweolo with only four attendants, the rest wished to follow, but he dissuaded them by saying that I had gone into a country where there was war. He was the direct cause of all my difficulties with these liberated slaves, but, judged by the East African Moslem standard, as he ought to be, and not by ours, he is a very good man, and I did not think it prudent to come to a rupture with the old black-guard.

"Laba" means, in the Manyema dialect, "medicine;" a charm, "boganga:" this would make Lualaba mean the river of medicine, or charms. Hassani thought that it meant "great," because it seemed to mean flowing greatly or grandly.

Casembe caught all the slaves that escaped from Mohamad, and placed them in charge of Fungafunga, so there is little hope for fugitive slaves so long as Casembe lives. This act is to the Arabs very good: he is very sensible, and upright besides.

November 3d.—Got a Kondohondo, the large double-billed hornbill (the *Buceros cristata*), Kakomira of the Shiré, and the Sassassa of Bamarré. It is good eating, and has fat of an orange tinge, like that of the zebra. I keep the bill to make a spoon of it.

An ambassador at Stamboul or Constantinople was shown a hornbill spoon, and asked if it were really the bill of the phenix. He replied that he did not know, but he had a friend in London who knew all these sort of things; so the Turkish ambassador in London brought the spoon to Professor Owen. He observed something in the divergences of the fibres of the horn which he knew before, and went off into the Muscum of the College of

Surgeons, and brought a preserved specimen of this very bird. "God is great—God is great," said the Turk; "this is the phenix of which we have heard so often." I heard the professor tell this at a dinner of the London Hunterian Society in 1857.

There is no great chief in Manyema or Balégga; all are petty head men, each of whom considers himself a chief: it is the ethnic state, with no cohesion between the different portions of the tribe. Murder can not be punished except by a war, in which many fall, and the feud is made worse, and transmitted to their descendants.

The heathen philosophers were content with mere guesses at the future of the soul. The elder prophets were content with the Divine support in life and in death. The later prophets advance farther, as Isaiah: "Thy dead men shall live, together with my dead body shall they arise. Awake and sing, ye that dwell in the dust: for thy dew is as the dew of herbs. The earth also shall cast out her dead." This, taken with the sublime spectacle of Hades in the fourteenth chapter, seems a forecast of the future; but Jesus instructed Mary and her sister and Lazarus; and Martha, without hesitation, spoke of the resurrection at the last day as a familiar doctrine, far in advance of the Mosaic law in which she had been reared.

The Arabs tell me that Monyungo, a chief, was sent for five years among the Watuta to learn their language and ways, and he sent his two sons and a daughter to Zanzibar to school. He kills many of his people, and says they are so bad that, if not killed, they would murder strangers. Once they were unruly, when he ordered some of them to give their huts to Mohamad; on refusing, he put fire to them, and they soon called out, "Let them alone; we will retire." He dresses like an Arab, and has ten loaded guns at his sitting-place, four pistols, two swords, several spears, and two bundles of the Batuta spears: he laments that his father filed his teeth when he was young. The name of his very numerous people is Bawungu, country Urungu: his other names are Ironga, Mohamu.

The Basango, on the other hand, consider their chief as a deity, and fear to say aught wrong, lest he should hear them: they fear both before him and when out of sight.

The father of Mérére never drank pombe, or beer, and assigned as a reason that a great man who had charge of people's lives should never become intoxicated so as to do evil. Bangé he never smoked, but in council smelled at a bunch of it, in order to make his people believe that it had a great effect on him.

Meréré drinks pombe freely, but never uses bangé: he alone kills sheep; he is a lover of mutton and beef, but neither goats nor fowls are touched by him.

November 9th.—I sent to Lohombo for dura, and planted some nyumbo. I long excessively to be away and finish my work by the two lacustrine rivers, Lualaba of Webb and Young, but wait only for Syde and Dugumbé, who may have letters; and as I do not intend to return hither, but go through Karagwé homeward, I should miss them altogether. I groan, and am in bitterness at the delay, but thus it is: I pray for help to do what is right, but sorely am I perplexed, and grieve and mourn: I can not give up making a complete work of the exploration.

November 10th.—A party of Katomba's men arrived on their way to Ujiji for carriers: they report that a foray was made south-west of Mamohela to recover four guns, which were captured from Katomba; three were recovered, and ten of the Arab party slain. The people of Manyuema fought very fiercely with arrows; and not till many were killed and others mutilated would they give up the guns: they probably expected this foray, and intended to fight till the last. They had not gone in search of ivory while this was enacting; consequently Mohamad's men have got the start of them completely by going along Lualaba to Kasongo's, and then along the western verge of the Metamba, or forest, to Loindé or Rindi River. The last men sent took to fighting instead of trading, and returned empty: the experience gained thus, and at the south-west, will probably lead them to conclude that the Manyuema are not to be shot down without reasonable cause. They have sown rice and maize at Mamohela, but can not trade now where they got so much ivory before. Five men were killed at Rindi or Loindé, and one escaped. The reason of this outbreak by men who have been so peaceable is not divulged; but any one seeing the wholesale plunder to which the houses and gardens were subject can easily guess the rest. Mamohela's camp had several times been set on fire by night by the tribes which suffered assault, but did not effect all that was intended. The Arabs say that the Manyuema now understand that every gun-shot does not kill: the next thing they will learn will be to grapple in close quarters in the forest, where their spears will outmatch the guns in the hands of slaves; it will follow, too, that no one will be able to pass through this country. This is the usual course of Suaheli trading; it is murder and plunder; and each slave, as he rises in his owner's favor, is eager to show himself a mighty man of valor by cold-

blooded killing of his countrymen: if they can kill a fellow-nigger, their pride boils up. The conscience is not enlightened enough to cause uneasiness, and Islam gives less than the light of nature.

I am grievously tired of living here. Mohamad is as kind as he can be, but to sit idle, or give up before I finish my work, are both intolerable. I can not bear either, yet I am forced to remain, by want of people.

November 11th.—I wrote to Mohamad bin Saleh at Ujiji for letters and medicines to be sent in a box of China tea, which is half empty: if he can not get carriers for the long box itself, then he is to send these, the articles of which I stand in greatest need.

The relatives of a boy captured at Monanyembé brought three goats to redeem him: he is sick and emaciated: one goat was rejected. The boy shed tears when he saw his grandmother, and the father too, when his goat was rejected. "So I returned, and considered all the oppressions that are done under the sun: and behold the tears of such as were oppressed, and they had no comforter; and on the side of their oppressors there was power; but they had no comforter."—Eccles. iv., 1. The relations were told either to bring the goat, or let the boy die; this was hard-hearted. At Mamohela ten goats are demanded for a captive, and given too; here three are demanded. "He that is higher than the highest regardeth, and there be higher than they. Marvel not at the matter."

I did not write to the coast, for I suspect that the Lewale Syde bin Salem Buraschid destroys my letters in order to quash the affair of robbery by his man Saloom: he kept the other thief, Kamaels, by him for the same purpose. Mohamad writes to Bin Saleh to say that I am here, and well; that I sent a large packet of letters in June, 1869, with money, and received neither an answer nor my box from Unyanyembé, and this is to be communicated to the consul by a friend at Zanzibar. If I wrote, it would only be to be burned; this is as far as I can see at present. The friend who will communicate with the consul is Mohamad bin Abdullah, the wazeer; Seyd Suleiman is the lewale of the Governor of Zanzibar; Suleiman bin Ali, or *Sheik* Suleiman, the secretary.

The Mamohela horde is becoming terrified; for every party going to trade has lost three or four men; and in the last foray they saw that the Manyuema can fight, for they killed ten men. They will soon refuse to go among those whom they have forced to become enemies.

One of the Bazula invited a man to go with him to buy ivory: he went with him, and on getting into the Zulas country the stranger was asked by the guide if his gun killed men, and how it did it: while he was explaining the matter he was stabbed to death. No one knows the reason of this, but the man probably lost some of his relations elsewhere: this is called murder without cause. When Syde and Dugumbé come, I hope to get men and a canoe, to finish my work among those who have not been abused by Ujijians, and still retain their natural kindness of disposition. None of the people are ferocious without cause; and the sore experience which they gain from slaves with guns in their hands usually ends in sullen hatred of all strangers.

The education of the world is a terrible one, and it has come down with relentless rigor on Africa from the most remote times. What the African will become after this awfully hard lesson is learned, is among the future developments of Providence. When He who is higher than the highest accomplishes His purposes, this will be a wonderful country, and again something like what it was of old, when Zerah and Tirhaka flourished and were great.

The soil of Manyema is clayey, and remarkably fertile; the maize sown in it rushes up to seed, and every thing is in rank profusion if only it be kept clear of weeds; but the Bamarró people are indifferent cultivators, planting maize, bananas and plantains, and ground-nuts only—no dura, a little cassava, no pennisetum, meleza, pumpkins, melons, or nyumbo, though they all flourish in other districts. A few sweet-potatoes appear, but elsewhere all these native grains and roots are abundant and cheap. No one would choose this as a residence, except for the sake of Moenékuss. Oil is very dear; while at Lualaba a gallon may be got for a single string of beads, and beans, ground-nuts, cassava, maize, plantains in rank profusion. The Balégga, like the Bamarró people, trust chiefly to plantains and ground-nuts: to play with parrots is their great amusement.

November 13th.—The men sent over to Lohombo, about thirty miles off, got two and a half loaves of dura for a small goat, but the people were unwilling to trade. “If we encourage Arabs to trade, they will come and kill us with their guns,” so they said, and it is true; the slaves are overbearing, and when this is resented, then slaughter ensues. I got some sweet plantains and a little oil, which is useful in cooking, and, with salt, passes for butter on bread; but all were unwilling to trade. Monangoi was over near Lohombo, and heard of a large trading-party coming, and not far off: this may be Syde and Dugumbé, but reports are

often false. When Katomba's men were on the late foray, they were completely overpowered, and compelled by the Manyuema to lay down their guns and powder-horns, on pain of being instantly dispatched by bowshot; they were mostly slaves, who could only draw the trigger and make a noise. Katomba had to rouse out all the Arabs who could shoot, and when they came they killed many, and gained the lost day: the Manyuema did not kill any one who laid down his gun and powder-horn. This is the beginning of an end which was easily perceived when it became not a trading, but a foray of a murdering horde of savages.

The foray above mentioned was undertaken by Katomba for twenty goats from Kassessa—ten men lost for twenty goats! but they will think twice before they try another foray.

A small bird follows the "sassassa," or *Buceros cristata*. It screams and pecks at his tail till he discharges the contents of his bowels, and then leaves him: it is called "play" by the natives, and by the Suaheli "utané" or "msaha"—fun or wit: he follows other birds in the same merciless way, screaming and pecking to produce purging. Manyuema call this bird "mambambwa." The buffalo-bird warns its big friend of danger by calling "Chachacha," and the rhinoceros-bird cries out, "Tye, tye, tye, tye," for the same purpose. The Manyuema call the buffalo-bird "mojela," and the Suaheli "chassa." A climbing plant in Africa is known as "ntulungopé," which, mixed with flour of dura, kills mice; they swarm in our camp, and destroy every thing, but ntulungopé is not near this.

The Arabs tell me that one dollar a day is ample for provisions for a large family at Zanzibar: the food consists of wheat, rice, flesh of goats or ox, fowls, bananas, milk, butter, sugar, eggs, mangoes, and potatoes. Ambergris is boiled in milk and sugar, and used by the Hindoos as a means of increasing blood in their systems; a small quantity is a dose: it is found along the shore of the sea at Barawa or Brava, and at Madagascar, as if the sperm-whale got rid of it while alive. Lamoo or Amu is wealthy, and well supplied with every thing, as grapes, peaches, wheat, cattle, camels, etc. The trade is chiefly with Madagascar: the houses are richly furnished with furniture, dishes from India, etc. At Garaganza there are hundreds of Arab traders; there, too, all fruits abound, and the climate is healthy, from its elevation. Why can not we missionaries imitate these Arabs in living on heights?

November 24th.—Herpes is common at the plantations in Zanzi-

bar, but the close crowding of the houses in the town they think prevents it; the lips and mouth are affected, and constipation sets in for three days: all this is cured by going over to the mainland. Affections of the lungs are healed by residence at Bariwa or Brava, and also on the main-land. The Tafori of Halfani took my letters from Ujiji, but who the person employed is I do not know.

November 29th.—*Safura* is the name of the disease of clay or earth eating at Zanzibar; it often affects slaves, and the clay is said to have a pleasant odor to the eaters; but it is not confined to slaves, nor do slaves eat in order to kill themselves; it is a diseased appetite, and rich men who have plenty to eat are often subject to it. The feet swell, flesh is lost, and the face looks haggard; the patient can scarcely walk for shortness of breath and weakness, and he continues eating till he dies. Here many slaves are now diseased with safura; the clay built in walls is preferred, and Manyuema women, when pregnant, often eat it. The cure is effected by drastic purges, composed as follows: old vinegar of cocoa-trees is put into a large basin, and old slag red-hot cast into it; then "moneyé," asafetida, half a rupee in weight, copperas, sulph. ditto: a small glass of this, fasting morning and evening, produces vomiting and purging of black dejections; this is continued for seven days; no meat is to be eaten, but only old rice, or dura and water; a fowl in course of time: no fish, butter, eggs, or beef for two years, on pain of death. Mohamad's father had skill in the cure, and the above is his prescription. Safura is thus a disease *per se*; it is common in Manyuema, and makes me in a measure content to wait for my medicines: from the description, inspissated bile seems to be the agent of blocking up the gall-duct and duodenum, and the clay or earth may be nature trying to clear it away: the clay appears unchanged in the stools, and in large quantity. A Banyamwezi carrier, who bore an enormous load of copper, is now by safura scarcely able to walk; he took it at Lualaba, where food is abundant, and he is contented with his lot. Squeeze a finger-nail, and if no blood appears beneath it, safura is the cause of the bloodlessness.

CHAPTER XVII.

Degraded State of the Manyema.—Want of Writing Materials.—Lion's Fat a Specific against Tsetse.—The Neggeri.—Jottings about Meréré.—Various Sizes of Tusks.—An Epidemic.—The strangest Disease of all!—The New Year.—Detention at Bamarré.—Goître.—News of the Cholera.—Arrival of Coast Caravan.—The Parrot's-feather Challenge.—Murder of James.—Men arrive as Servants.—They refuse to go North.—Parts at last with Malcontents.—Receives Letters from Dr. Kirk and the Sultan.—Doubts as to the Congo or Nile.—Katomba presents a young Soko.—Forest Scenery.—Discrimination of the Manyema.—They “want to eat a white one.”—Horrible Bloodshed by Ujiji Traders.—Heart-sore, and sick of Blood.—Approaches Nyañgwé.—Reaches the Lualaba.

December 6th, 1870.—OH for Dugumbé or Syde to come! but this delay may be all for the best. The parrots all seize their food and hold it with the left hand; the lion, too, is left-handed; he strikes with the left; so are all animals left-handed save man.

I noticed a very pretty woman come past this quite jauntily about a month ago, on marriage with Monasimba. Ten goats were given: her friends came and asked another goat, which being refused, she was enticed away, became sick of rheumatic fever two days afterward, and died yesterday. Not a syllable of regret for the beautiful young creature does one hear; but for the goats—“Oh, our ten goats!”—they can not grieve too much—“Our ten goats—oh! oh!”

Basanga wail over those who die in bed, but not over those who die in battle: the cattle are a salve for all sores.

Another man was killed within half a mile of this: they quarreled, and there is virtually no chief. The man was stabbed, the village burned, and the people all fled: they are truly a bloody people!

A man died near this: Monasimba went to his wife, and after washing he may appear among men. If no widow can be obtained, he must sit naked behind his house till some one happens to die: all the clothes he wore are thrown away. They are the lowest of the low, and especially in bloodiness. The man who killed a woman without cause goes free: he offered his grandmother to be killed in his stead, and after a great deal of talk nothing was done to him!

December 8th.—Suleiman bin Juma lived on the main-land; Mosessamé opposite Zanzibar. It is impossible to deny his pow-

er of foresight, except by rejecting all evidence, for he frequently foretold the deaths of great men among Arabs, and he was pre-eminently a good man, upright and sincere: "Thirti," none like him now for goodness and skill. He said that two middle-sized white men, with straight noses and flowing hair down to the girdle behind, came at times and told him things to come. He died twelve years ago, and left no successor: he foretold his own decease three days beforehand by cholera. "Heresi," a ball of hair rolled in the stomach of a lion, is a grand charm to the animal and to Arabs. Mohamad has one.

December 10th.—I am sorely let and hindered in this Manyema. Rain every day, and often at night. I could not travel now, even if I had men, but I could make some progress. This is the sorest delay I ever had. I look above for help and mercy.

[The wearied man tried to while away the time by gaining little scraps of information from the Arabs and the natives, but we can not fail to see what a serious stress was all the time put upon his constitution under these circumstances. The reader will pardon the disjointed nature of his narrative, written as it was under the greatest disadvantage.]

Lion's fat is regarded as a sure preventive of tsetse or bungo. This was noted before, but I add now that it is smeared on the ox's tail, and preserves hundreds of the Banyamwesi cattle in safety while going to the coast; it is also used to keep pigs and hippopotami away from gardens: the smell is probably the efficacious part in "heresi," as they call it.

December 12th.—It may be all for the best that I am so hindered, and compelled to inactivity.

An advance to Lohombo was the farthest point of traders for many a day, for the slaves returning with ivory were speared mercilessly by Manyema, because they did not know guns could kill, and their spears could. Katomba coming to Moenékuss was a great feat three or four years ago; then Dugumbé went on to Lualaba, and fought his way, so I may be restrained now in mercy till men come.

The neggeri, an African animal, attacks the tenderest parts of man and beast, cuts them off, and retires contented: buffaloes are often castrated by him. Men who know it squat down, and kill him with knife or gun. The zibu, or mbuidé, flies at the tendon Achilles: it is most likely the ratel.

The fisi ea bahari, probably the seal, is abundant in the seas, but the ratel, or badger, probably furnished the skins for the

Tabernacle: bees escape from his urine, and he eats their honey in safety; lions and all other animals fear his attacks of the heel.

The Babemba mix a handful (about twenty-five to a measure) of castor-oil seeds with the dura and meleza they grind, and usage makes them like it; the nauseous taste is not perceptible in porridge: the oil is needed where so much farinaceous or starchy matter exists, and the bowels are regulated by the mixture: experience has taught them the need of a fatty ingredient.

[Dr. Livingstone seems to have been anxious to procure all the information possible from the Arabs respecting the powerful chief Meréré, who is reported to live on the borders of the Salt Water Lake, which lies between Lake Tanganyika and the East Coast. It would seem as if Meréré held the most available road for travelers passing to the south-west from Zanzibar, and although the doctor did not go through his country, he felt an interest, no doubt, in ascertaining as much as he could for the benefit of others.]

Goambari is a prisoner at Meréré's, guarded by a thousand or more men, to prevent him intriguing with Monyungo, who is known as blood-thirsty. In the third generation Charura's descendants numbered sixty able-bodied spearmen; Garahenga or Kimamuré killed many of them. Charura had six white attendants with him, but all died before he did, and, on becoming chief, he got all his predecessor's wives. Meréré is the son of a woman of the royal stock, and of a common man; hence he is a shade or two darker than Charura's descendants, who are very light-colored, and have straight noses. They shave the head, and straight hair is all cut off: they drink much milk, warm, from the teats of the cows, and think that it is strengthening by its heat.

December 23d.—Bambarré people suffer hunger now because they will not plant cassava; this trading-party eats all the maize, and sends to a distance for more, and the Manyuema buy from them with malofu, or palm-toddy. Rice is all coming into ear, but the Manyuema planted none: maize is ripening, and mice are a pest. A strong man among the Manyuema does what he pleases, and no chief interferes: for instance, a man's wife for ten goats was given off to a Mené man, and his child, now grown, is given away too: he comes to Mohamad for redress! Two elephants killed were very large, but have only small tusks: they come from the south in the rains. All animals, as elephants, buffaloes, and zebras, are very large in the Basango country; tusks are full in the hollows, and weigh very heavy, and animals are

fat, and good in flesh. Eleven goats are the exchange for the flesh of an elephant.

[The following details respecting ivory can not fail to be interesting here: they are very kindly furnished by Mr. F. D. Blyth, whose long experience enables him to speak with authority upon the subject. He says England imports about five hundred and fifty tons of ivory annually; of this two hundred and eighty tons pass away to other countries, while the remainder is used by our manufacturers, of whom the Sheffield cutlers alone require about one hundred and seventy tons. The whole annual importation is derived from the following countries, and in the quantities given below, as near as one can approach to actual figures:

Bombay and Zanzibar export.....	160 tons.
Alexandria and Malta.....	180 "
West Coast of Africa.....	140 "
Cape of Good Hope.....	50 "
Mozambique.....	20 "

The Bombay merchants collect ivory from all the southern countries of Asia and the East Coast of Africa, and after selecting that which is most suited to the wants of the Indian and Chinese markets, ship the remainder to Europe.

From Alexandria and Malta we receive ivory collected from Northern and Central Africa, from Egypt, and the countries through which the Nile flows.

Immediately after the Franco-German war the value of ivory increased considerably; and when we look at the prices realized on large Zanzibar tusks at the public sales, we can well understand the motive power which drove the Arab ivory hunters farther and farther into the country from which the chief supply was derived when Dr. Livingstone met them.

In 1867 their price varied from	£39	to	£42
" 1868	"	"	39 " 42
" 1869	"	"	41 " 44
" 1870	"	"	41 " 44
" 1871	"	"	41 " 44
" 1872	"	"	58 " 61
" 1873	"	"	68 " 72
" 1874	"	"	53 " 58

Single tusks vary in weight from one to one hundred and sixty-five pounds: the average of a pair of tusks may be put at twenty-eight pounds; and therefore forty-four thousand elephants, large and small, must be killed yearly to supply the ivory which *comes to England alone*; and when we remember that an enormous quantity goes to America, to India, and China, for consumption there, and of which we have no account, some faint notion may be formed of the destruction that goes on among the herds of elephants.

Although naturalists distinguish only two living species of elephants, viz., the African and the Asiatic, nevertheless there is a great difference in the size, character, and color of their tusks, which may arise from variations in climate, soil, and food. The largest tusks are yielded by the African elephant, and find their way hither from the port of Zanzibar: they are noted for being opaque, soft or "mellow" to work, and free from cracks or defects.

The tusks from India, Ceylon, etc., are smaller in size, partly of an opaque character, and partly translucent (or, as it is technically called, "bright"), and harder and more cracked; but those from Siam and the neighboring countries are very "bright," soft, and fine-grained; they are much sought after for carvings and ornamental work. Tusks from Mozambique and the Cape of Good Hope seldom exceed seventy pounds in weight each: they are similar in character to the Zanzibar kind.

Tusks which come through Alexandria and Malta differ considerably in quality: some resemble those from Zanzibar, while others are white and opaque, harder to work, and more cracked at the points; and others, again, are very translucent and hard, besides being liable to crack: this latter description fetches a much lower price in the market.

From the West Coast of Africa we get ivory which is always translucent, with a dark outside or coating, but partly hard and partly soft.

The soft ivory which comes from Ambriz, the Gaboon River, and the ports south of the equator, is more highly valued than any other, and is called "silver gray:" this sort retains its whiteness when exposed to the air, and is free from that tendency to become yellowish in time which characterizes Asiatic and East African ivory.

Hard tusks, as a rule, are proportionately smaller in diameter, sharper, and less worn than soft ones, and they come to market much more cracked, fetching, in consequence, a lower price.

In addition to the above, a few tons of mammoth ivory are received from time to time from the Arctic regions and Siberia; and although of unknown antiquity, some tusks are equal in every respect to ivory which is obtained in the present day from elephants newly killed; this, no doubt, is owing to the preservative effects of the ice in which the animals have been imbedded for many thousands of years. In the year 1799 the entire carcass of a mammoth was taken from the ice, and the skeleton and portions of the skin, still covered with reddish hair, are preserved in the Museum of St. Petersburg: it is said that portions of the flesh were eaten by the men who dug it out of the ice.]

December 24th.—Between twenty-five and thirty slaves have died in the present epidemic, and many Manyema; two yester-

day at Kandawara. The feet swell, then the hands and face, and in a day or two they drop dead. It came from the East, and is very fatal, for few escape who take it.

A woman was accused of stealing maize, and the chief here sent all his people yesterday, plundered all she had in her house and garden, and brought her husband bound in thongs till he shall pay a goat: she is said to be innocent.

Monangoi does this by fear of the traders here; and, as the people tell him, as soon as they are gone the vengeance he is earning by injustice on all sides will be taken. I told the chief that his head would be cut off as soon as the traders leave, and so it will be, and Kasessa's also.

Three men went from Katomba to Kasonga's to buy viramba, and a man was speared belonging to Kasonga; these three then fired into a mass of men who collected; one killed two, another three, and so on; so now that place is shut up from traders; and all this country will be closed as soon as the Manyema learn that guns are limited in their power of killing, and especially in the hands of slaves, who can not shoot, but only make a noise. These Suaheli are the most cruel and blood-thirsty missionaries in existence, and withal so impure in talk and acts, spreading disease everywhere. The Lord sees it.

December 28th.—Moenembegg, the most intelligent of the two sons of Moenékuss, in power, told us that a man was killed and eaten a few miles from this yesterday: hunger was the reason assigned. On speaking of tainted meat, he said that the Manyema put meat in water for two days to make it putrid and smell high. The love of high meat is the only reason I know for their cannibalism; but the practice is now hidden on account of the disgust that the traders expressed against open man-eating when they first arrived.

Lightning was very near us last night. The Manyema say that when it is so loud fishes of large size fall with it—an opinion shared by the Arabs; but the large fish is really the *Clarias capensis* of Smith, and it is often seen migrating in single file along the wet grass for miles: it is probably this that the Manyema thinks falls from the lightning.

The strangest disease I have seen in this country seems really to be broken-heartedness, and it attacks free men who have been captured and made slaves. My attention was drawn to it when the elder brother of Syde bin Habib was killed in Rua by a night attack, from a spear being pitched through his tent into his side. Syde then vowed vengeance for the blood of his brother, and

assaulted all he could find, killing the elders, and making the young men captives. He had secured a very large number, and they endured the chains until they saw the broad River Lualaba roll between them and their free homes; they then lost heart. Twenty-one were unchained, as being now safe; however, all ran away at once; but eight, with many others still in chains, died in three days after crossing. They ascribed their only pain to the heart, and placed the hand correctly on the spot, though many think that the organ stands high up under the breast-bone. Some slavers expressed surprise to me that they should die, seeing they had plenty to eat and no work. One fine boy of about twelve years was carried, and when about to expire was kindly laid down on the side of the path, and a hole dug to deposit the body in. He, too, said he had nothing the matter with him except pain in his heart: as it attacks only the free (who are captured and never slaves), it seems to be really broken hearts of which they die.

[Livingstone's servants give some additional particulars in answer to questions put to them about this dreadful history. The sufferings endured by these unfortunate captives while they were hawked about in different directions must have been shocking indeed: many died because it was impossible for them to carry a burden on the head while marching in the heavy yoke, or "taming-stick," which weighs from thirty to forty pounds as a rule, and the Arabs knew that if once the stick were taken off, the captive would escape on the first opportunity. Children for a time would keep up with wonderful endurance; but it happened sometimes that the sound of dancing and the merry tinkle of the small drums would fall on their ears, in passing near to a village: then the memory of home and happy days proved too much for them; they cried and sobbed, the "broken heart" came on, and they rapidly sank.

The adults, as a rule, came into the slave-sticks from treachery, and had never been slaves before. Very often the Arabs would promise a present of dried fish to villagers if they would act as guides to some distant point; and as soon as they were far enough away from their friends they were seized, and pinned into the yoke, from which there is no escape. These poor fellows would expire in the way the doctor mentions, talking to the last of their wives and children, who would never know what had become of them. On one occasion twenty captives succeeded in escaping as follows: chained together by the neck, and in the custody of an Arab armed with a gun, they were sent off to collect wood. At a given signal, one of them called the guard to look at something which he pretended he had found: when he

stooped down, they threw themselves upon him and overpowered him, and after he was dead managed to break the chain and make off in all directions.]

Rice sown on the 19th of October was in ear in seventy days. A leopard killed my goat, and a gun set for him went off at 10 P.M. The ball broke both hind-legs and one fore-leg, yet he had power to spring up and bite a man badly afterward. He was a male, two feet four inches at withers, and six feet eight inches from tip of nose to end of tail.

January 1st, 1871.—O Father! help me to finish this work to Thy honor!

Still detained at Bambarré, but a caravan of five hundred muskets is reported from the coast: it may bring me other men and goods.

Rain daily. A woman was murdered without cause close by the camp; the murderer said she was a witch, and speared her: the body is exposed till the affair is settled, probably by a fine of goats.

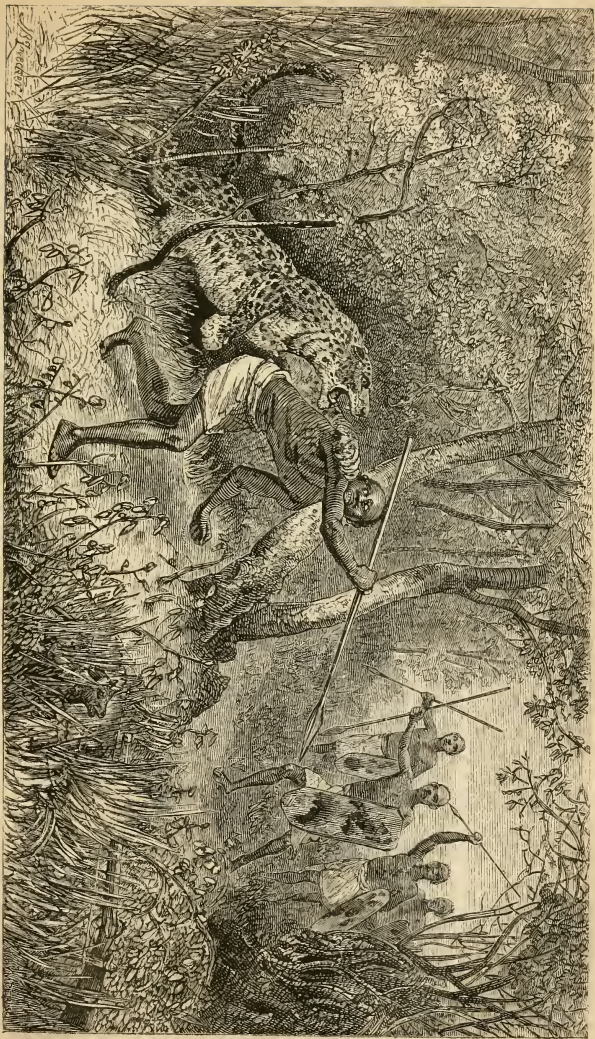
The Manyema are the most bloody, callous savages I know. One puts a scarlet feather from a parrot's tail on the ground, and challenges those near to stick it in the hair: he who does so must kill a man or woman!

Another custom is that none dare wear the skin of the musk-cat (ngawa), unless he has murdered somebody. Guns alone prevent them from killing us all, and for no reason either.

January 16th.—Ramadân ended last night, and it is probable my people and others from the coast will begin to travel after three days of feasting. It has been so rainy I could have done little, though I had had people.

January 22d.—A party is reported to be on the way hither. This is likely enough, but reports are so often false that doubts arise. Mohamad says he will give men when the party of Hasani comes, or when Dugumbé arrives.

January 24th.—Mohamad mentioned this morning that Moenemokaia, and Moeneghera, his brother, brought about thirty slaves from Katañga to Ujiji, affected with swelled thyroid glands, or "goître," and that drinking the water of Tanganyika proved a perfect cure to all in a very few days. Sometimes the swelling went down in two days after they began to use the water, in their ordinary way of cooking, washing, and drinking: possibly some ingredient of the hot fountain that flows into it effects the cure, for the people on the Lofubu, in Nsama's country, had the swelling. The water in bays is decidedly brackish, while the body of Tanganyika is quite fresh.



A DANGEROUS PRIZE.

The odor of putrid elephant's meat in a house kills parrots: the Manyema keep it till quite rotten, but know its fatal effects on their favorite birds.

January 27th.—Safari, or caravan, reported to be near, and my men and goods at Ujiji.

January 28th.—A safari, under Hassani and Ebed, arrived with news of great mortality by cholera (*towny*) at Zanzibar, and my "brother," whom I conjecture to be Dr. Kirk, has fallen. The men I wrote for have come to Ujiji, but did not know my whereabouts: when told by Katomba's men, they will come here, and bring my much-longed-for letters and goods. Seventy thousand victims in Zanzibar alone from cholera, and it spread inland to the Masoi and Ugogo! Cattle shivered, and fell dead: the fishes in the sea died in great numbers: here the fowls were first seized, and died, but not from cholera, only from its companion. Thirty men perished in our small camp, made still smaller by all the able men being off trading at the Metamba, and how many Manyema died we do not know. The survivors became afraid of eating the dead.

Formerly the cholera kept along the sea-shore, now it goes far inland, and will spread all over Africa. This we get from Mecca filth, for nothing was done to prevent the place being made a perfect cess-pool of animals' guts and ordure of men.* A piece of skin bound round the chest of a man, and half of it hanging down, prevents waste of strength, and he forgets and fattens.

Ebed's party bring two hundred frasilahs of all sorts of beads: they will cross Lualaba, and open a new field on the other, or Young's, Lualaba: all Central Africa will soon be known. The evils inflicted by these Arabs are enormous, but probably not greater than the people inflict on each other. Meréré has turned against the Arabs, and killed one; robbing several others of all they had, though he has ivory sufficient to send down seven thousand pounds to the coast, and receive loads of goods for five hundred men in return. He looks as if insane, and probably is so, and will soon be killed. His insanity may be the effect of pombe, of which he drinks largely, and his people may have told him that the Arabs were plotting with Goambari. He restored Mohamad's ivory and slaves, and sent for the other traders, who had fled, saying his people had spoken badly, and he would repay all losses.

* The epidemic here mentioned reached Zanzibar Island from the interior of Africa by way of the Masai caravan route and Pangani. Dr. Kirk says it again entered Africa from Zanzibar, and followed the course of the caravans to Ujiji and Manyema.—Ed.

The Watuta (who are the same as the Mazitu) came stealing Banyanwezi cattle, and Mtéza's men went out to them, and twenty-two were killed, but the lewale's people did nothing. The governor's sole anxiety is to obtain ivory, and no aid is rendered to traders. Seyd Suleiman, the wazeer, is the author of the do-nothing policy, and sent away all the sepoy as too expensive; consequently the Wagogo plunder traders unchecked. It is reported that Egyptian Turks came up and attacked Mtéza, but lost many people, and fled. The report of a Moslem mission to his country was a falsehood, though the details given were circumstantial. Falsehood is so common, one can believe nothing the Arabs say, unless confirmed by other evidence: they are the followers of the prince of lies, Mohammed, whose cool appropriation of the knowledge gained at Damascus, and from the Jews, is perfectly disgusting. All his deeds were done when unseen by any witnesses. It is worth noticing that all admit the decadence of the Moslem power, and they ask how it is so fallen? They seem sincere in their devotion and in teaching the Koran, but its meaning is comparatively hid from most of the Suaheli. The Persian Arabs are said to be gross idolaters, and awfully impure. Earth from a grave at Kurbelow (?) is put in the turban and worshiped: some of the sects will not say "Amen."

Moenyegumbé never drank more than a mouthful of pombe. When young, he could make his spear pass right through an elephant, and stick in the ground on the other side. He was a large man, and all his members were largely developed; his hands and fingers were all in proportion to his great height, and he lived to old age with strength unimpaired: Goambari inherits his white color and sharp nose, but not his wisdom or courage. Meréré killed five of his own people for exciting him against the Arabs. The half-caste is the murderer of many of Charura's descendants. His father got a daughter of Moenyegumbé for courage in fighting the Babema of Ubena.

Cold-blooded murders are frightfully common here. Some kill people in order to be allowed to wear the red tail-feathers of a parrot in their hair; and yet they are not ugly like the West Coast Negroes, for many men have as finely formed heads as could be found in London. We English, if naked, would make but poor figures beside the strapping forms and finely shaped limbs of Manyuema men and women. Their cannibalism is doubtful, but my observations raise grave suspicions. A Scotch jury would say, "Not proven." The women are not guilty.

February 4th, 1871.—Ten of my men from the coast have come

near to Bambarré, and will arrive to-day. I am extremely thankful to hear it, for it assures me that my packet of letters was not destroyed. They know at home by this time what has detained me, and the end to which I strain.

Only one letter reached, and forty are missing! James was killed to-day by an arrow: the assassin was hid in the forest till my men going to buy food came up.* I propose to leave on the 12th. I have sent Dr. Kirk a check for 4000 reals. Great havoc was made by cholera, and in the midst of it my friend exerted himself greatly to get men off to me with goods; the first gang of porters all died.

February 8th.—The ten men refusing to go north are influenced probably by Shereef and my two ringleaders, who try this means to compel me to take them.

February 9th.—The man who contrived the murder of James came here, drawn by the pretense that he was needed to lead a party against the villages, which he led to commit the outrage. His thirst for blood is awful. He was bound, and word sent to bring the actual murderers within three days, or he suffers death. He brought five goats, thinking that would smooth the matter over.

February 11th.—Men struck work for higher wages: I consented to give them six dollars a month if they behaved well; if ill, I diminish it; so we hope to start to-morrow. Another hunting quelled by Mohamad and me.

The ten men sent are all slaves of the Banians, who are English subjects, and they come with a lie in their mouth: they will not help me, and swear that the consul told them not to go forward, but to force me back; and they spread the tale all over the country that a certain letter has been sent to me with orders to return forthwith. They swore so positively, that I actually looked again at Dr. Kirk's letter to see if his orders had been rightly understood by me. But for Mohamad Bogharib, and fear of pistol-shot, they would gain their own and their Banian master's end to baffle me completely. They demand an advance of one dollar, or six dollars a month, though this is double freeman's pay at Zanzibar. Their two head men, Shereef and Awathé, refused to come past Ujiji, and are reveling on my goods there.

February 13th.—Mabruki, being seized with choleraic purging, detains us to-day. I gave Mohamad five pieces Americano, five ditto Kaniké,† and two frasilahs samisami beads. He gives me

* The men give indisputable proof that his body was eaten by the Manyema who lay in ambush.—ED.

† Kaniké is a blue calico.

a note to Hassani for twenty thick copper bracelets. Yesterday crowds came to eat the meat of the man who misled James to his death-spot; but we want the men who set the Mbanga men to shoot him. They were much disappointed when they found that no one was killed, and are undoubtedly cannibals.

Friday, 16th.—Started to-day. Mabruki making himself out very ill, Mohamad roused him out by telling him I traveled when much worse. The chief gave me a goat, and Mohamad another; but in coming through the forest on the neck of the mountain the men lost three, and have to go back for them, and return to-morrow. Simon and Ibram were bundled out of the camp, and impudently followed me: when they came up, I told them to be off.

February 17th.—Waiting at a village on the western slope for the men to come up with the goats, if they have gone back to the camp. Mohamad would not allow the deserters to remain among his people, nor would I. It would only be to imbue the minds of my men with their want of respect for all English, and total disregard of honesty and honor. They came after me with inimitable effrontery, believing that though I said I would not take them, they were so valuable, I was only saying what I knew to be false. The goats were brought by a Manyema man, who found one fallen into a pitfall and dead: he ate it, and brought one of his own in lieu of it. I gave him ten strings of beads, and he presented a fowl in token of good-will.

February 18th.—Went on to a village on the Lulwa, and on the 19th reached Moenemgoi, who dissuaded me so earnestly against going to Moenekurumbo for the cause of Molembalemba that I agreed not to venture.

February 20th.—To the ford with only one canoe now, as two men of Katomba were swept away in the other and drowned. They would not sell the remaining canoe, so I go north-west on foot to Moené Lualaba, where fine large canoes are abundant. The grass and mud are grievous, but my men lift me over the waters.

February 21st.—Arrived at Monandewa's village, situated on a high ridge between two deep and difficult gullies. These people are obliging and kind: the chief's wife made a fire for me in the evening unbidden.

February 22d.—On the north-west to a high hill called Chibandé a Yundé, with a spring of white water at the village on the top. Famine from some unknown cause here, but the people are cultivating now on the plain below with a will.

February 23d.—On to two large villages with many banana-

plants around; but the men said they were in fear of the traders, and shifted their villages to avoid them: we then went on to the village Kahombogola, with a feeble old man as chief. The country is beautiful and undulating: light-green grass covers it all, save at the brooks, where the eye is relieved by the dark-green lines of trees. Grass tears the hands and wets the extremities constantly. The soil is formed of the débris of granitic rocks; rough and stony, but everywhere fertile. One can rarely get a bare spot to sit down and rest.

February 24th.—To a village near Lolandé River. Then across the Loengadyé, sleeping on the bank of the Luha, and so to Mamohela, where we were welcomed by all the Arabs, and I got a letter from Dr. Kirk, and another from the Sultan, and from Mohamad bin Nassib, who was going to Karagwé: all anxious to be kind. Katomba gave flour, nuts, fowls, and goat. A new way is opened to Kasonga's much shorter than that I followed. I rest a few days, and then go on.

February 25th.—So we went on, and found that it was now known that the Lualaba flowed west-south-west, and that our course was to be west across this other great bend of the mighty river. I had to suspend my judgment so as to be prepared to find it, after all, perhaps the Congo. No one knew any thing about it except that when at Kasongo's nine days west and by south, it came sweeping round, and flowed north and north and by east.

Katomba presented a young soko, or gorilla, that had been caught while its mother was killed: she sits eighteen inches high; has fine, long, black hair all over, which was pretty so long as it was kept in order by her dam. She is the least mischievous of all the monkey tribe I have seen, and seems to know that in me she has a friend, and sits quietly on the mat beside me. In walking, the first thing observed is that she does not tread on the palms of her hands, but on the backs of the second line of bones of the hands: in doing this, the nails do not touch the ground, nor do the knuckles. She uses the arms thus supported crutch fashion, and hitches herself along between them: occasionally one hand is put down before the other, and alternates with the feet, or she walks upright and holds up a hand to any one to carry her: if refused, she turns her face down, and makes grimaces of the most bitter human weeping, wringing her hands, and sometimes adding a fourth hand or foot to make the appeal more touching. Grass or leaves she draws around her to make a nest, and resents any one meddling with her property. She is a most

friendly little beast, and came up to me at once, making her chirrup of welcome, smelled my clothing, and held out her hand to be shaken. I slapped her palm without offense, though she winced. She began to untie the cord with which she was afterward bound, with fingers and thumbs, in quite a systematic way; and on being interfered with by a man, looked daggers, and screaming, tried to beat him with her hands: she was afraid of his stick, and faced him, putting her back to me as a friend. She holds out her hand for people to lift her up and carry her quite like a spoiled child; then bursts into a passionate cry, somewhat like that of a kite, wrings her hands quite naturally, as if in despair. She eats every thing, covers herself with a mat to sleep, and makes a nest of grass or leaves, and wipes her face with a leaf.

I presented my double-barreled gun which is at Ujiji to Katomba, as he has been very kind when away from Ujiji: I pay him thus for all his services. He gave me the soko, and will carry it to Ujiji for me. I have tried to refund all that the Arabs expended on me.

March 1st, 1871.—I was to start this morning, but the Arabs asked me to take seven of their people going to buy biramba. As they know the new way, the offer was gladly accepted.

March 2d-5th.—Left Mamohela, and traveled over fine grassy plains, crossing in six hours fourteen running rills, from three to ten or fifteen feet broad, and from calf to thigh deep. Tree-covered mountains on both sides. The natives know the rills by names, and readily tell their courses, and which falls into which, before all go into the great Lualaba; but without one as a guide, no one can put them in a map. We came to Monanbunda's villages, and spent the night. Our next stage was at Monangongo's. A small present of a few strings of beads satisfies, but is not asked: I give it invariably as acknowledgment for lodgings. The head man of our next stage hid himself in fear, as we were near to the scene of Bin Juma's unprovoked slaughter of five men for tusks that were not stolen, but thrown down. Our path lay through dense forest, and again, on the 5th, our march was in the same dense jungle of lofty trees and vegetation that touch our arms on each side. We came to some villages among beautiful tree-covered hills, called Basilañgé or Mobasilangé. The villages are very pretty, standing on slopes. The main street generally lies east and west, to allow the bright sun to stream his clear hot rays from one end to the other, and lick up quickly the moisture from the frequent showers which is not drained off by

the slopes. A little veranda is often made in front of the door, and here at dawn the family gathers round a fire, and, while enjoying the heat needed in the cold that always accompanies the first darting of the light, or sun's rays, across the atmosphere, inhale the delicious air, and talk over their little domestic affairs. The various shaped leaves of the forest all around their village and near their nestlings are bespangled with myriads of dew-drops. The cocks crow vigorously, and strut and ogle; the kids gambol and leap on the backs of their dams, quietly chewing the cud; other goats make believe fighting. Thrifty wives often bake their new clay pots in a fire, made by lighting a heap of grass roots: the next morning they extract salt from the ashes, and so two birds are killed with one stone. The beauty of this morning scene of peaceful enjoyment is indescribable. Infancy gilds the fairy picture with its own lines, and it is probably never forgotten; for the young, taken up from slavers, and treated with all philanthropic missionary care and kindness, still revert to the period of infancy as the finest and fairest they have known. They would go back to freedom and enjoyment as fast as would our own sons of the soil, and be heedless to the charms of hard work and no play which we think so much better for them if not for us.

In some cases we found all the villages deserted; the people had fled at our approach, in dread of repetitions of the outrages of Arab slaves. The doors were all shut: a bunch of the leaves of reeds or of green reeds placed across them means "no entrance here." A few stray chickens wander about wailing, having hid themselves, while the rest were caught and carried off into the deep forest, and the still smoking fires tell the same tale of recent flight from the slave-traders.

Many have found out that I am not one of their number, so in various cases they stand up and call out loudly, "Bolongo, bolongo!" (Friendship, friendship!). They sell their fine iron bracelets eagerly for a few beads (for bracelets seem out of fashion since beads came in); but they are of the finest quality of iron; and were they nearer Europe would be as eagerly sought and bought as horseshoe nails are for the best gun-barrels. I overhear the Manyuema telling each other that I am the "good one." I have no slaves, and I owe this character to the propagation of a good name by the slaves of Zanzibar, who are any thing but good themselves. I have seen slaves belonging to the seven men now with us slap the cheeks of grown men who had offered food for sale; it was done in sheer wantonness, till I

threatened to thrash them if I saw it again; but out of my sight they did it still, and when I complained to the masters they confessed that all the mischief was done by slaves; for the Manyema, on being insulted, lose temper, and use their spears on the nasty curs, and then vengeance is taken with guns. Free men behave better than slaves; the bondmen are not responsible. The Manyema are far more beautiful than either the bond or free of Zanzibar: I overhear the remark often, "If we had Manyema wives, what beautiful children we should beget." The men are usually handsome, and many of the women are very pretty; hands, feet, limbs, and forms perfect in shape, and the color light-brown, but the orifices of the nose are widened by snuff-takers, who ram it up as far as they can with the finger and thumb: the teeth are not filed, except a small space between the two upper front teeth.

March 5th.—We heard to-day that Mohamad's people passed us on the west, with much ivory. I lose thus twenty copper rings I was to take from them, and all the notes they were to make for me of the rivers they crossed.

March 6th.—Passed through very large villages, with many forges in active work. Some men followed us, as if to fight, but we got them to turn peaceably: we do not know who are enemies, so many have been maltreated and had relatives killed. The rain of yesterday made the paths so slippery that the feet of all were sorely fatigued, and, on coming to Manyara's, I resolved to rest on the 7th near Mount Kimazi. I gave a cloth and beads in lieu of a fine fat goat from the chief, a clever, good man.

March 9th.—We marched about five hours across a grassy plain without trees—buga, or prairie. The torrid sun, nearly vertical, sent his fierce rays down, and fatigued us all. We crossed two Sokoyé streams by bridges, and slept at a village on a ridge of woodland overlooking Kasonga. After two hours this morning, we came to villages of this chief, and at once were welcomed by the Safari of Salem Mokadam, and I was given a house. Kasonga is a very fine young man, with European features, and "very clever and good." He is clever, and is pronounced good, because he eagerly joins the Arabs in marauding! Seeing the advantage of fire-arms, he has bought four muskets. Mohamad's people were led by his, and spent all their copper for some fifty frasilahs of good ivory. From this party men have been sent over Lualaba, and about fifty frasilahs obtained: all praise Kasonga. We were now only six miles from Lualaba, and yet south of Mamohela; this great river, in fact, makes a second great sweep

to the west of some one hundred and thirty miles, and there are at least 30' of southing; but now it comes rolling majestically to the north, and again makes even easting. It is a mighty stream, with many islands in it, and is never wadable at any point or at any time of the year.

March 10th.—Mohamad's people are said to have gone to Luapanya, a powerful chief, who told them they were to buy all their ivory from him: he had not enough, and they wanted to go on to a people who have ivory door-posts; but he said, "You shall go neither forward nor backward, but remain here;" and he then called an immense body of archers, and said, "You must fight these." The consequence was, they killed Luapanya and many of his people, called Bahika, then crossed a very large river, the Morombya or Morombwé, and again the Pembo River, but do not seem to have gone very far north. I wished to go from this in canoes, but Kasonga has none; so I must tramp for five or six days to Moené Lualaba to buy one, if I have credit with Abed.

March 11th.—I had a long, fierce oration from Amur, in which I was told again and again that I should be killed and eaten—the people wanted a "white one" to eat! I needed two hundred guns, and "must not go to die." I told him that I was thankful for advice, if given by one who had knowledge, but his vehement threats were dreams of one who had never gone anywhere, but sent his slaves to kill people: he was only frightening my people, and doing me an injury. I told him that Baker had only twelve people, and came near to this: to this he replied, "Were the people cannibals?" etc., etc.

I left this noisy demagogue, after saying I thanked him for his warnings, but saw he knew not what he was saying. The traders from Ujiji are simply marauders, and their people worse than themselves: they thirst for blood more than for ivory; each longs to be able to tell a tale of blood, and the Manyuema are an easy prey. Hassani assaulted the people at Moené Lualaba's, and now they keep to the other bank. I am forced to bargain with Kasonga for a canoe, and he sends to a friend for one to be sent on the 13th. This Hassani declared to me that he would not begin hostilities, but he began nothing else. The prospect of getting slaves overpowers all else, and blood flows in horrid streams. The Lord look on it! Hassani will have some tale to tell Mohamad Bogharib.

[At the outset of his explorations Livingstone fancied that there were degrees in the sufferings of slaves, and that the horrors perpetrated by the Portuguese of Tette were unknown in the

system of slave-hunting which the Arabs pursue: we now see that a further acquaintance with the slave-trade of the interior has restored the balance of infamy, and that the same tale of murder and destruction is common wherever the traffic extends, no matter by whom it is carried on.]

March 15th.—Falsehood seems ingrained in their constitutions: no wonder that in all this region they have never tried to propagate Islamism: the natives soon learn to hate them, and slaving, as carried on by the Kilwas and Ujijians, is so bloody as to prove an effectual barrier against proselytism.

My men are not come back: I fear they are engaged in some broil. In confirmation of what I write, some of the party here assaulted a village of Kasonga's, killed three men, and captured women and children: they pretended that they did not know them to be his people, but they did not return the captives.

March 20th.—I am heart-sore, and sick of human blood.

March 21st.—Kasonga's brother's child died, and he asked me to remain to-day while he buried the dead, and he would give me a guide to-morrow: being rainy, I stopped willingly. Dugumbé is said to purpose going down the river to Kanagumbé River to build on the land Kanagumbé, which is a loop formed by the river, and is large. He is believed to possess great power of divination, even of killing unfaithful women.

March 22d.—I am detained another day by the sickness of one of the party. Very cold rain yesterday from the north-west. I hope to go to-morrow toward the Lakoni, or great market of this region.

March 23d.—Left Kasonga, who gave me a goat and a guide. The country is gently undulating, showing green slopes fringed with wood, with grass from four to six feet. We reached Katenga's, about five miles off. There are many villages, and people passed us carrying loads of provisions and cassava from the chitoka, or market.

March 24th.—Great rain in the night and morning, and sickness of the men prevented our march.

March 25th.—Went to Mazimwé, seven miles and a half off.

March 26th.—Went four miles, and crossed the Kabwinaji; then a mile beyond Kahembai, which flows into the Kunda, and it into the Lualaba. The country is open, and low hills appear in the north. We met a party from the traders at Kasonga, chiefly Materéka's people, under Salem and Syde bin Sultan. They had eighty-two captives, and say they fought ten days to secure them and two of the Malongwana, and two of the Ban-

yamwezi. They had about twenty tusks, and carried one of their men, who broke his leg in fighting. We shall be safe only when past the bloodshed and murder.

March 27th.—We went along a ridge of land overhanging a fine valley of denudation, with well-cultivated hills in the distance (north), where Hassani's feat of bloodshed was performed. There are many villages on the ridge, some rather tumble-down ones, which always indicate some misrule. Our march was about seven miles. A head man who went with us plauged another chief to give me a goat. I refused to take what was not given willingly, but the slaves secured it; and I threatened our companion, Kama, with dismissal from our party if he became a tool in slave hands. The arum is common.

March 28th.—The Banian slaves are again trying compulsion—I do not know what for. They refused to take their bread rations, and made Chakanga spokesman: I could not listen to it, as he has been concocting a mutiny against me. It is excessively trying; and so many difficulties have been put in my way, I doubt whether the Divine favor and will is on my side.

We came six miles to-day, crossing many rivulets running to the Kunda, which also we crossed in a canoe; it is almost thirty yards wide, and deep. Afterward, near the village where we slept, we crossed the Luja, about twenty yards wide, going into the Kunda and Lualaba. I am greatly distressed because there is no law here. They probably mean to create a disturbance at Abed's place, to which we are near: the Lord look on it!

March 29th.—Crossed the Liya, and next day the Moangoi, by two well-made wattle bridges at an island in its bed: it is twenty yards, and has a very strong current, which makes all the market-people fear it. We then crossed the Molembé in a canoe, which is fifteen yards, but swelled by rains and many rills. Came seven miles and a half to sleep at one of the outlying villages of Nyangwé. About sixty market-people came past us from the chitoka, or market-place, on the banks of Lualaba; they go thither at night, and come away about midday, having disposed of most of their goods by barter. The country is open, and dotted over with trees, chiefly a species of bauhinia, that resists the annual grass burnings. There are trees along the water-courses, and many villages, each with a host of pigs. This region is low as compared with Tanganyika; about two thousand feet above the sea.

The head man's house, in which I was lodged, contained the housewife's little conveniences, in the shape of forty pots, dishes.

baskets, knives, mats, all of which she removed to another house : I gave her four strings of beads, and go on to-morrow. Crossed the Kunda River, and seven miles more brought us to Nyañgwé, where we found Abed and Hassani had erected their dwellings, and sent their people over Lualaba, and as far west as the Loéki or Lomamé. Abed said that my words against blood-shedding had stuck into him, and he had given orders to his people to give presents to the chiefs, but never fight unless actually attacked.

March 31st.—I went down to take a good look at the Lualaba here. It is narrower than it is higher up, but still a mighty river—at least three thousand yards broad, and always deep : it can never be waded at any point, or at any time of the year ; the people unhesitatingly declare that if any one tried to ford it, he would assuredly be lost. It has many large islands, and at these it is about two thousand yards, or one mile. The banks are steep and deep : there is clay, and a yellow-clay schist in their structure ; the other rivers, as the Luya and Kunda, have gravelly banks. The current is about two miles an hour away to the north.

CHAPTER XVIII.

The Chitoka, or Market gathering.—The broken Watch.—Improvises Ink.—Builds a new House at Nyañgwé, on the Bank of the Lualaba.—Marketing.—Cannibalism.—Lake Kamalondo.—Dreadful Effect of Slaving.—News of Country across the Lualaba.—Tiresome Frustration.—The Bakuss.—Feeble Health.—Busy Scene at Market.—Unable to procure Canoes.—Disaster to Arab Canoes.—Rapids in Lualaba.—Project for visiting Lake Lincoln and the Lomamé.—Offers large Reward for Canoes and Men.—The Slave's Mistress.—Alarm of Natives at Market.—Fiendish Slaughter of Women by Arabs.—Heart-rending Scene.—Death on Land and in the River.—Tagamoio's Assassinations.—Continued Slaughter across the River.—Livingstone becomes desponding.

April 1st, 1871.—THE banks are well peopled, but one must see the gathering at the market, of about three thousand, chiefly women, to judge of their numbers. They hold market one day, and then omit attendance here for three days, going to other markets at other points in the intervals. It is a great institution in Manyema: numbers seem to inspire confidence, and they enforce justice for each other. As a rule, all prefer to buy and sell in the market, to doing business anywhere else; if one says, "Come, sell me that fowl or cloth," the reply is, "Come to the 'chitoka,' or market-place."

April 2d.—To-day the market contained over a thousand people, carrying earthen pots and cassava, grass-cloth, fishes, and fowls; they were alarmed at my coming among them, and were ready to flee; many stood afar off in suspicion; some came from the other side of the river with their goods. To-morrow market is held up river.

April 3d.—I tried to secure a longitude by fixing a weight on the key of the watch, and so helping it on: I will try this in a quiet place to-morrow. The people all fear us; and they have good reason for it, in the villainous conduct of many of the black-guard half-castes, which alarms them. I can not get a canoe, so I wait to see what will turn up. The river is said to overflow all its banks annually, as the Nile does farther down. I sounded across yesterday. Near the bank it is nine feet, the rest fifteen feet; and one cast in the middle was twenty feet: between the islands twelve feet, and nine feet again inshore: it is a mighty river truly. I took distances and altitudes alternately, with a bullet for a weight on the key of the chronometer, taking succes-

sive altitudes of the sun and distances of the moon. Possibly the first and last altitudes may give the rate of going, and the frequent distances between may give approximate longitude.

April 4th.—Moon, the fourth of the Arabs, will appear in three or four days. This will be a guide in ascertaining the day of observing the lunars, with the weight.

The Arabs ask many questions about the Bible, and want to know how many prophets have appeared, and probably say that they believe in them all; while we believe all, but reject Mohammed. It is easy to drive them into a corner by questioning, as they do not know whither the inquiries lead; and they are not offended when their knowledge is, as it were, admitted. When asked how many false prophets are known, they appeal to my knowledge, and evidently never heard of Balaam, the son of Beor, or of the two hundred and fifty false prophets of Jezebel and Ahab, or of the many lying prophets referred to in the Bible.

April 6th.—Ill from drinking two cups of very sweet malofu, or beer, made from bananas: I shall touch it no more.

April 7th.—Made this ink with the seeds of a plant called by the Arabs zugifaré; it is known in India, and is used here by the Manyema to dye virambos, and ornament faces and heads.* I sent my people over to the other side to cut wood to build a house for me; the borrowed one has mud walls and floors, which are damp, foul-smelling, and unwholesome. I shall have grass walls, and grass and reeds on the floor of my own house; the free ventilation will keep it sweet. This is the season called Masika, the finishing rains, which we have in large quantities almost every night, and I could scarcely travel even if I had a canoe; still it is trying to be kept back by suspicion, and by the wickedness of the wicked.

Some of the Arabs try to be kind, and send cooked food every day: Abed is the chief donor. I taught him to make a mosquito-curtain of thin printed calico, for he had endured the persecution of these insects helplessly, except by sleeping on a high stage, when they were unusually bad. The Manyema often

* The reader will best judge of the success of the experiment by looking at a specimen of the writing. An old sheet of the *Standard* newspaper, made into rough copy-books, sufficed for paper, in the absence of all other material; and by writing across the print, no doubt the notes were tolerably legible at the time. The color of the decoction used instead of ink has faded so much, that if Dr. Livingstone's handwriting had not at all times been beautifully clear and distinct, it would have been impossible to decipher this part of his diary.—Ep.

INTELLIGENCE.

VICK NOTES.

the year seems to have become and considering how poor were ecks-ago, it is surprising what a ntended since the illegitimate dden activity displayed by the as not arisen from the prizes Fraal, and Merry, for these have not, while in all the programmes 's bad handicapping has been xception. There really is no infused into the national sport, orses still kept in training. The on—if the weather keeps open— e as good racing as that wit- the Swan Meadows, which were f Monday morning. If the sun ow as it did early to-day, there n the going, and perhaps even decided does not call for par- st number ran for the Nursery, profimed Boy out a queer has never ran up to the form he ck in the summer. Mr. Merry's it a barred place honour, and like light, she appears unable to finish. e best of the afternoon's operations, Roxana, Romance, and Herbert, ativity good turns. There are ten and my selections for the most im-

er—VICTRESS OR BORDER KNIGHT.
Handicap (RECORDED OR NEWSMAN).
BLACK BOY.
D COLE OR LUMLEY.
ASE—GODEFELLOW.
FARE.
ELAWARE.
ASMODEUS.

MINGTON MEETING—TUESDAY.
ndel before the races commenced ng had been bright with an occa- . The Warwick pastures, where "sticky" and heavy going, but

The DONINGTON HANDICAP of 10 sovs. each, 3 ft, with 50 added; winners extra. Three-quarters of a mile. Twenty-four subs.

Mr. T. T. Drake's Lord of the Valley, by Mentmore—
Queca Bee, 3 yrs, 7st 6lb. Fox 1
Mr. W. Fletcher's Veda, 4 yrs, 1st. Wilson 2
Mr. Hodgman's Cheddington, 4 yrs, 6st. Hunt 3
Mr. G. Trimmer's The Skipper, 5 yrs, 8st 6lb. Killick 4
Betting.—2 to 1 each agst The Skipper and Cheddington, 3 to 1 agst Lord of the Valley, and 5 to 1 agst Veda. Lord of the Valley made play, followed by Cheddington, next to whom came Veda, the Skipper, who got off badly, bringing up the rear. Half way up the distance Veda joined the leading pair, and after a fine race Lord of the Valley won by a head, and Veda beat Cheddington a neck for second place. The Skipper was last throughout.

The NURSERY HANDICAP of 15 sovs each, 10 ft, and 3 if declared, &c., with 100 sovs added; winners extra; second to save stake. Three-quarters of a mile. Thirty-five subs, 17 of whom pay 3 sovs each.

Mr. Payne's Newsmen, by Newminster—Pauline, 8st 7lb. Chaloner 1
Mr. J. Merry's f by Cramond—Seamstress—7st 7lb. Maidment 2
Captain Machel's Bonny Swell, 8st 10lb (inc. 5lb ex) Jeffery 3

Mr. E. Brayl y's Soucar, 8st 6lb. Cannon 0
Mr. Dawson's Ware Hare, 8st 2lb. Hudson 0
Mr. Hilton's Bruce, 7st 10lb ear 7st 11lb. Wyatt 0
Capt. Atkin's The Boy, 7st 7lb. Butler 0

Betting.—5 to 2 agst The Boy, 3 to 1 agst Soucar, 4 to 1 agst Seamstress filly, 5 to 1 agst Newsmen, 11 to 2 agst Bruce, 10 to 1 agst Bonny Swell. The Boy held a slight lead of the rest, who ran abreast, with the exception of Newsmen. The latter, after going a couple of hundred yards, dropped into the rear, and at the same time the Seamstress filly, followed by Bonny Swell, went to the front, The Boy occupying third position into the straight, where Newsmen drew up, caught the leaders opposite the stand, and won by a length; a neck separated the second and third; The Boy was fourth; Soucar fifth; Bruce sixth; and Ware Hare last.

A HANDICAP of 5 sovs each, with 30 sovs added; winners extra. Half a mile. Thirty subs.

Mr. J. Wood's Northern Star, by Cape Flyaway—Star of India, 4 yrs, 7st 7lb. Wilson 1
Mr. Head's Bonnie Katie, 3 yrs, 7st 10lb. Wyatt 2
Mr. Stevens's Chateau Margaux, 4 yrs, 7st. J. Clark 3
Mr. W. Holman's Last Rose of Summer, 4 yrs, 7st 3lb. Holland 4
's Plenipotentiary, 3 yrs, 7st. Vinell 0

bring evil on themselves by being untrustworthy. For instance, I paid one to bring a large canoe to cross the Lualaba; he brought a small one, capable of carrying three only; and after wasting some hours, we had to put off crossing till next day.

April 8th.—Every head man of four or five huts is a mologhwé, or chief, and glories in being called so. There is no political cohesion. The Ujijian slavery is an accursed system; but it must be admitted that the Manyema, too, have faults, the result of ignorance of other people. Their isolation has made them as unconscious of danger, in dealing with the cruel stranger, as little dogs in the presence of lions. Their refusal to sell or lend canoes for fear of blame by each other will be ended by the party of Dugumbé, which has ten head men, taking them by force; they are unreasonable and bloody-minded toward each other: every Manyema would like every other head man slain; they are subjected to bitter lessons and sore experience. Abed went over to mologhwé Kabembé, and mixed blood with him; he was told that two large canoes were hollowed out, and nearly ready to be brought for sale. If this can be managed peaceably, it is a great point gained; and I may get one at our Arabs' price, which may be three or four times the native price. There is no love lost among the three Arabs here.

April 9th.—Cut wood for my house. The Loéki is said by slaves who have come thence to be much larger than the Lualaba, but on the return of Abed's people from the west we shall obtain better information.

April 10th.—Chitoka, or market, to-day. I counted upward of seven hundred passing my door. With market-women it seems to be a pleasure of life to haggle and joke, and laugh and cheat: many come eagerly, and retire with care-worn faces; many are beautiful, and many old; all carry very heavy loads of dried cassava and earthen pots, which they dispose of very cheaply for palm-oil, fish, salt, pepper, and relishes for their food. The men appear in gaudy lambas, and carry little save their iron wares, fowls, grass-cloth, and pigs.

Bought the fish with the long snouts: very good eating.

April 12th.—New moon last night; fourth Arab month: I am at a loss for the day of the month. My new house is finished; a great comfort, for the other was foul, and full of vermin: bugs (tapazi, or ticks), that follow wherever Arabs go, made me miserable, but the Arabs are insensible to them; Abed alone had a mosquito-curtain, and he never could praise it enough. One of his remarks is, "If slaves think you fear them, they will climb

over you." I clothed mine for nothing, and ever after they have tried to ride rough-shod over me, and mutiny on every occasion!

April 14th.—Kahembé came over, and promises to bring a canoe; but he is not to be trusted; he presented Abed with two slaves, and is full of fair promises about the canoe, which he sees I am anxious to get. They all think that my buying a canoe means carrying war to the left bank; and now my Banian slaves encourage the idea: "He does not wish slaves nor ivory," say they, "but a canoe, in order to kill Manyema." Need it be wondered at that people who had never heard of strangers or white men before I popped down among them believed the slander? The slaves were aided in propagating the false accusation by the half-caste Ujijian slaves at the camp. Hassani fed them every day; and, seeing that he was a bigoted Moslem, they equalled him in prayers in his sitting-place seven or eight times a day! They were adepts at lying, and the first Manyema words they learned were used to propagate falsehood.

I have been writing part of a dispatch, in case of meeting people from the French settlement on the Gaboon at Loéki, but the canoe affair is slow and tedious: the people think only of war: they are a bloody-minded race.

April 15th.—The Manyema tribe, called Bagenya, occupy the left bank, opposite Nyañgwé. A spring of brine rises in the bed of a river named Lofubu, and this the Bayenga inspissate by boiling, and sell the salt at market. The Lomamé is about ten days west of Lualaba, and very large; the confluence of Lomamé, or Loéki, is about six days down below Nyañgwé by canoe; the River Nyanzé is still less distant.

April 16th.—On the Nyanzé stands the principal town and market of the chief, Zurampela. Rashid visited him, and got two slaves on promising to bring a war-party from Abed against Chipangé, who by similar means obtained the help of Salem Mokadam to secure eighty-two captives. Rashid will leave this as soon as possible, sell the slaves, and leave Zurampela to find out the fraud! This deceit, which is an average specimen of the beginning of half-caste dealings, vitiates his evidence of a specimen of cannibalism which he witnessed; but it was after a fight that the victims were cut up; and this agrees with the fact that the Manyema eat only those who are killed in war. Some have averred that captives, too, are eaten, and a slave is bought with a goat to be eaten; but this I very strongly doubt.

April 17th.—Rainy.

April 18th.—I found that the *Lepidosiren* is brought to market

in pots with water in them; also white ants roasted, and the large snail, *Achetina*, and a common snail: the *Lepidosiren* is called "*sembé*."

Abed went a long way to examine a canoe, but it was still farther, and he turned back.

April 19th.—Dreary waiting; but Abed proposes to join and trade along with me: this will render our party stronger, and he will not shoot people in my company; we shall hear Katomba's people's story too.

April 20th.—Katomba, a chief, was to visit us yesterday, but failed, probably through fear.

The chief Mokandira says that Loéki is small where it joins Lualaba; but another, which they call Lomamé, is very much larger, and joins Lualaba too: rapids are reported on it.

April 21st.—A common salutation reminds me of the Bechuana's "*U le hatsi*" (thou art on earth); "*Ua tala*" (thou lookest); "*Ua boka*," or *byoka* (thou awakest); "*U ri ho*" (thou art here); "*U li koni*" (thou art here)—about pure "*Sichuana*," and "*Nya*" (no), is identical. The men here deny that cannibalism is common: they eat only those killed in war, and, it seems, in revenge; for, said Mokandira, "the meat is not nice; it makes one dream of the dead man." Some west of Lualaba eat even those bought for the purpose of a feast; but I am not quite positive on this point: all agree in saying that human flesh is saltish, and needs but little condiment. And yet they are a fine-looking race: I would back a company of Manyuema men to be far superior in shape of head, and generally in physical form too, against the whole Anthropological Society. Many of the women are very light-colored, and very pretty; they dress in a kilt of many folds of gaudy lambas.

April 22d.—In Manyuema, here Kusi, Kunzi, is north; Mhuru, south; Nkanda, west, or other side Lualaba; Mazimba, east. The people are sometimes confused in name by the directions; thus, Bankanda is only "the other side folk." The Bagenya Chimburu came to visit me, but I did not see him, nor did I know Moené Nyañgwé till too late to do him honor; in fact, every effort was made to keep me in the dark while the slavers of Ujiji made all smooth for themselves to get canoes. All chiefs claim the privilege of shaking hands, that is, they touch the hand held out with their palm, then clap two hands together, then touch again, and clap again, and the ceremony concludes: this frequency of shaking hands misled me when the great man came.

April 24th.—Old feuds lead the Manyuema to entrap the trad-

ers to fight; they invite them to go to trade, and tell them that at such a village plenty of ivory lies; then when the trader goes with his people, word is sent that he is coming to fight, and he is met by enemies, who compel him to defend himself by their onslaught. We were nearly entrapped in this way by a chief pretending to guide us through the country near Basilañgé; he would have landed us in a fight, but we detected his drift, changed our course so as to mislead any messengers he might have sent, and dismissed him with some sharp words.

Lake Kamolondo is about twenty-five miles broad. The Lufira at Katanga is a full bow-shot wide; it goes into Kamolondo. Chakomo is east of Lufira Junction. Kikonzé Kalanza is on the west of it, and Mkana, or the under-ground dwellings, still farther west: some are only two days from Katanga. The Chorwé people are friendly. Kamolondo is about ten days distant from Katanga.

April 25th.—News came that four men sent by Abed to buy ivory had been entrapped, and two killed. The rest sent for aid to punish the murderers, and Abed wished me to send my people to bring the remaining two men back. I declined; because, no matter what charges I gave, my Banian slaves would be sure to shed human blood. We can go nowhere but the people of the country ask us to kill their fellow-men; nor can they be induced to go to villages three miles off, because there, in all probability, live the murderers of fathers, uncles, or grandfathers—a dreadful state truly. The traders are as blood-thirsty every whit as the Manyuema, where no danger exists; but in most cases where the people can fight they are as civil as possible. At Moeré Mpan-da's, the son of Casembe, Mohamad Bogharib left a debt of twenty-eight slaves and eight bars of copper, each seventy pounds, and did not dare to fire a shot because they saw they had met their match: here his head men are said to have bound the head men of villages till a ransom was paid in tusks! Had they only gone three days farther to the Babisa, to whom Moenemokaia's men went, they would have got fine ivory at two rings a tusk, while they had paid from ten to eighteen. Here it is as sad a tale to tell as was that of the Manganja scattered and peeled by the Waiyau agents of the Portuguese of Tétte. The good Lord look on it!

April 26th.—Chitovu called nine slaves bought by Abed's people from the Kuss country, west of the Lualaba, and asked them about their tribes and country for me. One, with his upper front teeth extracted, was of the tribe Maloba, on the other side of the

Loéki; another comes from the River Lombadzo, or Lombazo, which is west of Loéki (this may be another name for the Lomamé): the country is called Nanga, and the tribe Noñgo, chief Mpunzo. The Malobo tribe is under the chiefs Yunga and Lomadyo. Another toothless boy said that he came from the Lomamé: the upper teeth extracted seem to say that the tribe have cattle; the knocking out the teeth is in imitation of the animals they almost worship. No traders had ever visited them; this promises ivory to the present visitors: all that is now done with the ivory there is to make rude blowing-horns and bracelets.

April 27th.—Waiting wearily and anxiously; we can not move people who are far off and make them come near with news. Even the owners of canoes say, "Yes, yes; we shall bring them," but do not stir; they doubt us, and my slaves increase the distrust by their lies to the Manyuema.

April 28th.—Abed sent over Manyuema to buy slaves for him, and got a pretty woman for three hundred cowries and a hundred strings of beads; she can be sold again to an Arab for much more in ivory. Abed himself gave one hundred and thirty dollars for a woman-cook, and she fled to me when put in chains for some crime: I interceded, and she was loosed. I advised her not to offend again, because I could not beg for her twice.

Hassani, with ten slaves, dug at the malachite mines of Katanga for three months, and gained a hundred frasilahs of copper, or three thousand five hundred pounds. We hear of a half-caste reaching the other side of Lomamé, probably from Congo or Ambriz, but the messengers had not seen him.

May 1st, 1871.—Katomba's people arrived from the Babisa, where they sold all their copper at two rings for a tusk, and then found that abundance of ivory still remained: door-posts and house-pillars had been made of ivory which now was rotten. The people of Babisa kill elephants now, and bring tusks by the dozen, till the traders get so many that in this case they carried them by three relays. They dress their hair like the Bashukulompo, plaited into upright basket helmets. No quarrel occurred, and great kindness was shown to the strangers. A river, having very black water, the Nyengeré, flows into Lualaba from the west, and it becomes itself very large: another river or water, Shamikwa, falls into it from the south-west, and it becomes still larger: this is probably the Lomamé. A short-horned antelope is common.

May 3d.—Abed informs me that a canoe will come in five days. Word was sent after me by the traders south of us not

to aid me, as I was sure to die where I was going: the wish is father to the thought! Abed was naturally very anxious to get first into the Babisa ivory market, yet he tried to secure a canoe for me before he went; but he was too eager, and a Manyuema man took advantage of his desire, and came over the river and said that he had one hollowed out, and he wanted goats and beads to hire people to drag it down to the water. Abed on my account advanced five goats, a thousand cowries, and many beads, and said that he would tell me what he wished in return: this was debt, but I was so anxious to get away I was content to take the canoe on any terms. However, it turned out that the matter on the part of the head man whom Abed trusted was all deception: he had no canoe at all, but knew of one belonging to another man, and wished to get Abed and me to send men to see it—in fact, to go with their guns, and he would manage to embroil them with the real owner, so that some old feud should be settled to his satisfaction. On finding that I declined to be led into his trap, he took a female slave to the owner, and on his refusal to sell the canoe for her, it came out that he had adopted a system of fraud to Abed. He had victimized Abed, who was naturally inclined to believe his false statements, and get off to the ivory market. His people came from the Kuss country in the west with sixteen tusks, and a great many slaves bought, and not murdered for. The river is rising fast, and bringing down large quantities of aquatic grass, duck-weed, etc. The water is a little darker in color than at Cairo. People remove, and build their huts on the higher forest lands adjacent. Many white birds (the paddy bird) appear, and one *Ibis religiosa*; they pass north.

The Bakuss live near Lomamé; they were very civil and kind to the strangers, but refused passage into the country. At my suggestion, the effect of a musket-shot was shown on a goat: they thought it supernatural, looked up to the clouds, and offered to bring ivory to buy the charm that could draw lightning down. When it was afterward attempted to force a path, they darted aside on seeing the Banyamwezi's followers putting the arrows into the bow-strings, but stood in mute amazement looking at the guns, which mowed them down in large numbers. They thought that muskets were the insignia of chieftainship. Their chiefs all go with a long straight staff of rattan, having a quantity of black medicine smeared on each end, and no weapons in their hands: they imagined that the guns were carried as insignia of the same kind; some, jeering, in the south called them big tobacco-pipes; they have no fear on seeing a gun leveled at them.

They use large and very long spears very expertly in the long grass and forest of their country, and are terrible fellows among themselves; and when they become acquainted with fire-arms will be terrible to the strangers who now murder them. The Manyema say truly, "If it were not for your guns, not one of you would ever return to your country." The Bakuss cultivate more than the Southern Manyema, especially pennisetum and dura, or *Holcus sorghum*; common coffee is abundant, and they use it, highly scented with vanilla, which must be fertilized by insects; they hand round cups of it after meals. Pine-apples, too, are abundant. They bathe regularly twice a day; their houses are of two stories. The women have rather compressed heads, but very pleasant countenances, and ancient Egyptian, round, wide-awake eyes. Their numbers are prodigious; the country literally swarms with people, and a chief's town extends upward of a mile. But little of the primeval forest remains. Many large pools of standing water have to be crossed, but markets are held every eight or ten miles from each other; and to these the people come from far, for the market is as great an institution as shopping is with the civilized. Illicit intercourse is punished by the whole of the offender's family being enslaved.

The Bakuss smelt copper from the ore, and sell it very cheaply to the traders for beads. The project of going in canoes now appeared to the half-castes so plausible that they all tried to get the Bagenya on the west bank to lend them, and all went over to mix blood and make friends with the owners; then all slandered me as not to be trusted, as they, their blood-relations, were, and my slaves mutinied and would go no farther. They mutinied three times here, and Hassani harbored them till I told him that, if an English officer harbored an Arab slave, he would be compelled by the consul to refund the price, and I certainly would not let him escape; this frightened him; but I was at the mercy of slaves who had no honor, and no interest in going into danger.

May 16th.—Abed gave me a frasilah of Matunda beads, and I returned fourteen fathoms of fine American sheeting, but it was an obligation to get beads from one whose wealth depended on exchanging beads for ivory.

May 17th.—At least three thousand people at market to-day; and my going among them has taken away the fear engendered by the slanders of slaves and traders, for all are pleased to tell me the names of the fishes and other things. Lepidosirens are caught by the neck and lifted out of the pot, to show their fatness. Cam-wood ground and made into flat cakes for sale, and

earthen balls, such as are eaten in the disease safura, or earth-eating, are offered, and there is quite a roar of voices in the multitude haggling. It was pleasant to be among them, compared to being with the slaves, who were all eager to go back to Zanzibar: some told me that they were slaves, and required a free man to thrash them, and proposed to go back to Ujiji for one. I saw no hope of getting on with them, and anxiously longed for the arrival of Dugumbé; and at last Abed overheard them plotting my destruction. "If forced to go on, they would watch till the first difficulty arose with the Manyema, then fire off their guns, run away, and, as I could not run as fast as they, leave me to perish." Abed overheard them speaking loudly, and advised me strongly not to trust myself to them any more, as they would be sure to cause my death. He was all along a sincere friend, and I could not but take his words as well meant and true.

May 18th.—Abed gave me two hundred cowries and some green beads. I was at the point of disarming my slaves and driving them away, when they relented, and professed to be willing to go anywhere; so, being eager to finish my geographical work, I said I would run the risk of their desertion, and gave beads to buy provisions for a start north. I can not state how much I was worried by these wretched slaves, who did much to annoy me, with the sympathy of all the slaving crew. When baffled by untoward circumstances, the bowels plague me too; and discharges of blood relieve the headache, and are as safety-valves to the system. I was nearly persuaded to allow Mr. Syme to operate on me when last in England; but an old friend told me that his own father had been operated on by the famous John Hunter, and died in consequence at the early age of forty. His advice saved me, for this complaint has been my safety-valve.

The zingifuré, or red pigment, is said to be a cure for itch common among both natives and Arab slaves and Arab children.

May 20th.—Abed called Kalonga, the head man, who beguiled him, as I soon found, and delivered the canoe he had bought formally to me, and went off down the Lualaba on foot to buy the Babisa ivory. I was to follow in the canoe and wait for him in the River Luéra; but soon I ascertained that the canoe was still in the forest, and did not belong to Kalonga. On demanding back the price, he said, "Let Abed come, and I will give it to him;" then when I sent to force him to give up the goods, all his village fled into the forest. I now tried to buy one myself from the Bagenya, but there was no chance; so long as the half-

caste traders needed any, they got all—nine large canoes, and I could not secure one.

May 24th.—The market is a busy scene; every one is in dead earnest; little time is lost in friendly greetings; venders of fish run about with potsherds full of snails or small fishes, or young *Clarias capensis* smoke-dried and spitted on twigs, or other relishes, to exchange for cassava roots dried, after being steeped about three days in water; potatoes, vegetables, or grain, bananas, flour, palm-oil, fowls, salt, pepper. Each is intensely eager to barter food for relishes, and makes strong assertions as to the goodness or badness of every thing; the sweat stands in beads on their faces; cocks crow briskly, even when slung over the shoulder with their heads hanging down, and pigs squeal. Iron knobs, drawn out at each end to show the goodness of the metal, are exchanged for cloth of the muabé-palm. They have a large funnel of basket-work below the vessel holding the wares, and slip the goods down if they are not to be seen. They deal fairly, and when differences arise they are easily settled by the men interfering or pointing to me: they appeal to each other, and have a strong sense of natural justice. With so much food changing hands among the three thousand attendants, much benefit is derived; some come from twenty to twenty-five miles. The men flaunt about in gaudy-colored lambas of many-folded kilts; the women work hardest; the potters slap and ring their earthenware all round, to show that there is not a single flaw in them. I bought two finely-shaped earthen bottles of porous earthenware, to hold a gallon each, for one string of beads; the women carry huge loads of them in their funnels above the baskets, strapped to the shoulders and forehead, and their hands are full besides; the roundness of the vessels is wonderful, seeing no machine is used: no slaves could be induced to carry half as much as they do willingly. It is a scene of the finest natural acting imaginable. The eagerness with which all sorts of assertions are made—the eager earnestness with which apparently all creation, above, around, and beneath, is called on to attest the truth of what they allege—and then the intense surprise and withering scorn cast on those who despise their goods: but they show no concern when the buyers turn up their noses at them. Little girls run about selling cups of water for a few small fishes to the half-exhausted wordy combatants. To me it was an amusing scene. I could not understand the words that flowed off their glib tongues, but the gestures were too expressive to need interpretation.

May 27th.—Hassani told me that since he had come, no Man-

yuema had ever presented him with a single mouthful of food, not even a potato or banana, and he had made many presents. Going from him into the market, I noticed that one man presented a few small fishes, another a sweet-potato and a piece of cassava, and a third two small fishes; but the Manyuema are not a liberal people. Old men and women who remained in the half-deserted villages we passed through in coming north, often ran forth to present me with bananas, but it seemed through fear; when I sat down and ate the bananas they brought beer of bananas, and I paid for all. A stranger in the market had ten human under-jaw-bones hung by a string over his shoulder: on inquiry, he professed to have killed and eaten the owners, and showed with his knife how he cut up his victim. When I expressed disgust, he and others laughed. I see new faces every market-day. Two nice girls were trying to sell their venture, which was roasted white ants, called "gumbé."

May 30th.—The river fell four inches during the last four days; the color is very dark brown, and large quantities of aquatic plants and trees float down. Mologhwé, or chief Ndambo, came and mixed blood with the intensely bigoted Moslem, Hassani: this is to secure the nine canoes. He next went over to have more palaver about them, and they do not hesitate to play me false by detraction. The Manyuema, too, are untruthful, but very honest; we never lose an article by them: fowls and goats are untouched; and if a fowl is lost, we know that it has been stolen by an Arab slave. When with Mohamad Bogharib, we had all to keep our fowls at the Manyuema villages to prevent them being stolen by our own slaves, and it is so here. Hassani denies complicity with them, but it is quite apparent that he and others encourage them in mutiny.

June 5th, 1871.—The river rose again six inches and fell three. Rain nearly ceased, and large masses of fleecy clouds float down here from the north-west, with accompanying cold.

June 7th.—I fear that I must march on foot, but the mud is forbidding.

June 11th.—New moon last night, and I believe Dugumbé will leave Kasonga's to-day. River down three inches.

June 14th.—Hassani got nine canoes, and put sixty-three persons in three: I can not get one. Dugumbé reported near, but detained by his divination, at which he is an expert; hence his native name is "Molembalemba" (writer, writing).

June 16th.—The high winds, and drying of soap and sugar, tell that the rains are now over in this part.

June 18th.—Dugumbé arrived, but passed to Moené Nyañgwé's, and found that provisions were so scarce and dear there, as compared with our market, that he was fain to come back to us. He has a large party, and five hundred guns. He is determined to go into new fields of trade, and has all his family with him, and intends to remain six or seven years, sending regularly to Ujiji for supplies of goods.

June 20th.—Two of Dugumbé's party brought presents of four large fundos of beads each. All know that my goods are unrighteously detained by Shereef, and they show me kindness, which I return by some fine calico which I have. Among the first words Dugumbé said to me were, "Why, your own slaves are your greatest enemies: I will buy you a canoe, but the Banian slaves' slanders have put all the Manyema against you." I knew that this was true, and that they were conscious of the sympathy of the Ujijian traders, who hate to have me here.

June 24th.—Hassani's canoe-party in the river were foiled by narrows after they had gone down four days. Rocks jut out on both sides, not opposite, but alternate to each other; and the vast mass of water of the great river jammed in, rushes round one promontory on to another, and a frightful whirlpool is formed, in which the first canoe went and was overturned, and five lives lost. Had I been there, mine would have been the first canoe; for the traders would have made it a point of honor to give me the precedence (although actually to make a feeler of me), while they looked on in safety. The men in charge of Hassani's canoes were so frightened by this accident that they at once resolved to return, though they had arrived in the country of the ivory: they never looked to see whether the canoes could be dragged past the narrows, as any one else would have done. No better luck could be expected after all their fraud and duplicity in getting the canoes; no harm lay in obtaining them, but why try to prevent me getting one?

June 27th.—In answer to my prayers for preservation, I was prevented going down to the narrows, formed by a dike of mountains cutting across country, and jutting a little ajar, which makes the water, in an enormous mass, wheel round behind it helplessly, and if the canoes reach the rock against which the water dashes they are almost certainly overturned. As this same dike probably cuts across country to Lomamé, my plan of going to the confluence and then up will not do, for I should have to go up rapids there. Again, I was prevented from going down Luamo: and on the north of its confluence another cataract mars naviga-

tion in the Lualaba, and my safety is thereby secured. We do not always know the dangers that we are guided past.

June 28th.—The river has fallen two feet: dark-brown water, and still much wreck floating down.

Eight villages are in flames—set fire to by a slave of Syde bin Habib, called Manilla, who thus shows his blood friends of the Bagenya how well he can fight against the Mohombo, whose country the Bagenya want! The stragglers of this camp are over on the other side helping Manilla, and catching fugitives and goats. The Bagenya are fishermen by taste and profession, and sell the produce of their nets and weirs to those who cultivate the soil, at the different markets. Manilla's foray is for an alleged debt of three slaves, and ten villages are burned.

June 30th.—Hassani pretended that he was not aware of Manilla's foray; and when I denounced it to Manilla himself, he showed that he was a slave, by cringing and saying nothing except something about the debt of three slaves.

July 1st, 1871.—I made known my plan to Dugumbé, which was to go west with his men to Lomamé, then by his aid buy a canoe and go up Lake Lincoln to Katanga and the fountains, examine the inhabited caves, and return here, if he would let his people bring me goods from Ujiji. He again referred to all the people being poisoned in mind against me, but was ready to do every thing in his power for my success. My own people persuaded the Bagenya not to sell a canoe. Hassani knows it all, but swears that he did not join in the slander, and even points up to heaven in attestation of innocence of all, even of Manilla's foray. Mohammedans are certainly famous as liars, and the falsehood of Mohammed has been transmitted to his followers in a measure unknown in other religions.

July 2d.—The upper stratum of clouds is from the north-west, the lower from the south-east: when they mix or change places the temperature is much lowered, and fever ensues. The air evidently comes from the Atlantic, over the low, swampy lands of the West Coast. Morning fogs show that the river is warmer than the air.

July 4th.—Hassani off down river, in high dudgeon at the cowards who turned after reaching the ivory country. He leaves them here and goes himself, entirely on land. I gave him hints to report himself and me to Baker, should he meet any of his head men.

July 5th.—The river has fallen three feet in all, that is, one foot since June 27th.

I offer Dugumbé \$2000, or £400, for ten men to replace the Banian slaves, and enable me to go up the Lomamé to Katanga and the under-ground dwellings, then return and go up by Tanganyika to Ujiji; and I added that I would give all the goods I had at Ujiji besides. He took a few days to consult with his associates.

July 6th.—Mokandira and other head men came, with a present of a pig and a goat, on my being about to depart west. I refused to receive them till my return, and protested against the slander of my wishing to kill people, which they all knew, but did not report to me. This refusal and protest will ring all over the country.

July 7th.—I was annoyed by a woman frequently beating a slave near my house, but on my reproving her she came and apologized. I told her to speak softly to her slave, as she was now the only mother the girl had. The slave came from beyond Lomamé, and was evidently a lady in her own land: she calls her son Mologwé, or chief, because his father was a head man.

Dugumbé advised my explaining my plan of procedure to the slaves, and he evidently thinks that I wish to carry it toward them with a high hand. I did explain all the exploration I intended to do: for instance, the fountains of Herodotus—beyond Katanga—Katanga itself, and the under-ground dwellings, and then return. They made no remarks, for they are evidently pleased to have me knuekling down to them: when pressed on the point of proceeding, they say they will only go with Dugumbé's men to the Lomamé, and then return. River fallen three inches since the 5th.

July 10th.—Manyuema children do not creep, as European children do, on their knees, but begin by putting forward one foot and using one knee. Generally a Manyuema child uses both feet and both hands, but never both knees: one Arab child did the same; he never crept, but got up on both feet, holding on till he could walk.

New moon last night of the seventh Arab month.

July 11th.—I bought the different species of fish brought to market, in order to sketch eight of them, and compare them with those of the Nile lower down: most are the same as in Nyassa. A very active species of Glanis, of dark olive-brown, was not sketched; but a spotted one, armed with offensive spikes in the dorsal and pectoral fins, was taken. Sesamum-seed is abundant just now, and cakes are made of ground-nuts, as on the West Coast. Dugumbé's horde tried to deal in the market in a domi-

neering way. "I shall buy that," said one. "These are mine," said another; "no one must touch them but me;" but the market-women taught them that they could not monopolize, but deal fairly. They are certainly clever traders, and keep each other in countenance; they stand by each other, and will not allow overreaching, and they give food astonishingly cheap: once in the market, they have no fear.

July 12th, 13th.—The Banian slaves declared before Dugumbé that they would go to the River Lomamé, but no farther: he spoke long to them, but they will not consent to go farther. When told that they would thereby lose all their pay, they replied, "Yes, but not our lives;" and they walked off from him muttering, which is insulting to one of his rank. I then added, "I have goods at Ujiji; I don't know how many, but they are considerable; take them all, and give me men to finish my work; if not enough, I will add to them; only do not let me be forced to return, now I am so near the end of my undertaking." He said he would make a plan in conjunction with his associates, and report to me.

July 14th.—I am distressed and perplexed what to do so as not to be foiled, but all seems against me.

July 15th.—The reports of guns on the other side of the Lualaba all the morning tell of the people of Dugumbé murdering those of Kimburu and others who mixed blood with Manilla. "Manilla is a slave, and how dares he to mix blood with chiefs who ought only to make friends with free men like us?"—this is their complaint. Kimburu gave Manilla three slaves, and he sacked ten villages in token of friendship: he proposed to give Dugumbé nine slaves in the same operation, but Dugumbé's people destroy his villages, and shoot and make his people captives, to punish Manilla; to make an impression, in fact, in the country that they alone are to be dealt with—"make friends with us, and not with Manilla, or any one else"—such is what they insist upon.

About one thousand five hundred people came to market, though many villages of those that usually come from the other side were now in flames, and every now and then a number of shots were fired on the fugitives.

It was a hot, sultry day, and when I went into the market I saw Adie and Manilla, and three of the men who had lately come with Dugumbé. I was surprised to see these three with their guns, and felt inclined to reprove them, as one of my men did, for bringing weapons into the market, but I attributed it to their ignorance; and, it being very hot, I was walking away to go out



THE MASSACRE OF THE MANYEMA WOMEN AT NYANGWE.

of the market, when I saw one of the fellows haggling about a fowl, and seizing hold of it. Before I had got thirty yards out, the discharge of two guns in the middle of the crowd told me that slaughter had begun: crowds dashed off from the place, and threw down their wares in confusion, and ran. At the same time that the three opened fire on the mass of people near the upper end of the market-place, volleys were discharged from a party down near the creek on the panic-stricken women, who dashed at the canoes. These, some fifty or more, were jammed in the creek, and the men forgot their paddles in the terror that seized all. The canoes were not to be got out, for the creek was too small for so many: men and women, wounded by the balls, poured into them, and leaped and scrambled into the water, shrieking. A long line of heads in the river showed that great numbers struck out for an island a full mile off: in going toward it, they had to put the left shoulder to a current of about two miles an hour: if they had struck away diagonally to the opposite bank, the current would have aided them, and, though nearly three miles off, some would have gained land; as it was, the heads above water showed the long line of those that would inevitably perish.

Shot after shot continued to be fired on the helpless and perishing. Some of the long line of heads disappeared quietly; while other poor creatures threw their arms high, as if appealing to the great Father above, and sank. One canoe took in as many as it could hold, and all paddled with hands and arms: three canoes, got out in haste, picked up sinking friends, till all went down together and disappeared. One man in a long canoe, which could have held forty or fifty, had clearly lost his head; he had been out in the stream before the massacre began, and now paddled up the river nowhere, and never looked to the drowning. By-and-by all the heads disappeared: some had turned down stream toward the bank, and escaped. Dugumbé put people into one of the deserted vessels to save those in the water, and saved twenty-one; but one woman refused to be taken on board from thinking that she was to be made a slave of: she preferred the chance of life by swimming to the lot of a slave. The Bagenya women are expert in the water, as they are accustomed to dive for oysters, and those who went down stream may have escaped; but the Arabs themselves estimated the loss of life at between three hundred and thirty and four hundred souls. The shooting-party near the canoes were so reckless they killed two of their own people; and a Banyamwezi follower, who got into a deserted

canoe to plunder, fell into the water, went down, then came up again, and down to rise no more.

My first impulse was to pistol the murderers, but Dugumbé protested against my getting into a blood-feud, and I was thankful afterward that I took his advice. Two wretched Moslems asserted "that the firing was done by the people of the English." I asked one of them why he lied so, and he could utter no excuse; no other falsehood came to his aid as he stood abashed before me; and so telling him not to tell palpable falsehoods, I left him gaping.

After the terrible affair in the water, the party of Tagamoio, who was the chief perpetrator, continued to fire on the people there and fire their villages. As I write, I hear the loud wails on the left bank over those who are there slain, ignorant of their many friends now in the depths of Lualaba. Oh, let Thy kingdom come! No one will ever know the exact loss on this bright sultry summer morning: it gave me the impression of being in hell. All the slaves in the camp rushed at the fugitives on land and plundered them: women were for hours collecting and carrying loads of what had been thrown down in terror.

Some escaped to me, and were protected: Dugumbé saved twenty-one, and of his own accord liberated them: they were brought to me, and remained overnight near my house. One woman of the saved had a musket-ball through the thigh, another in the arm. I sent men with our flag to save some, for without a flag they might have been victims, for Tagamoio's people were shooting right and left like fiends. I counted twelve villages burning this morning. I asked the question of Dugumbé and others, "Now, for what is all this murder?" All blamed Manilla as its cause, and in one sense he was the cause; but it is hardly credible that they repeat it is in order to be avenged on Manilla for making friends with head men, he being a slave. I can not believe it fully. The wish to make an impression in the country as to the importance and greatness of the new-comers was the most potent motive; but it was terrible that the murdering of so many should be contemplated at all. It made me sick at heart. Who could accompany the people of Dugumbé and Tagamoio to Lomamé, and be free from blood-guiltiness?

I proposed to Dugumbé to catch the murderers, and hang them up in the market-place, as our protest against the bloody deeds before the Manyuema. If, as he and others added, the massacre was committed by Manilla's people, he would have consented; but it was done by Tagamoio's people, and others of this

party, headed by Dugumbé. This slaughter was peculiarly atrocious, inasmuch as we have always heard that women coming to or from market have never been known to be molested: even when two districts are engaged in actual hostilities, "the women," say they, "pass among us to market unmolested," nor has one ever been known to be plundered by the men. These nigger Moslems are inferior to the Manyema in justice and right. The people under Hassani began the superwickedness of capture and pillage of all indiscriminately. Dugumbé promised to send over men to order Tagamoio's men to cease firing and burning villages; they remained over among the ruins, feasting on goats and fowls all night, and next day (16th) continued their infamous work till twenty-seven villages were destroyed.

July 16th.—I restored upward of thirty of the rescued to their friends: Dugumbé seemed to act in good faith, and kept none of them; it was his own free-will that guided him. Women are delivered to their husbands, and about thirty-three canoes left in the creek are to be kept for the owners too.

12 A.M.—Shooting still going on on the other side, and many captives caught. At 1 P.M. Tagamoio's people began to cross over in canoes, beating their drums, firing their guns, and shouting, as if to say, "See the conquering heroes come;" they are answered by the women of Dugumbé's camp lullilooing, and friends then fire off their guns in joy. I count seventeen villages in flames, and the smoke goes straight up and forms clouds at the top of the pillar, showing great heat evolved, for the houses are full of carefully-prepared fire-wood. Dugumbé denies having sent Tagamoio on this foray, and Tagamoio repeats that he went to punish the friends made by Manilla, who, being a slave, had no right to make war and burn villages; that could only be done by free men. Manilla confesses to me privately that he did wrong in that, and loses all his beads and many friends in consequence.

2 P.M.—An old man, called Kabobo, came for his old wife. I asked her if this were her husband: she went to him, and put her arm lovingly around him, and said "Yes." I gave her five strings of beads to buy food, all her stores being destroyed with her house. She bowed down, and put her forehead to the ground as thanks, and old Kabobo did the same: the tears stood in her eyes as she went off. Tagamoio caught seventeen women, and other Arabs of his party, twenty-seven; dead by gun-shot, twenty-five. The heads of two head men were brought over to be redeemed by their friends with slaves.

3 P.M.—Many of the head men who have been burned out by the foray came over to me, and begged me to come back with them, and appoint new localities for them to settle in again; but I told them that I was so ashamed of the company in which I found myself, that I could scarcely look the Manyuema in the face. They had believed that I wished to kill them—what did they think now? I could not remain among bloody companions, and would flee away, I said; but they begged me hard not to leave until they were again settled.

The open murder perpetrated on hundreds of unsuspecting women fills me with unspeakable horror. I can not think of going anywhere with the Tagamoio crew. I must either go down or up Lualaba, whichever the Banian slaves choose.

4 P.M.—Dugumbé saw that by killing the market-people he had committed a great error, and speedily got the chiefs who had come over to me to meet him at his house and forthwith mix blood: they were in bad case. I could not remain to see to their protection; and Dugumbé being the best of the whole horde, I advised them to make friends, and then appeal to him as able to restrain to some extent his infamous underlings. One chief asked to have his wife and daughter restored to him first, but generally they were cowed, and the fear of death was on them. Dugumbé said to me, "I shall do my utmost to get all the captives; but he must make friends now, in order that the market may not be given up." Blood was mixed, and an essential condition was, "You must give us chitoka," or market. He and most others saw that in theoretically punishing Manilla they had slaughtered the very best friends that strangers had. The Banian slaves openly declare that they will go only to Lomamé, and no farther. Whatever the Ujjian slavers may pretend, they all hate to have me as a witness of their cold-blooded atrocities. The Banian slaves would like to go with Tagamoio, and share in his rapine and get slaves. I tried to go down Lualaba, then up it, and west, but with blood-hounds it is out of the question. I see nothing for it but to go back to Ujiji for other men, though it will throw me out of the chance of discovering the fourth great lake in the Lualaba line of drainage, and other things of great value.

At last I said that I would start for Ujiji in three days on foot. I wished to speak to Tagamoio about the captive relations of the chiefs, but he always ran away when he saw me coming.

July 17th.—All the rest of Dugumbé's party offered me a share of every kind of goods they had, and pressed me not to be

ashamed to tell them what I needed. I declined every thing save a little gunpowder; but they all made presents of beads, and I was glad to return equivalents in cloth. It is a sore affliction, at least forty-five days in a straight line—equal to three hundred miles, or, by the turnings and windings, six hundred English miles, and all after feeding and clothing the Banian slaves for twenty-one months! But it is for the best, though; if I do not trust to the riff-raff of Ujiji, I must wait for other men at least ten months there. With help from above, I shall yet go through Rua, see the under-ground excavations first, then on to Katanga, and the four ancient fountains eight days beyond, and after that Lake Lincoln.

July 18th.—The murderous assault on the market-people felt to me like Gehenna, without the fire and brimstone; but the heat was oppressive, and the fire-arms pouring their iron bullets on the fugitives was not an inapt representation of burning in the bottomless pit.

The terrible scenes of man's inhumanity to man brought on severe headache, which might have been serious had it not been relieved by a copious discharge of blood. I was laid up all yesterday afternoon with the depression the bloodshed made—it filled me with unspeakable horror. "Don't go away," say the Manyema chiefs to me; but I can not stay here in agony.

July 19th.—Dugumbé sent me a fine goat, a maneh of gunpowder, a maneh of fine blue beads, and two hundred and thirty cowries, to buy provisions in the way. I proposed to leave a doti Merikano and one of Kaniké, to buy specimens of workmanship. He sent me two very fine large Manyema swords, and two equally fine spears, and said that I must not leave any thing: he would buy others with his own goods, and divide them equally with me: he is very friendly.

River fallen four feet and a half since the 5th ult.

A few market-people appear to-day; formerly they came in crowds: a very few from the west bank bring salt to buy back the baskets from the camp slaves, which they threw away in panic; others carried a little food for sale, about two hundred in all—chiefly those who have not lost relatives: one very beautiful woman had a gun-shot wound in her upper arm tied round with leaves. Seven canoes came instead of fifty; but they have great tenacity and hopefulness: an old established custom has great charms for them, and the market will again be attended if no fresh outrage is committed. No canoes now come into the creek of death, but land above, at Ntambwé's village: this creek, at the

bottom of the long, gentle slope on which the market was held, probably led to its selection.

A young Manyema man worked for one of Dugumbé's people preparing a space to build on: when tired, he refused to commence to dig a pit, and was struck on the loins with an axe, and soon died. He was drawn out of the way, and his relations came, wailed over him, and buried him. They are too much awed to complain to Dugumbé!

CHAPTER XIX.

Leaves for Ujji.—Dangerous Journey through Forest.—The Manyema understand Livingstone's Kindness.—Zanzibar Slaves.—Kasonga's.—Stalactite Caves.—Consequences of eating Parrots.—Ill.—Attacked in the Forest.—Providential Deliverance.—Another extraordinary Escape.—Taken for Mohamad Bogharib.—Running the Gauntlet for five Hours.—Loss of Property.—Reaches Place of Safety.—Ill.—Mamohela.—To the Luamo.—Severe Disappointment.—Recovers.—Severe Marching.—Reaches Ujji.—Despondency.—Opportune Arrival of Mr. Stanley.—Joy and Thankfulness of the old Traveler.—Determines to examine north End of Lake Tanganyika.—They start.—Reach the Lusizé.—No Outlet.—“Theoretical Discovery” of the real Outlet.—Mr. Stanley ill.—Returns to Ujji.—Leaves Stores there.—Departure for Unyanyembé with Mr. Stanley.—Abundance of Game.—Attacked by Bees.—Serious Illness of Mr. Stanley.—Thankfulness at reaching Unyanyembé.

July 20th, 1871.—I START back for Ujji. All Dugumbé's people came to say good-bye, and convoy me a little way. I made a short march, for, being long inactive, it is unwise to tire one's self on the first day, as it is then difficult to get over the effects.

July 21st.—One of the slaves was sick, and the rest falsely reported him to be seriously ill, to give them time to negotiate for women with whom they had cohabited. Dugumbé saw through the fraud, and said, “Leave him to me: if he lives, I will feed him; if he dies, we will bury him: do not delay for any one, but travel in a compact body, as stragglers now are sure to be cut off.” He lost a woman of his party, who lagged behind, and seven others were killed besides, and the forest hid the murderers. I was only too anxious to get away quickly, and on the 22d started off at daylight, and went about six miles to the village of Mañk-wara, where I spent the night when coming this way. The chief Mokandira convoyed us hither: I promised him a cloth if I came across from Lomamé. He wonders much at the under-ground houses, and never heard of them till I told him about them. Many of the gullies which were running fast when we came were now dry. Thunder began, and a few drops of rain fell.

July 23d, 24th.—We crossed the River Kunda, of fifty yards, in two canoes, and then ascended from the valley of denudation, in which it flows to the ridge Lobango. Crowds followed, all anxious to carry loads for a few beads. Several market-people came to salute, who knew that we had no hand in the massacre, as we are a different people from the Arabs. In going and com-

ing, they must have a march of twenty-five miles, with loads so heavy no slave would carry them. They speak of us as "good:" the anthropologists think that to be spoken of as wicked is better. Ezekiel says that the Most High put His comeliness upon Jerusalem: if He does not impart of His goodness to me, I shall never be good: if He does not put of His comeliness on me, I shall never be comely in soul, but be like these Arabs, in whom Satan has full sway—the god of this world having blinded their eyes.

July 25th.—We came over a beautiful country yesterday, a vast hollow of denudation, with much cultivation, intersected by a ridge some three hundred feet high, on which the villages are built: this is Lobango. The path runs along the top of the ridge, and we see the fine country below all spread out with different shades of green, as on a map. The colors show the shapes of the different plantations in the great hollow drained by the Kunda. After crossing the fast-flowing Kahembai, which flows into the Kunda, and it into Lualaba, we rose on to another intersecting ridge, having a great many villages burned by Matereka, or Salem Mokadam's people, since we passed them in our course north-west. They had slept on the ridge after we saw them, and next morning, in sheer wantonness, fired their lodgings: their slaves had evidently carried the fire along from their lodgings, and set fire to houses of villages in their route as a sort of horrid Moslem nigger joke; it was done only because they could do it without danger of punishment: it was such fun to make the Mashensé, as they call all natives, houseless. Men are worse than beasts of prey, if indeed it is lawful to call Zanzibar slaves men. It is monstrous injustice to compare free Africans living under their own chiefs and laws, and cultivating their own free lands, with what slaves afterward become at Zanzibar and elsewhere.

July 26th.—Came up out of the last valley of denudation—that drained by Kahembai, and then along a level land with open forest. Four men passed us in hot haste, to announce the death of a woman at their village to her relations living at another. I heard of several deaths lately of dysentery. Pleurisy is common, from cold winds from north-west. Twenty-two men, with large, square, black shields, capable of completely hiding the whole person, came next, in a trot, to receive the body of their relative and all her gear, to carry her to her own home for burial. About twenty women followed them, and the men waited under the trees till they should have wound the body up and wept over her. They smeared their bodies with clay and their faces with soot. Reached our friend Kama.

July 27th.—Left Kama's group of villages and went through many others before we reached Kasonga's, and were welcomed by all the Arabs of the camp at this place. Bought two milch-goats reasonably, and rest over Sunday.

July 28th, 29th.—They asked permission to send a party with me for goods to Ujiji: this will increase our numbers, and perhaps safety too, among the justly irritated people between this and Bambarré. All are enjoined to help me, and of course I must do the same to them. It is colder here than at Nyañgwé. Kasonga is off guiding an ivory or slaving party, and doing what business he can on his own account: he has four guns, and will be the first to maraud on his own account.

July 30th.—They send thirty tusks to Ujiji, and seventeen Manyema volunteers to carry thither and back: these are the very first who in modern times have ventured fifty miles from the place of their birth. I came only three miles to a ridge overlooking the River Shokoyé, and slept at a village on a hill beyond it.

July 31st.—Passed through the defile between Mount Kimazi and Mount Kijila. Below the cave, with stalactite pillar in its door, a fine echo answers those who feel inclined to shout to it. Come to Mangala's numerous villages, and, two slaves being ill, rest on Wednesday.

August 1st, 1871.—A large market assembles close to us.

August 2d.—Left Mangala's, and came through a great many villages, all deserted, on our approach, on account of the vengeance taken by Dugumbé's party for the murder of some of their people. Kasonga's men appeared eager to plunder their own countrymen: I had to scold and threaten them, and set men to watch their deeds. Plantains are here very abundant, good, and cheap. Came to Kittetté, and lodge in a village of Loembo. About thirty foundries were passed: they are very high in the roof, and thatched with leaves, from which the sparks roll off as sand would. Rain runs off equally well.

August 3d.—Three slaves escaped, and, not to abandon ivory, we wait a day. Kasonga came up and filled their places.

I have often observed effigies of men made of wood in Manyema; some, of clay, are simply cones, with a small hole in the top: on asking about them here, I for the first time obtained reliable information. They are called "Bathata" (fathers or ancients), and the name of each is carefully preserved. Those here at Kittetté were evidently the names of chiefs, Molenda being the most ancient, while Mbayo Yamba, Kamoanga, Kitambwé, Noñ-

go, Aulumba, Yengé Yengé, Simba Mayaña, Loembwé are more recently dead. They were careful to have the exact pronunciation of the names. The old men told me that on certain occasions they offer goat's flesh to them: men eat it, and allow no young person or women to partake. The flesh of the parrot is only eaten by very old men. They say that, if eaten by young men, their children will have the waddling gait of the bird. They say that originally those who preceded Molenda came from Kongolakokwa, which conveys no idea to my mind. It was interesting to get even this little bit of history here. (Nkoñgolo = Deity; Nkoñgolokwa as the Deity.)

August 4th.—Came through miles of villages, all burned, because the people refused a certain Abdullah lodgings! The men had begun to re-thatch the huts, and kept out of our way; but a goat was speared by some one in hiding, and we knew danger was near. Abdullah admitted that he had no other reason for burning them than the unwillingness of the people to lodge him and his slaves without payment, with the certainty of getting their food stolen and utensils destroyed.

August 5th, 6th.—Through many miles of palm-trees and plantains to a boma, or stockaded village, where we slept, though the people were evidently suspicious and unfriendly.

August 7th.—To a village, ill, and almost every step in pain. The people all ran away, and appeared in the distance armed, and refused to come near; then came and threw stones at us, and afterward tried to kill those who went for water. We sleep uncomfortably, the natives watching us all round. Sent men to see if the way was clear.

August 8th.—They would come to no parley. They knew their advantage, and the wrongs they had suffered from Bin Juma and Mohamad's men when they threw down the ivory in the forest. In passing along the narrow path, with a wall of dense vegetation touching each hand, we came to a point where an ambush had been placed, and trees cut down to obstruct us while they speared us; but for some reason it was abandoned. Nothing could be detected; but by stooping down to the earth and peering up toward the sun, a dark shade could sometimes be seen: this was an infuriated savage, and a slight rustle in the dense vegetation meant a spear. A large spear from my right lunged past, and almost grazed my back, and stuck firmly into the soil. The two men from whom it came appeared in an opening in the forest only ten yards off, and bolted, one looking back over his shoulder as he ran. As they are expert with the spear, I do not know



THE MANYUEMA AMBUSCADE.

how it missed, except that he was too sure of his aim, and the good hand of God was upon me.

I was behind the main body, and all were allowed to pass till I, the leader, who was believed to be Mohamad Bogharib, or Kolokolo himself, came up to the point where they lay. A red jacket they had formerly seen me wearing was proof to them that I was the same that sent Bin Juma to kill five of their men, capture eleven women and children, and twenty-five goats. Another spear was thrown at me by an unseen assailant, and it missed me by about a foot in front. Guns were fired into the dense mass of forest, but with no effect, for nothing could be seen; but we heard the men jeering and denouncing us close by: two of our party were slain.

Coming to a part of the forest cleared for cultivation, I noticed a gigantic tree, made still taller by growing on an ant-hill twenty feet high; it had fire applied near its roots: I heard a crack, which told that the fire had done its work, but felt no alarm till I saw it come straight toward me. I ran a few paces back, and down it came to the ground one yard behind me, and breaking into several lengths, it covered me with a cloud of dust. Had the branches not previously been rotted off, I could scarcely have escaped.

Three times in one day was I delivered from impending death.

My attendants, who were scattered in all directions, came running back to me, calling out, "Peace! peace! you will finish all your work in spite of these people, and in spite of every thing." Like them, I took it as an omen of good success to crown me yet, thanks to the "Almighty Preserver of men."

We had five hours of running the gauntlet, waylaid by spearmen, who all felt that if they killed me they would be revenging the death of relations. From each hole in the tangled mass we looked for a spear, and each moment expected to hear the rustle which told of deadly weapons hurled at us. I became weary with the constant strain of danger, and—as, I suppose, happens with soldiers on the field of battle—not courageous, but perfectly indifferent whether I were killed or not.

When at last we got out of the forest and crossed the Liya on to the cleared lands near the villages of Monanbundwa, we lay down to rest, and soon saw Muanampunda coming, walking up in a stately manner, unarmed, to meet us. He had heard the vain firing of my men into the bush, and came to ask what was the matter. I explained the mistake that Munangonga had made in supposing that I was Kolokolo, the deeds of whose men he knew, and then we went on to his village together.

In the evening he sent to say that if I would give him all my people who had guns, he would call his people together, burn off all the vegetation they could fire, and punish our enemies, bringing me ten goats instead of the three milch-goats I had lost. I again explained that the attack was made by a mistake in thinking I was Mohamad Bogharib, and that I had no wish to kill men: to join in his old feud would only make matters worse. This he could perfectly understand.

I lost all my remaining calico, a telescope, umbrella, and five spears, by one of the slaves throwing down the load and taking up his own bundle of country cloth.

August 9th.—Went on toward Mamohela, now deserted by the Arabs. Monanponda convoyed me a long way, and at one spot, with grass all trodden down, he said, "Here we killed a man of Moezia and ate his body." The meat, cut up, had been seen by Dugumbé.

August 10th.—In connection with this affair, the party that came through from Mamalulu found that a great fight had taken place at Muanampunda's, and they saw the meat cut up to be cooked with bananas. They did not like the strangers to look at their meat, but said, "Go on, and let our feast alone;" they did not want to be sneered at. The same Muanampunda or Monambonda told me frankly that they ate the man of Moezia: they seem to eat their foes to inspire courage, or in revenge. One point is very remarkable; it is not want that has led to the custom, for the country is full of food: nobody is starved of farinaceous food. They have maize, dura, pennisetum, cassava, and sweet-potatoes, and for fatty ingredients of diet, the palm-oil, ground-nuts, sesamum, and a tree whose fruit yields a fine sweet oil: the saccharine materials needed are found in the sugar-cane, bananas, and plantains.

Goats, sheep, fowls, dogs, pigs abound in the villages, while the forest affords elephants, zebras, buffaloes, antelopes, and in the streams there are many varieties of fish. The nitrogenous ingredients are abundant, and they have dainties in palm-toddy, and tobacco or bangé. The soil is so fruitful that mere scraping off the weeds is as good as plowing; so that the reason for cannibalism does not lie in starvation or in want of animal matter, as was said to be the case with the New Zealanders. The only feasible reason I can discover is a depraved appetite, giving an extraordinary craving for meat which we call "high." They are said to bury a dead body for a couple of days in the soil in a forest, and in that time, owing to the climate, it soon becomes putrid enough for the strongest stomachs.

The Lualaba has many oysters in it, with very thick shells. They are called *Makessi*, and at certain seasons are dived for by the Bagenya women: pearls are said to be found in them, but boring to string them has never been thought of. *Kanone*, Ibis religiosa. *Uruko*, Kuss name of coffee.

The Manyema are so afraid of guns that a man borrows one to settle any dispute or claim: he goes with it over his shoulder, and quickly arranges the matter by the pressure it brings, though they all know that he could not use it.

Gulu, Deity above, or heaven. *Mamvu*, earth or below. *Gulu* is a person; and men, on death, go to him. *Nkoba*, lightning. *Nkongolo*, Deity (?). *Kula* or *Nkula*, salt spring west of Nyañgwé. *Kalunda*, ditto. *Kiria*, rapid down river. *Kirila*, islet in sight of Nyañgwé. *Magoya*, ditto.

Note.—The chief Zurampela is about north-west of Nyañgwé, and three days off. The Luivé River, of very red water, is crossed, and the larger Mabila River receives it into its very dark water before Mabila enters Lualaba.

A ball of hair rolled in the stomach of a lion, as calculi are, is a great charm among the Arabs: it scares away other animals, they say.

Lion's fat smeared on the tails of oxen taken through a country abounding in tsetse, or buñgo, is a sure preventive. When I heard of this, I thought that lion's fat would be as difficult of collection as gnat's brains or mosquito tongues; but I was assured that many lions are killed on the Basango highland, and they, in common with all beasts there, are extremely fat: so it is not at all difficult to buy a calabash of the preventive: the Banyamwezi, desirous of taking cattle to the coast for sale, know the substance, and use it successfully (?).

August 11th.—Came on, by a long march of six hours, across plains of grass and water-courses, lined with beautiful trees, to Kassessa's, the chief of Mamohela, who has helped the Arabs to scourge several of his countrymen for old feuds. He gave them goats, and then guided them by night to the villages, where they got more goats and many captives, each to be redeemed with ten goats more. During the last foray, however, the people learned that every shot does not kill, and they came up to the party with bows and arrows, and compelled the slaves to throw down their guns and powder-horns. They would have shown no mercy had Manyema been thus in slave power; but this is a beginning of the end, which will exclude Arab traders from the country. I rested half a day, as I am still ill. I do most devoutly thank the

Lord for sparing my life three times in one day. The Lord is good, a stronghold in the day of trouble, and he knows them that trust in him.

[The brevity of the following notes is fully accounted for: Livingstone was evidently suffering too severely to write more.]

August 12th.—Mamohela camp all burned off. We sleep at Mamohela village.

August 13th.—At a village on the bank of River Lolindi. I am suffering greatly. A man brought a young, nearly full-fledged kite from a nest on a tree: this is the first case of their breeding, that I am sure of, in this country: they are migratory into these intertropical lands from the south probably.

August 14th.—Across many brisk burns to a village on the side of a mountain range. First rains 12th and 14th, gentle; but near Luamo it ran on the paths, and caused dew.

August 15th.—To Muanambonyo's. Golungo, a bush buck, with stripes across body, and two rows of spots along the sides(?).

August 16th.—To Luamo River. Very ill with bowels.

August 17th.—Cross river, and sent a message to my friend. Katomba sent a bountiful supply of food back.

August 18th.—Reached Katomba, at Moenemgoi's, and was welcomed by all the heavily-laden Arab traders. They carry their trade spoil in three relays. Kenyengeré attacked before I came, and one hundred and fifty captives were taken, and about one hundred slain: this is an old feud of Moenemgoi, which the Arabs took up for their own gain. No news whatever from Ujiji, and M. Bogharib is still at Bambarré, with all my letters.

August 19th, 20th.—Rest from weakness.

August 21st.—Up to the palms on the west of Mount Kanyima Pass.

August 22d.—Bambarré.

August 28th.—Better, and thankful. Katomba's party has nearly a thousand frasilahs of ivory, and Mohamad's has three hundred frasilahs.

August 29th.—Ill all night, and remain.

August 30th.—Ditto, ditto; but go on to Monandenda's, on River Lombonda.

August 31st.—Up and half over the mountain range.

September 1st, 1871.—Sleep in dense forest, with several fine running streams.

September 2d.—Over the range, and down on to a marble-capped hill, with a village on top.

September 3d.—Equinoctial gales. On to Lohombo.

September 5th.—To Kasangangazi's.

September 6th.—Rest.

September 7th.—Mamba's. Rest on 8th.

September 9th.—Ditto, ditto. People falsely accused of stealing; but I disproved it, to the confusion of the Arabs, who wish to be able to say, "The people of the English steal too." A very rough road from Kasangangazi's hither, and several running rivulets crossed.

September 10th.—Manyuema boy followed us; but I insisted on his father's consent, which was freely given: marching proved too hard for him, however, and in a few days he left.

Down into the valley of the Kapemba, through beautiful undulating country, and came to the village of Amru: this is a common name, and is used as "man," or "comrade," or "mate."

September 11th.—Up a very steep, high mountain range, Moloni or Mononi, and down to a village at the bottom on the other side of a man called Molembu.

September 12th.—Two men sick. Wait, though I am now comparatively sound and well. Dura flour, which we can now procure, helps to strengthen me: it is nearest to wheaten flour: maize-meal is called "cold," and not so wholesome as the *Holcus sorghum*, or dura. A lengthy march through a level country, with high mountain ranges on each hand; along that on the left our first path lay, and it was very fatiguing. We came to the rivulet Kalangai. I had hinted to Mohamad that if he harbored my deserters it might go hard with him; and he came after me for two marches, and begged me not to think that he did encourage them. They came impudently into the village, and I had to drive them out: I suspected that he had sent them. I explained, and he gave me a goat, which I sent back for.

September 13th.—This march back completely used up the Manyuema boy: he could not speak, or tell what he wanted cooked, when he arrived. I did not see him go back, and felt sorry for the poor boy, who left us by night. People here would sell nothing, so I was glad of the goat.

September 14th.—To Pyanamosindé's.

September 15th.—To Karungamagao's; very fine undulating green country.

September 16th, 17th.—Rest, as we could get food to buy.

September 18th.—To a stockaded village, where the people ordered us to leave. We complied, and went out half a mile and built our sheds in the forest. I like sheds in the forest much

better than huts in the villages, for we have no mice or vermin, and incur no obligation.

September 19th.—Found that Barua are destroying all the Manyema villages not stockaded.

September 20th.—We came to Kunda's, on the River Katemba, through great plantations of cassava, and then to a woman chief's, and now regularly built our own huts apart from the villages, near the hot fountain called Kabila, which is about blood-heat, and flows across the path. Crossing this, we came to Mokwaniwa's, on the River Gombezé, and met a caravan, under Nassur Masudi, of two hundred guns. He presented a fine sheep, and reported that Syed Majid was dead: he had been ailing, and fell from some part of his new house at Darsalam, and in three days afterward expired. He was a true and warm friend to me, and did all he could to aid me with his subjects, giving me two Sultan's letters for the purpose. Syed Burghash succeeds him: this change causes anxiety. Will Syed Burghash's goodness endure, now that he has the sultanate? Small-pox raged lately at Ujiji.

September 22d.—Caravan goes northward, and we rest, and eat the sheep kindly presented.

September 23d.—We now passed through the country of mixed Barua and Baguha, crossed the River Loñgumba twice, and then came near the great mountain mass on the west of Tanganyika. From Mokwaniwa's to Tanganyika is about ten good marches, through open forest. The Guha people are not very friendly; they know strangers too well to show kindness: like Manyema, they are also keen traders. I was sorely knocked up by this march from Nyañgwé back to Ujiji. In the latter part of it, I felt as if dying on my feet. Almost every step was in pain, the appetite failed, and a little bit of meat caused violent diarrhœa; while the mind, sorely depressed, reacted on the body. All the traders were returning successful: I alone had failed, and experienced worry, thwarting, baffling, when almost in sight of the end toward which I strained.

October 3d, 1871.—I read the whole Bible through four times while I was in Manyema.

October 8th.—The road covered with angular fragments of quartz was very sore to my feet, which are crammed into ill-made French shoes. How the bare feet of the men and women stood out I do not know; it was hard enough on mine, though protected by the shoes. We marched in the afternoons where water at this season was scarce. The dust of the march caused ophthalmia, like that which afflicted Speke: this was my first touch of it in

Africa. We now came to the Lobumba River, which flows into Tanganyika, and then to the village Loanda, and sent to Kasanga, the Guha chief, for canoes. The Loñgumba rises, like the Lobumba, in the mountains called Kabogo West. We heard great noises, as of thunder, as far as twelve days off, which were ascribed to Kabogo, as if it had subterranean caves, into which the waves rushed with great noise; and it may be that the Loñgumba is the outlet of Tanganyika. It becomes the Luassé farther down, and then the Luamo before it joins the Lualaba. The country slopes that way, but I was too ill to examine its source.

October 9th.—On to the islet Kasengé. After much delay, got a good canoe for three dotis, and on the 15th of October went to the islet Kabiziwa.

October 18th.—Start for Kabogo East, and on the 19th reach it, 8 A.M.

October 20th.—Rest men.

October 22d.—To Rombola.

October 23d.—At dawn off, and go to Ujiji. Welcomed by all the Arabs, particularly by Moenyegheré. I was now reduced to a skeleton; but the market being held daily, and all kinds of native food brought to it, I hoped that food and rest would soon restore me; but in the evening my people came and told me that Shereef had sold off all my goods, and Moenyegheré confirmed it by saying, "We protested, but he did not leave a single yard of calico out of three thousand, nor a string of beads out of seven hundred pounds." This was distressing. I had made up my mind, if I could not get people at Ujiji, to wait till men should come from the coast; but to wait in beggary was what I never contemplated, and I now felt miserable. Shereef was evidently a moral idiot, for he came without shame to shake hands with me, and when I refused assumed an air of displeasure, as having been badly treated; and afterward came with his "Balghere" (good-luck salutation), twice a day, and, on leaving, said, "I am going to pray," till I told him that, were I an Arab, his hand and both ears would be cut off for thieving, as he knew, and I wanted no salutations from him. In my distress it was annoying to see Shereef's slaves passing from the market with all the good things that my goods had bought.

October 24th.—My property had been sold to Shereef's friends at merely nominal prices. Syed bin Majid, a good man, proposed that they should be returned, and the ivory be taken from Shereef; but they would not restore stolen property, though they knew it to be stolen. Christians would have acted differently,

even those of the lowest classes. I felt, in my destitution, as if I were the man who went down from Jerusalem to Jericho, and fell among thieves; but I could not hope for priest, Levite, or good Samaritan to come by on either side; but one morning Syed bin Majid said to me, "Now this is the first time we have been alone together; I have no goods, but I have ivory; let me, I pray you, sell some ivory, and give the goods to you." This was encouraging; but I said, "Not yet, but by-and-by." I had still a few barter goods left, which I had taken the precaution to deposit with Mohamad bin Saleh before going to Manyuema, in case of returning in extreme need. But when my spirits were at their lowest ebb the good Samaritan was close at hand, for one morning Susi came running, at the top of his speed, and gasped out, "An Englishman! I see him!" and off he darted to meet him. The American flag at the head of a caravan told of the nationality of the stranger. Bales of goods, baths of tin, huge kettles, cooking-pots, tents, etc., made me think, "This must be a luxurious traveler, and not one at his wits' end like me."

October 28th.—It was Henry Moreland Stanley, the traveling correspondent of the *New York Herald*, sent by James Gordon Bennett, junior, at an expense of more than £4000, to obtain accurate information about Dr. Livingstone if living, and if dead, to bring home my bones. The news he had to tell to one who had been two full years without any tidings from Europe made my whole frame thrill. The terrible fate that had befallen France—the telegraphic cables successfully laid in the Atlantic—the election of General Grant—the death of good Lord Clarendon, my constant friend—the proof that Her Majesty's Government had not forgotten me in voting £1000 for supplies, and many other points of interest, revived emotions that had lain dormant in Manyuema. Appetite returned; and instead of the spare, tasteless two meals a day, I ate four times daily, and in a week began to feel strong. I am not of a demonstrative turn—as cold, indeed, as we islanders are usually reputed to be—but this disinterested kindness of Mr. Bennett, so nobly carried into effect by Mr. Stanley, was simply overwhelming. I really do feel extremely grateful, and at the same time I am a little ashamed at not being more worthy of the generosity. Mr. Stanley has done his part with untiring energy; good judgment, in the teeth of very serious obstacles. His help-mates turned out depraved blackguards, who, by their excesses at Zanzibar and elsewhere, had ruined their constitutions, and prepared their systems to be fit provender for the grave. They had used up their strength by wickedness, and were of next to

no service, but rather down-drafts, and unbearable drags to progress.

November 16th, 1871.—As Tanganyika explorations are said by Mr. Stanley to be an object of interest to Sir Roderick, we go at his expense, and by his men, to the north of the Lake.

[Dr. Livingstone on a previous occasion wrote from the interior of Africa to the effect that Lake Tanganyika poured its waters into the Albert Nyanza Lake of Baker. At the time, perhaps, he hardly realized the interest that such an announcement was likely to occasion. He was now shown the importance of ascertaining by actual observation whether the junction really existed, and for this purpose he started with Mr. Stanley to explore the region of the supposed connecting link in the north, so as to verify the statements of the Arabs.]

November 16th.—Four hours to Chigoma.

November 20th, 21st.—Passed a very crowded population, the men calling to us to land, to be fleeced and insulted by way of Mahonga or Mutuari: they threw stones in rage, and one, apparently slung, lighted close to the canoe. We came on until after dark, and landed under a cliff to rest and cook, but a crowd came and made inquiries; then a few more came, as if to investigate more perfectly: they told us to sleep, and to-morrow friendship should be made. We put our luggage on board, and set a watch on the cliff. A number of men came along, cowering behind rocks, which then aroused suspicion, and we slipped off quietly: they called after us, as men balked of their prey. We went on five hours and slept, and then this morning came on to Magala, where the people are civil; but Mukamba had war with some one. The Lake narrows to about ten miles as the western mountains come toward the eastern range, that being about north-north-west magnetic. Many stumps of trees killed by water show an encroachment by the Lake on the east side. A transverse range seems to shut in the north end, but there is open country to the east and west of its ends.

November 24th.—To Point Kizuka, in Mukamba's country. A Molongwana came to us from Mukamba and asserted most positively that all the water of Tanganyika flowed into the River Lusizé, and then on to Ukerewé of Mtéza: nothing could be more clear than his statements.

November 25th.—We came on about two hours to some villages on a high bank, where Mukamba is living. The chief, a young, good-looking man like Mugala, came and welcomed us. Our friend of yesterday now declared as positively as before that the

water of Lusizé flowed into Tanganyika, and not the way he said yesterday! I have not the smallest doubt but Tanganyika discharges somewhere, though we may be unable to find it. Lusizé goes to or comes from Luanda and Karagwé. This is hopeful, but I suspend my judgment. War rages between Mukamba and Wasmashanga, or Uasmasané, a chief between this and Lusizé: ten men were killed of Mukamba's people a few days ago. Vast numbers of fishermen ply their calling night and day as far as we can see. Tanganyika closes in except at one point north and by west of us. The highest point of the western range, about seven thousand feet above the sea, is Sumburuza. We are to go tomorrow to Lohinga, elder brother of Mukamba, near Lusizé, and the chief follows us next day.

November 26th.—Sunday. Mr. Stanley has severe fever. I gave Mukamba nine dotis and nine fundos. The end of Tanganyika, seen clearly, is rounded off about 4' broad from east to west.

November 27th.—Mr. Stanley is better. We started at sunset westward, then northward for seven hours, and at 4 A.M. reached Lohinga, at the mouth of the Lusizé.

November 28th.—Shot an *Ibis religiosa*. In the afternoon, Lohinga, the superior of Mukambé, came, and showed himself very intelligent. He named eighteen rivers, four of which enter Tanganyika, and the rest Lusizé: all come into, none leave Tanganyika.* Lusizé is said to rise in Kwangeregéré, in the Kivo lagoon, between Mutumbé and Luanda. Nyabungu is chief of Mutumbé. Lohinga is the most intelligent and the frankest chief we have seen here.

November 29th.—We go to see the Lusizé River in a canoe. The mouth is filled with large, reedy, sedgy islets: there are three branches, about twelve to fifteen yards broad, and one fathom deep, with a strong current of 2' per hour: water discolored. The outlet of the Lake is probably by the Loñgumba River into Lualaba as the Luamo; but this as yet must be set down as a "theoretical discovery."

November 30th.—A large present of eggs, flour, and a sheep came from Mukamba. Mr. Stanley went round to a bay in the west, to which the mountains come sheer down.

December 1st, 1871, Friday.—Latitude last night $3^{\circ} 18' 3''$ S. I gave fifteen cloths to Lohinga, which pleased him highly.

* Thus the question of the Lusizé was settled at once: the previous notion of its outflow to the north proved a myth.—ED.

Kuansibura is the chief who lives near Kivo, the lagoon from which the Lusizé rises: they say it flows under a rock.

December 2d.—Ill from bilious attack.

December 3d.—Better, and thankful. Men went off to bring Mukamba, whose wife brought us a handsome present of milk, beer, and cassava. She is a good-looking young woman, of light color and full lips, with two children of eight or ten years of age. We gave them cloths, and she asked beads; so we made them a present of two fundos. By lunars I was one day wrong to-day.

December 4th.—Very heavy rain from north all night. Baker's lake can not be as near as he puts it in his map, for it is unknown to Lohinga. He thinks that he is a hundred years old, but he is really about forty-five! Namataranga is the name of birds which float high in air in large flocks.

December 5th.—We go over to a point on our east. The bay is about 12' broad: the mountains here are very beautiful. We visited the chief Mukamba at his village five miles north of Lohinga's; he wanted us to remain a few days, but I declined. We saw two flocks of *Ibis religiosa*, numbering in all fifty birds, feeding like geese.

December 6th.—Remain at Lohinga's.

December 7th.—Start and go south-west to Lohanga: passed the point where Speke turned, then breakfasted at the market-place.

December 8th.—Go on to Mukamba, near the boundary of Babembé and Bavira. We pulled six hours to a rocky islet, with two rocks covered with trees on its western side. The Babembé are said to be dangerous, on account of having been slaughtered by the Malongwana. The latitude of these islands is $3^{\circ} 41' S$.

December 9th.—Leave New York Herald Islet, and go south to Lubumba Cape. The people now are the Basansas along the coast. Some men here were drunk, and troublesome: we gave them a present, and left them about half-past four in the afternoon and went to an islet at the north end in about three hours' good pulling, and afterward, in eight hours, to the eastern shore; this makes the Lake say twenty-eight or thirty miles broad. We coasted along to Mokungos, and rested.

December 10th.—Kisessa is chief of all the islet Mozima. His son was maltreated at Ujiji, and died in consequence. This stopped the dura trade, and we were not assaulted, because not Malongwana.

December 11th.—Leave Mokungo at 6 A.M., and coast along six hours and a half to Sazzi.

December 12th.—Mr. Stanley ill with fever. Off, and after three hours stop at Masambo village.

December 13th.—Mr. Stanley better. Go on to Ujiji. Mr. Stanley received a letter from Consul Webb (American) of the 11th of June last, and telegrams from Aden up to the 29th of April.

December 14th.—Many people off to fight Mirambo at Unyan-yembé: their wives promenade, and weave green leaves for victory.

December 15th.—At Ujiji. Getting ready to march east for my goods.

December 16th.—Engage paddlers to Tongwé and a guide.

December 17th.—South.

December 18th.—Writing.

December 19th, 20th.—Still writing dispatches. Packed up the large tin box with Manyema swords and spear-heads, for transmission home by Mr. Stanley. Two chronometers and two watches—anklets of Nzigé and of Manyema. Leave with Mohamad bin Saleh a box with books, shirts, paper, etc.; also large and small beads, tea, coffee, and sugar.

December 21st.—Heavy rains for planting now.

December 22d.—Stanley ill of fever.

December 23d.—Do. very ill. Rainy and uncomfortable.

December 24th.—South.

December 25th.—Christmas. I leave here one bag of beads in a skin, two bags of Sungo mazi, 746 and 756 blue. Gardner's bag of beads, soap two bars, in three boxes (wood): 1st, tea and matunda; 2d, wooden box, paper and shirts; 3d, iron box, shoes, quinine, one bag of coffee, sextant stand, one long wooden box empty. These are left with Mohamad bin Saleh at Ujiji, Christmas-day, 1871. Two bags of beads are already here, and tablecloths.

December 26th.—Had but a sorry Christmas yesterday.

December 27th.—*Mem.* To send Moenyegheré some coffee, and tell his wishes to Masudi. Left Ujiji 9 A.M., and crossed goats, donkeys, and men over Luiché. Sleep at the Malagarasi.

December 29th.—Crossed over the broad bay of the Malagarasi to Kagonga, and sleep.

December 30th.—Pass Viga Point, red sandstone, and cross the bay of the River Lugufu and Nkala village, and transport the people and goats: sleep.

December 31st.—Send for beans, as there are no provisions in front of this. Brown water of the Lugufu bent away north: the high wind is south-west and west. Having provisions, we went round Munkalu Point. The water is slightly discolored for a

mile south of it, but brown water is seen on the north side of bay bent north by a current.

January 1st, 1872.—May the Almighty help me to finish my work this year for Christ's sake! We slept in Mosehezi Bay. I was storm-stayed in Kifwé Bay, which is very beautiful—still as a mill-pond. We found twelve or thirteen hippopotami near a high bank, but did not kill any, for our balls are not hardened. It is high, rocky, tree-covered shore, with rocks bent and twisted wonderfully. Large slices are worn off the land, with hill-sides clad with robes of living green, yet very, very steep.

January 2d.—A very broad belt of large tussocks of reeds lines the shore near Mount Kibanga or Boumba. We had to coast along to the south. Saw a village nearly afloat, the people having there taken refuge from their enemies. There are many hippopotami and crocodiles in Tanganyika. A river thirty yards wide, the Kibanga, flows in strongly. We encamped on an open space on a knoll, and put up flags to guide our land-party to us.

January 3d.—We send off to buy food. Mr. Stanley shot a fat zebra; its meat was very good.

January 4th.—The Ujijians left last night with their canoes. I gave them fourteen fundos of beads to buy food on the way. We are now waiting for our land-party. I gave head men here at Burimba two dotis and a kitamba. Men arrived yesterday, or four days and a half from the Lugufu.

January 5th.—Mr. Stanley is ill of fever. I am engaged in copying notes into my journal. All men and goats arrived safely.

January 6th.—Mr. Stanley better, and we prepare to go.

January 7th.—Mr. Stanley shot a buffalo at the end of our first march up. East, and across the hills. The River Luajeré is in front. We spend the night at the carcass of the buffalo.

January 8th.—We crossed the river, which is thirty yards wide, and rapid. It is now knee and waist deep. The country is rich and beautiful, hilly and tree-covered, reddish soil, and game abundant.

January 9th.—Rainy, but we went on east and north-northeast through a shut-in valley to an opening full of all kinds of game. Buffalo cows have calves now; one was wounded. Rain came down abundantly.

January 10th.—Across a very lovely green country of open forest, all fresh, and like an English gentleman's park. Game plentiful. Tree-covered mountains right and left, and much brown hematite on the levels. Course east. A range of mountains appears about three miles off on our right.

January 11th.—Off through open forest for three hours east, then cook, and go on east another three hours, over very rough, rocky, hilly country. River Mtambahu.

January 12th.—Off early, and pouring rain came down. As we advance, the country is undulating. We cross a rivulet fifteen yards wide going north, and at another, of three yards, came to a halt: all wet and uncomfortable.

The people pick up many mushrooms and manendinga roots, like turnips. There are buffaloes near us in great numbers.

January 13th.—Fine morning. Went through an undulating hilly country, clothed with upland trees, for three hours, then breakfast in an open glade, with bottom of rocks of brown hematite, and a hole with rain-water in it. We are over one thousand feet higher than Tanganyika. It became cloudy, and we finished our march, in a pouring rain, at a rivulet thickly clad with aquatic trees on banks. Course east-south-east.

January 14th.—Another fine morning, but miserably wet afternoon. We went almost 4' east-south-east, and crossed a strong rivulet eight or ten yards wide: then on and up to a ridge and along the top of it, going about south. We had breakfast on the edge of the plateau, looking down into a broad, lovely valley. We now descended, and saw many reddish monkeys, which made a loud outcry: there was much game, but scattered, and we got none. Miserably wet crossing another stream, then up a valley to see a deserted boma, or fenced village.

January 15th.—Along a valley with high mountains on each hand, then up over that range on our left or south. At the top some lions roared. We then went on on high land, and saw many hartbeests and zebra, but did not get one, though a buffalo was knocked over. We crossed a rivulet, and away over beautiful and undulating hills and vales, covered with many trees and jambros fruit. Sleep at a running rill.

January 16th.—A very cold night, after long-continued and heavy rain. Our camp was among brackens. Went east and by south along the high land; then we saw a village down in a deep valley, into which we descended. Then up another ridge in a valley and along to a village well cultivated; up again seven hundred feet at least, and down to Meréra's village, hid in a mountainous nook—about one hundred and forty huts, with doors on one side. The valleys present a lovely scene of industry, all the people being eagerly engaged in weeding and hoeing, to take advantage of the abundant rains which have drenched us every afternoon.

January 17th.—We remain at Meréra's to buy food for our men and ourselves.

January 18th.—March, but the Mirongosi wandered, and led us roundabout instead of south-south-east. We came near some tree-covered hills, and a river, Monya Mazi—Mtamba River in front. I have very sore feet from bad shoes.

January 19th.—Went about south-east for four hours, and crossed the Mbamba River and passed through open forest. There is a large rock in the river, and hills thickly tree-covered, 2' east and west; down a steep descent, and camp. Came down River Mpokwa, over rough country, with sore feet, to ruins of a village, Basavira, and sleep.

January 21st.—Rest.

January 22d.—Rest. Mr. Stanley shot two zebras yesterday, and a she-giraffe to-day. The meat of the giraffe was one thousand pounds weight, the two zebras about eight hundred pounds.

January 23d.—Rest. Mr. Stanley has fever.

January 24th.—Ditto.

January 25th.—Stanley ill.

January 26th.—Stanley better, and off. Through low hills north-east and among bamboos to open forest: on in undulating bushy tract to a river with two rounded hills east, one having three mushroom-shaped trees on it.

January 27th.—On across long land-waves, and the only bamboos east of Mpokwa rill, to breakfast. In going on, a swarm of bees attacked a donkey Mr. Stanley bought for me, and, instead of galloping off, as did the other, the fool of a beast rolled down, and over and over. I did the same, then ran, dashed into a bush like an ostrich pursued, than ran whisking a bush round my head. They gave me a sore head and face before I got rid of the angry insects: I never saw men attacked before: the donkey was completely knocked up by the stings on head, face, and lips, and died in two days in consequence. We slept in the stockade of Misonghi.

January 28th.—We crossed the river, and then away east to near a hill. Crossed two rivers, broad and marshy, and deep, with elephants plunging. Rain almost daily, but less in amount now. Bombay says his greatest desire is to visit Speke's grave ere he dies: he has a square head, with the top depressed in the centre.

January 29th.—We ascended a ridge, the edge of a flat basin with ledges of dark brown sandstone, the brim of ponds in which were deposited great masses of brown hematite, disintegrated into gravel: flat open forest, with short grass. We crossed a rill of

light-colored water three times, and reached a village. After this, in one hour and a half we came to Meréra's.

January 30th.—At Meréra's, the second of the name. Much rain, and very heavy; food abundant. Banyamwezi and Yukonongo people here.

January 31st.—Through scraggy bush, then open forest, with short grass, over a broad rill, and on good path to village Mwaro; chief Kamirambo.

February 1st, 1872.—We met a caravan of Syde bin Habib's people yesterday, who reported that Mirambo has offered to repay all the goods he has robbed the Arabs of, all the ivory, powder, blood, etc., but his offer was rejected. The country all around is devastated, and Arab force is at Simba's. Mr. Stanley's man Shaw is dead. There is very great mortality by small-pox among the Arabs and at the coast. We went over flat upland forest, open and bushy, then down a deep descent, and along north-east to a large tree at a deserted stockade.

February 2d.—Away over ridges of cultivation and elephants' footsteps. Cultivators all swept away by Basavira. Very many elephants feed here. We lost our trail, and sent men to seek it, then came to the camp in the forest. Lunched at rill running into Ngombé Nullah.

Ukamba is the name of the tsetse fly here.

February 3d.—Mr. Stanley has severe fever, with great pains in the back and loins. An emetic helped him a little, but resin of jalap would have cured him quickly. Rainy all day.

February 4th.—Mr. Stanley so ill that we carried him in a cot across flat forest and land covered with short grass for three hours, about north-east, and at last found a path, which was a great help. As soon as the men got under cover, continued rains began. There is a camp of Malongwana here.

February 5th.—Off at 6 A.M. Mr. Stanley a little better, but still carried across same level forest. We pass water in pools, and one in hematite. Saw a black rhinoceros, and come near people.

February 6th.—Drizzly morning, but we went on, and in two hours got drenched with a cold north-west rain: the paths full of water, we splashed along to our camp in a wood. Met a party of native traders going to Mwaro.

February 7th.—Along level plains, and clumps of forest, and hollows filled at present with water, about north-east to a large pool of Ngombé Nullah. Send off two men to Unyanyembe for letters and medicine.

February 8th.—Removed from the large pool of the nullah, about an hour north, to where game abounds. Saw giraffes and zebras on our way. The nullah is covered with lotus-plants, and swarms with crocodiles.

February 9th.—Remained for game, but we were unsuccessful. An eland was shot by Mr. Stanley, but it was lost. Departed at 2 P.M., and reached Manyara, a kind old chief. The country is flat, and covered with detached masses of forest, with open glades and flats.

February 10th.—Leave Manyara, and pass along the same park-like country, with but little water. The rain sinks into the sandy soil at once, and the collection is seldom seen. After a hard tramp, we came to a pool by a sycamore-tree, twenty-eight feet nine inches in circumference, with broad, fruit-laden branches. Ziwané.

February 11th.—Rain nearly all night. Scarcely a day has passed without rain and thunder since we left Tanganyika. Across a flat forest again, meeting a caravan for Ujiji. The grass is three feet high, and in seed. Reach Chikuru, a stockaded village, with dura plantations around it and pools of rain-water.

February 12th.—Rest.

February 13th.—Leave Chikuru, and wade across an open flat with much standing-water. They plant rice on the wet land round the villages. Our path lies through an open forest, where many trees are killed for the sake of the bark, which is used as cloth, and for roofing and beds. Mr. Stanley has severe fever.

February 14th.—Across the same flat, open forest, with scraggy trees and grass, three feet long, in tufts. Came to a boma. North-east of Gunda.

February 15th.—Over the same kind of country, where the water was stagnant, to camp in the forest.

February 16th.—Camp near Kigando, in a rolling country with granite knolls.

February 17th.—Over a country, chiefly level, with stagnant water: rounded hills were seen. Cross a rain-torrent, and encamp in a new boma, Magonda.

February 18th.—Go through low, tree-covered hills of granite, with blocks of rock sticking out: much land cultivated, and many villages. The country now opens out, and we come to the tembé,* in the midst of many straggling villages. Unyanyembé. Thanks to the Almighty!

* Tembé, a flat-roofed Arab house.

CHAPTER XX.

Determines to continue his Work.—Proposed Route.—Refits.—Robberies discovered.—Mr. Stanley leaves.—Parting Messages.—Mteza's People arrive.—Ancient Geography.—Tabora.—Description of the Country.—The Banyamwezi.—A Baganda Bargain.—The Population of Unyanyembé.—The Mirambo War.—Thoughts on Sir S. Baker's Policy.—The Cat and the Snake.—Firm Faith.—Feathered Neighbors.—Mistaken Notion concerning Mothers.—Prospects for Missionaries.—Halima.—News of other Travelers.—Chuma is married.

BY the arrival of the fast Ramadân on the 14th of November, and a Nautical Almanac, I discovered that I was on that date twenty-one days too fast in my reckoning. Mr. Stanley used some very strong arguments in favor of my going home, recruiting my strength, getting artificial teeth, and then returning to finish my task; but my judgment said, "All your friends will wish you to make a complete work of the exploration of the sources of the Nile before you retire." My daughter Agnes says, "Much as I wish you to come home, I would rather that you finished your work to your own satisfaction than return merely to gratify me." Rightly and nobly said, my darling Nannie. Vanity whispers pretty loudly, "She is a chip of the old block." My blessing on her and all the rest.

It is all but certain that four full-grown gushing fountains rise on the water-shed eight days south of Katanga, each of which at no great distance off becomes a large river; and two rivers thus formed flow north to Egypt, the other two south to Inner Ethiopia; that is, Lufira, or Bartle Frere's River, flows into Kamolondo, and that into Webb's Lualaba, the main line of drainage. Another, on the north side of the sources, Sir Paraffin Young's Lualaba, flows through Lake Lincoln, otherwise named Chibungo and Lomamé, and that, too, into Webb's Lualaba. Then Liambai Fountain, Palmerston's, forms the Upper Zambesi; and the Lunga (Lunga), Oswell's Fountain, is the Kafuú; both flowing into Inner Ethiopia. It may be that these are not the fountains of the Nile mentioned to Herodotus by the secretary of Minerva, in Saïs, in Egypt; but they are worth discovery, as in the last hundred of the seven hundred miles of the water-shed, from which nearly all the Nile springs do unquestionably arise.

I propose to go from Unyanyembé to Fipa; then round the

south end of Tanganyika, Tambeté or Mbeté; then across the Chambezé, and round south of Lake Bangweolo, and due west to the ancient fountains; leaving the under-ground excavations till after visiting Katanga. This route will serve to certify that no other sources of the Nile can come from the south without being seen by me. No one will cut me out after this exploration is accomplished; and may the good Lord of all help me to show myself one of his stout-hearted servants, an honor to my children, and perhaps to my country and race.

Our march extended from December 26th, 1871, till February 18th, 1872, or fifty-four days. This was over three hundred miles, and thankful I am to reach Unyanyembé, and the Tembé Kwikuru.

I find, also, that the two head men selected by the notorious but covert slave-trader, Ludha Damji, have been plundering my stores from October 20th, 1870, to February 18th, 1872, or nearly sixteen months. One has died of small-pox; and the other not only plundered my stores, but has broken open the lock of Mr. Stanley's store-room and plundered his goods. He declared that all my goods were safe; but when the list was referred to, and the goods counted, and he was questioned as to the serious loss, he at last remembered a bale of seven pieces of merikano, and three kaniké, or three hundred and four yards, that he evidently had hidden. On questioning him about the boxes brought, he was equally ignorant, but at last said, "Oh! I remember a box of brandy where it went, and every one knows as well as I."

February 18th, 1872.—This and Mr. Stanley's goods being found in his possession, make me resolve to have done with him. My losses by the robberies of the Banian employed slaves are more than made up by Mr. Stanley, who has given me twelve bales of calico, nine loads = fourteen and a half bags of beads, thirty-eight coils of brass wire, a tent, boat, bath, cooking-pots, twelve copper sheets, air-beds, trowsers, jackets, etc. Indeed, I am again quite set up; and as soon as he can send men, not slaves, from the coast, I go to my work, with a fair prospect of finishing it.

February 19th.—Rest. Receive thirty-eight coils of brass wire from Mr. Stanley, fourteen and a half bags of beads, twelve copper sheets, a strong canvas tent, boat-trowsers, nine loads of calico, a bath, cooking-pots, a medicine-chest, a good lot of tools, tacks, screw-nails, copper nails, books, medicines, paper, tar, many cartridges, and some shot.

February 20th.—To my great joy, I got four flannel shirts from Agnes, and I was delighted to find that two pairs of fine

English boots had most considerably been sent by my friend Mr. Waller. Mr. Stanley and I measured the calico, and found that seven hundred and thirty-three and three-quarter yards were wanting, also two frasilahs of samsam, and one case of brandy. Othman pretended sickness, and blamed the dead men, but produced a bale of calico hidden in Thani's goods; this reduced the missing quantity to four hundred and thirty-six and a half yards.

February 21st.—Heavy rains. I am glad we are in shelter. Masudi is an Arab, near to Ali bin Salem at Bagamoio. Bushir is an Arab, for whose slave he took a bale of calico. Masudi took this Chirongozi, who is not a slave, as a pagazi, or porter. Robbed by Bushir at the fifth camp from Bagamoio. Othman confessed that he knew of the sale of the box of brandy, and brought also a shawl which he had forgotten: I searched him, and found Mr. Stanley's stores which he had stolen.

February 22d.—Service this morning, and thanked God for safety thus far. Got a packet of letters from an Arab.

February 23d.—Send to governor for a box which he has kept for four years: it is all eaten by white ants. Two fine guns and a pistol are quite destroyed, all the wood-work being eaten. The brandy-bottles were broken, to make it appear as if by an accident; but the corks being driven in, and corks of maize-cobs used in their place, show that a thief has drunk the brandy and then broken the bottles. The tea was spoiled, but the china was safe, and the cheese good.

February 24th.—Writing a dispatch to Lord Granville against Banian slaving, and in favor of an English native settlement transfer.

February 25th.—A number of Batusi women came to-day asking for presents. They are tall and graceful in form, with well-shaped, small heads, noses, and mouths. They are the chief owners of cattle here. The war with Mirambo is still going on. The governor is ashamed to visit me.

February 26th.—Writing journal and dispatch.

February 27th.—Moenemokaia is ill of heart disease and liver abscess. I sent him some blistering fluid. To-day we hold a Christmas feast.

February 28th.—Writing journal. Syde bin Salem called; he is a China-looking man, and tried to be civil to us.

March 5th, 1872.—My friend Moenemokaia came yesterday; he is very ill of abscess in liver, which has burst internally. I gave him some calomel and jalap to open his bowels. He is very weak; his legs are swollen, but body emaciated.

March 6th.—Repairing tent, and receiving sundry stores. Moe-nemokaia died.

March 7th.—Received a machine for filling cartridges.

March 8th, 9th.—Writing.

March 10th.—Writing. Gave Mr. Stanley a check for five thousand rupees on Stewart and Co., Bombay. This £500 is to be drawn if Dr. Kirk has expended the rest of the £1000. If not, then the check is to be destroyed by Mr. Stanley.

March 12th.—Writing.

March 13th.—Finished my letter to Mr. Bennett of the *New York Herald*, and Dispatch No. 3 to Lord Granville.

March 14th.—Mr. Stanley leaves. I commit to his care my journal sealed with five seals: the impressions on them are those of an American gold coin, anna, and half anna, and cake of paint with royal arms. Positively not to be opened.

[We must leave each heart to know its own bitterness, as the old explorer retraces his steps to the tembé at Kwihara, there to hope and pray that good fortune may attend his companion of the last few months on his journey to the coast; while Stanley, duly impressed with the importance of that which he can reveal to the outer world, and laden with a responsibility which by this time can be fully comprehended, thrusts on through every difficulty.

There is nothing for it now but to give Mr. Stanley time to get to Zanzibar, and to shorten by any means at hand the anxious period which must elapse before evidence can arrive that he has carried out the commission intrusted to him.

As we shall see, Livingstone was not without some material to afford him occupation. Distances were calculated from native report; preparations were pushed on for the coming journey to Lake Bangweolo; apparatus was set in order. Travelers from all quarters dropped in from time to time: each contributed something about his own land; while waifs and strays of news from the expedition sent by the Arabs against Mirambo kept the settlement alive. To return to his diary.

How much seems to lie in their separating, when we remember that with the last shake of the hand, and the last adieu, came the final parting between Livingstone and all that could represent the interest felt by the world in his travels, or the sympathy of the white man!]

March 15th.—Writing to send after Mr. Stanley by two of his men, who wait here for the purpose. Copied line of route, observations from Kabuiré to Casembe's, the second visit, and on to Lake Bangweolo; then the experiment of weight on watch-key at Nyañgwé and Lusizé.

March 16th.—Sent the men after Mr. Stanley, and two of mine to bring his last words, if any.

[Sunday was kept in the quiet of the tembé, on the 17th of March. Two days after, and his birthday again comes round—that day which seems always to have carried with it such a special solemnity. He has yet time to look back on his marvelous deliverances, and the venture he is about to launch forth upon.]

March 19th.—Birthday. My Jesus, my king, my life, my all; I again dedicate my whole self to Thee. Accept me, and grant, oh, gracious Father, that ere this year is gone I may finish my task. In Jesus's name I ask it. Amen, so let it be.

DAVID LIVINGSTONE.

[Many of his astronomical observations were copied out at this time, and minute records taken of the rain-fall. Books saved up against a rainy day were read in the middle of the Masika and its heavy showers.]

March 21st.—Read Baker's book. It is artistic and clever. He does good service in exploring the Nile slave-trade: I hope he may be successful in suppressing it.

The Batusi are the cattle-herds of all this Unyanyembé region. They are very polite in address. The women have small, compact, well-shaped heads and pretty faces; color, brown; very pleasant to speak to; well-shaped figures, with small hands and feet; the last with high insteps, and springy altogether. Plants and grass are collected every day, and a fire, with much smoke, made to fumigate the cattle and keep off flies: the cattle like it, and the valleys are filled with smoke in the evening in consequence. The Baganda are slaves in comparison; black, with a tinge of copper-color sometimes; bridgeless noses, large nostrils and lips, but well-made limbs and feet.

[We see that the thread by which he still draws back a lingering word or two from Stanley has not parted yet.]

March 25th.—Susi brought a letter back from Mr. Stanley. He had a little fever, but I hope he will go on safely.

March 26th.—Rain of Masika chiefly by night. The Masika of 1871 began on the 23d of March, and ended the 30th of April.

March 27th.—Reading. Very heavy rains.

March 28th.—Moenyembegu asked for the loan of a doti. He is starving, and so is the war-party at M'Futu; chaining their slaves together to keep them from running away to get food anywhere.

March 29th, 30th, 31st.—Very rainy weather. Am reading "Mungo Park's Travels;" they look so truthful.

April 1st, 1872.—Read Young's "Search after Livingstone;" thankful for many kind words about me. He writes like a gentleman.

April 2d.—Making a sounding-line out of lint left by Mr. Stanley. Whydah-birds are now building their nests. The cock-bird brings fine grass seed-stalks off the top of my tembé. He takes the end inside the nest and pulls it all in, save the ear. The hen keeps inside, constantly arranging the grass with all her might, sometimes making the whole nest move by her efforts. Feathers are laid in after the grass.

April 4th.—We hear that Dugumbé's men have come to Ujiji with fifty tusks. He went down Lualaba with three canoes a long way, and bought much ivory. They were not molested by Monangungo as we were.

My men whom I had sent to look for a book, left by accident in a hut some days' journey off, came back, stopped by a flood in their track. Copying observations for Sir T. Maclear.

April 8th.—An Arab called Syed bin Mohamad Magibbé called. He proposes to go west to the country west of Katanga (Urangé).

[It is very interesting to find that the results of the visit paid by Speke and Grant to Mtéza, king of Uganda, have already become well marked. As we see, Livingstone was at Unyanyembé when a large trading-party dropped in, on their way back to the king, who, it will be remembered, lives on the north-western shores of the Victoria Nyassa.]

April 9th.—About one hundred and fifty Waganga of Mtéza carried a present to Syed Burghash, sultan of Zanzibar, consisting of ivory and a young elephant.* He spent all the ivory in buying return presents of gunpowder, guns, soap, brandy, gin, etc., and they have stowed it all in this tembé. This morning they have taken every thing out, to see if any thing is spoiled. They have hundreds of packages.

One of the Baganda told me yesterday that the name of the Deity is Dubalé in his tongue.

April 15th.—Hung up the sounding-line on poles one fathom

* This elephant was subsequently sent by Dr. Kirk to Sir Philip Wodehouse, governor of Bombay. When in Zanzibar it was perfectly tame. We understand it is now in the possession of Sir Solar Jung, to whom it was presented by Sir Philip Wodehouse.—Ed.

apart and tarred it. Three hundred and seventy-five fathoms of five strands.

Ptolemy's geography of Central Africa seems to say that the science was then (second century A.D.) in a state of decadence from what was known to the ancient Egyptian priests, as revealed to Herodotus six hundred years before his day (or say B.C. 440). They seem to have been well aware, by the accounts of travelers or traders, that a great number of springs contributed to the origin of the Nile, but none could be pointed at distinctly as the "Fountains," except those I long to discover, or rather rediscover. Ptolemy seems to have gathered up the threads of ancient explorations, and made many springs (six) flow into two lakes situated east and west of each other—the space above them being unknown. If the Victoria Lake were large, then it and the Albert would probably be the lakes which Ptolemy meant, and it would be pleasant to call them Ptolemy's sources, rediscovered by the toil and enterprise of our countrymen, Speke, Grant, and Baker; but unfortunately Ptolemy has inserted the small lake "Coloe" nearly where the Victoria Lake stands, and one can not say where his two lakes are. Of Lakes Victoria, Bangweolo, Moero, Kamolondo—Lake Lincoln and Lake Albert, which two did he mean? The science in his time was in a state of decadence. Were two lakes not the relics of a greater number previously known? What says the most ancient map known of Sethos II.'s time?

April 16th.—Went over to visit Sultan bin Ali, near Tabora. Country open, plains sloping very gently down from low rounded granite hills covered with trees. Rounded masses of the light-gray granite crop out all over them, but many are hidden by the trees: Tabora slopes down from some of the same hills that overlook Kwihara, where I live. At the bottom of the slope swampy land lies, and during the Masika it is flooded, and runs westward. The sloping plain on the north of the central drain is called Kazé, that on the south is Tabora, and this is often applied to the whole space between the hills north and south. Sultan bin Ali is very hospitable. He is of the Bedawee Arabs, and a famous marksman with his long Arab gun, or matchlock. He often killed hares with it, always hitting them in the head. He is about sixty-five years of age, black-eyed, six feet high, and inclined to stoutness, and his long beard is nearly all gray. He provided two bountiful meals for self and attendants.

Called on Mohamad bin Nassur—recovering from sickness. He presented a goat and a large quantity of guavas. He gave

the news that came from Dugumbé's underling, Nseréré, and men now at Ujiji. They went south-west to the country called Nombé: it is near Rua, and where copper is smelted. After I left them, on account of the massacre at Nyañgwé, they bought much ivory; but acting in the usual Arab way, plundering and killing, they aroused the Bakuss's ire, and, as they are very numerous, about two hundred were killed, and none of Dugumbé's party. They brought fifty tusks to Ujiji. We dare not pronounce positively on any event in life, but this looks like prompt retribution on the perpetrators of the horrible and senseless massacre of Nyañgwé. It was not vengeance by the relations of the murdered ones we saw shot and sunk in the Lualaba, for there is no communication between the people of Nyañgwé and the Bakuss, or people of Nombé of Lomamé. That massacre turned my heart completely against Dugumbé's people. To go with them to Lomamé, as my slaves were willing to do, was so repugnant, I preferred to return that weary four hundred or six hundred miles to Ujiji. I mourned over my being baffled and thwarted all the way, but tried to believe that it was all for the best. This news shows that had I gone with these people to Lomamé I could not have escaped the Bakuss's spears, for I could not have run like the routed fugitives. I was prevented from going in order to save me from death. Many escapes from danger I am aware of: some make me shudder, as I think how near to death's door I came. But how many more instances of Providential protecting there may be of which I know nothing! But I thank most sincerely the good Lord of all for his goodness to me.

April 18th.—I pray the good Lord of all to favor me so as to allow me to discover the ancient fountains of Herodotus; and if there is any thing in the under-ground excavations to confirm the precious old documents (*τὰ βιβλία*), the Scriptures of truth, may he permit me to bring it to light, and give me wisdom to make a proper use of it!

Some seem to feel that their own importance in the community is enhanced by an imaginary connection with a discovery or discoverer of the Nile sources, and are only too happy to figure, if only in a minor part, as theoretical discoverers—a theoretical discovery being a contradiction in terms.

The cross has been used—not as a Christian emblem certainly, but from time immemorial as the form in which the copper ingot of Katanga is moulded: this is met with quite commonly, and is called Handiplé Mahandi. Our capital letter I (called Vigerá) is the large form of the bars of copper, each about sixty or sev-

enty pounds weight, seen all over Central Africa and from Katakanga.

April 19th.—A roll of letters and newspapers, apparently, came to-day for Mr. Stanley. The messenger says he passed Mr. Stanley on the way, who said, "Take this to the doctor!" this is erroneous. The Prince of Wales is reported to be dying of typhoid fever: the Princess Louise has hastened to his bedside.

April 20th.—Opened it on the 20th, and found nine *New York Herald*s of December 1-9, 1871, and one letter for Mr. Stanley, which I shall forward, and one stick of tobacco.

April 21st.—Tared the tent presented by Mr. Stanley.

April 23d.—Visited Kwikuru, and saw the chief of all the Banyamwezi (around whose boma it is), about sixty years old, and partially paralytic. He told me that he had gone as far as Katakanga by the same Fipa route I now propose to take, when a little boy following his father, who was a great trader.

The name Banyamwezi arose from an ivory ornament of the shape of the new moon hung to the neck, with a horn reaching round over either shoulder. They believe that they came from the sea-coast, Mombas (?) of old, and when people inquired for them, they said, "We mean the men of the moon ornament." It is very popular even now, and a large amount of ivory is cut down in its manufacture: some are made of the curved tusks of hippopotami. The Banyamwezi have turned out good porters, and they do most of the carrying work of the trade to and from the East Coast: they are strong, and trustworthy. One I saw carried six frasilahs, or two hundred pounds, of ivory, from Unyanyembé to the sea-coast.

The prefix "*Nya*" in Nyamwezi seems to mean place or locality, as *Mya* does on the Zambesi. If the name referred to the "moon ornament," as the people believe, the name would be *Ba* or *Wamwezi*, but *Banyamwezi* means probably the *Ba*, *they*, or *people*—*Nya*, *place*—*Mwezi*, *moon*, people of the moon locality, or moon-land.

Unyanyembé, *place of hoes.*

Unyambéwa.

Unyangoma, *place of drums.*

Nyanguruć, *place of pigs.*

Nyangkondo.

Nyarukwé.

It must be a sore affliction to be bereft of one's reason, and the more so if the insanity takes the form of uttering thoughts which in a sound state we drive from us as impure.

April 25th, 26th.—A touch of fever from exposure.

April 27th.—Better, and thankful. Zahor died of small-pox here, after collecting much ivory at Fipa and Urungu. It is all taken up by Lewalé.*

The rains seem nearly over, and are succeeded by very cold easterly winds: these cause fever, by checking the perspiration, and are well known as eminently febrile. The Arabs put the cause of the fever to the rains drying up. In my experience, it is most unhealthy during the rains if one gets wet: the chill is brought on, the bowels cease to act, and fever sets in. Now it is the cold wind that operates, and possibly this is intensified by the malaria of the drying-up surface. A chill from bathing on the 25th in cold water gave me a slight attack.

May 1st, 1872.—Unyanyembé: bought a cow for eleven dotis of merikano (and two kaniké for calf): she gives milk, and this makes me independent.

Head man of the Baganda, from whom I bought it, said, "I go off to pray." He has been taught by Arabs, and is the first proselyte they have gained. Baker thinks that the first want of Africans is to teach them to *want*. Interesting, seeing he was bored almost to death by Kamrasi wanting every thing he had.

Bought three more cows and calves for milk: they give a good quantity enough for me and mine, and are small short-horns; one has a hump: two black, with white spots, and one white, one black, with white face. The Baganda were well pleased with the prices given, and so am I. Finished a letter for the *New York Herald*, trying to enlist American zeal to stop the East Coast slave-trade. I pray for a blessing on it from the All-Gracious.

[Through a coincidence, a singular interest attaches to this entry. The concluding words of the letter he refers to are as follows:]

"All I can add, in my loneliness, is, may Heaven's rich blessing come down on every one, American, English, or Turk, who will help to heal the open sore of the world."

[It was felt that nothing could more palpably represent the man, and this quotation has consequently been inscribed upon the tablet erected to his memory near his grave in Westminster Abbey. It was noticed some time after selecting it that Livingstone wrote these words exactly one year before his death, which, as we shall see, took place on May 1st, 1873.]

* Lewalé appears to be the title by which the governor of the town is called.

May 3d.—The entire population of Unyanyembé called Arab is eighty males; many of these are country born, and are known by the paucity of beard and bridgeless noses, as compared with men from Muscat. The Muscatees are more honorable than the main-landers, and more brave—altogether better looking, and better every way.

If we say that the eighty so-called Arabs here have twenty dependents each, one thousand five hundred or one thousand six hundred is the outside population of Unyanyembé in connection with the Arabs. It is called an ivory station; that means simply that elephants' tusks are the chief articles of trade. But little ivory comes to market: every Arab who is able sends bands of his people to different parts to trade: the land being free, they cultivate patches of maize, dura, rice, beans, etc., and after one or two seasons return with what ivory they may have secured. Ujiji is the only mart in the country, and it is chiefly for oil, grain, goats, salt, fish, beef, native produce of all sorts, and is held daily. A few tusks are sometimes brought, but it can scarcely be called an ivory mart for that. It is an institution begun and carried on by the natives, in spite of great drawbacks from unjust Arabs. It resembles the markets of Manyuema, but is attended every day by about three hundred people. No dura has been brought lately to Ujiji, because a Belooch man found the son of the chief of Mbwara Island peeping in at his women, and beat the young man so that on returning home he died. The Mbwara people always brought much grain before that, but since that affair never come.

The Arabs send a few freemen, as heads of a party of slaves, to trade. These select a friendly chief, and spend at least half these goods brought in presents on him, and in buying the best food the country affords for themselves. It happens frequently that the party comes back nearly empty-handed, but it is the Banians that lose, and the Arabs are not much displeased. This point is not again occupied if it has been a dead loss.

May 4th.—Many palavers about Mirambo's death having taken place, and being concealed. Arabs say that he is a brave man, and the war is not near its end. Some northern natives, called Bagoyé, get a keg of powder and a piece of cloth, go and attack a village, then wait a month or so, eating the food of the captured place, and come back for stores again: thus the war goes on. Prepared tracing-paper to draw a map for Sir Thomas Maclear. Lewalé invites me to a feast.

May 7th.—New moon last night. Went to breakfast with Le-

walé. He says that the Mirambo war is virtually against himself as a Syed Majid man. They wish to have him removed, and this would be a benefit.

The Banyamwezi told the Arabs that they did not want them to go to fight, because when one Arab was killed all the rest ran away, and the army got frightened.

"Give us your slaves only, and we will fight," say they.

A Magohé man gave charms, and they pressed Mirambo sorely. His brother sent four tusks as a peace-offering, and it is thought that the end is near. His mother was plundered, and lost all her cattle.

May 9th.—No fight, though it was threatened yesterday: they all like to talk a great deal before striking a blow. They believe that in the multitude of counselors there is safety. Women singing, as they pound their grain into meal, "Oh, the march of Bwanamokolu to Katanga! Oh, the march to Katanga and back to Ujiji!—Oh, oh, oh!" Bwanamokolu means the great, or old, gentleman. Batusi women are very keen traders, and very polite and pleasing in their address and pretty way of speaking.

I do not know how the great loving Father will bring all out right at last, but he knows and will do it.

The African's idea seems to be that they are within the power of a power superior to themselves—apart from and invisible: good, but frequently evil and dangerous. This may have been the earliest religious feeling of dependence on a Divine power, without any conscious feeling of its nature. Idols may have come in to give a definite idea of superior power, and the primitive faith or impression obtained by Revelation seems to have mingled with their idolatry, without any sense of incongruity. (See Micah, in Judges.)*

The origin of the primitive faith in Africans and others seems always to have been a Divine influence on their dark minds, which has proved persistent in all ages. One portion of primitive belief—the continued existence of departed spirits—seems to have no connection whatever with dreams, or, as we should say, with "ghost-seeing;" for great agony is felt in prospect of bodily mutilation or burning of the body after death, as that is believed to render return to one's native land impossible. They feel as if it would shut them off from all intercourse with relatives after death. They would lose the power of doing good to those once loved, and evil to those who deserved their revenge. Take the case of

* Judges xviii.

the slaves in the yoke singing songs of hate and revenge against those who sold them into slavery. They thought it right so to harbor hatred, though most of the party had been sold for crimes—adultery, stealing, etc., which they knew to be sins.

If Baker's expedition should succeed in annexing the valley of the Nile to Egypt, the question arises, Would not the miserable condition of the natives, when subjected to all the atrocities of the White Nile slave-traders, be worse under Egyptian dominion? The villages would be farmed out to tax-collectors, the women, children, and boys carried off into slavery, and the free thought and feeling of the population placed under the dead-weight of Islam. Bad as the situation now is, if Baker leaves it, matters will grow worse. It is probable that actual experience will correct the fancies he now puts forth as to the proper mode of dealing with Africans.

May 10th.—Hamees Wodin Tagh, my friend, is reported slain by the Makoa of a large village he went to fight. Other influential Arabs are killed, but full information has not yet arrived. He was in youth a slave, but by energy and good conduct in trading with the Masai and far south of Nyassa and elsewhere, he rose to freedom and wealth. He had good taste in all his domestic arrangements, and seemed to be a good man. He showed great kindness to me on my arrival at Chitimbwa's.

May 11th.—A serpent of dark olive color was found dead at my door this morning, probably killed by a cat. Puss approaches very cautiously, and strikes her claws into the head with a blow delivered as quick as lightning; then holds the head down with both paws, heedless of the wriggling mass of coils behind it; she then bites the neck and leaves it, looking with interest to the disfigured head, as if she knew that therein had lain the hidden power of mischief. She seems to possess a little of the nature of the ichneumon, which was sacred in Egypt, from its destroying serpents. The serpent was in pursuit of mice when killed by puss.

May 12th.—Singeri, the head man of the Baganda here, offered me a cow and calf yesterday, but I declined, as we were strangers both, and this is too much for me to take. I said that I would take ten cows at Mtésa's if he offered them. I gave him a little medicine (arnica) for his wife, whose face was burned by smoking over gunpowder. Again he pressed the cow and calf in vain.

The reported death of Hamees Wodin Tagh is contradicted. It was so circumstantial that I gave it credit, though the false reports in this land are one of its most marked characteristics. They are "enough to spear a sow."

May 13th.—He will keep His word—the gracious One, full of grace and truth—no doubt of it. He said, “Him that cometh unto me, I will in nowise cast out,” and “Whatsoever ye shall ask in my name I will give it.” He WILL keep His word: then I can come and humbly present my petition, and it will be all right. Doubt is here inadmissible, surely. D. L.

Ajala’s people, sent to buy ivory in Uganda, were coming back with some ten tusks, and were attacked at Ugalla by robbers and one free man slain: the rest threw every thing down and fled. They came here with their doleful tale to-day.

May 14th.—People came from Ujiji to-day, and report that many of Mohamad Bogharib’s slaves have died of small-pox—Fundi and Suleiman among them. Others sent out to get fire-wood have been captured by the Waha. Mohamad’s chief slave, Othman, went to see the cause of their losses, and received a spear in the back, the point coming out at his breast. It is scarcely possible to tell how many of the slaves have perished since they were bought or captured, but the loss has been grievous.

Lewalé off to M’futu to loiter, and not to fight. The Bagoyé do not wish Arabs to come near the scene of action, because, say they, “When one Arab is killed, all the rest run away, and they frighten us thereby. Stay at M’futu; we will do all the fighting.” This is very acceptable advice.

May 16th.—A man came from Ujiji to say one of the party at Kasonga’s reports that a marauding party went thence to the island of Bazula, north of them. They ferried them to an island, and in coming back they were assaulted by the islanders in turn. They speared two in canoes shoving off, and the rest, panic-stricken, took to the water, and thirty-five were slain. It was a just punishment, and shows what the Manyema can do if aroused to right their wrongs. No news of Baker’s party; but Abed and Hassani are said to be well, and far down the Lualaba. Nassur Masudi is at Kasonga’s, probably afraid by the Zula slaughter to go farther. They will shut their own market against themselves. Lewalé sends off letters to the Sultan to-day. I have no news to send, but am waiting wearily.

May 17th.—Ailing. Making cheeses for the journey: good, but sour rather, as the milk soon turns in this climate, and we do not use rennet, but allow the milk to coagulate of itself, and it does thicken in half a day.

May 18th, 19th.—One of Dugumbé’s men came to-day from Ujiji. He confirms the slaughter of Matereka’s people, but denies that of Dugumbé’s men. They went to Lomamé, about eleven

days west, and found it to be about the size of Luamo: it comes from a lake, and goes to Lualaba, near the Kisingité, a cataract. Dugumbé then sent his people down Lualaba, where much ivory is to be obtained. They secured a great deal of copper—one thousand thick bracelets—on the south-west of Nyangwé, and some ivory, but not so much as they desired. No news of Abed. Lomamé water is black, and black scum comes up in it.

May 20th.—Better. Very cold winds. The cattle of the Batusi were captured by the Arabs to prevent them going off with the Baganda, my four among them. I sent over for them, and they were returned this morning. Thirty-five of Mohamad's slaves died of small-pox.

May 21st.—The genuine Africans of this region have flattened nose-bridges; the higher grades of the tribes have prominent nose-bridges, and are on this account greatly admired by the Arabs. The Batusi here, the Balunda of Casembe, and Itawa of Nsama, and many Manyema, have straight noses; but every now and then you come to districts in which the bridgeless noses give the air of the low English bruiser class, or faces inclining to King Charles the Second's spaniels. The Arab progeny here have scanty beards, and many grow to a very great height—tall, gaunt savages; while the Muscatees have prominent nose-bridges, good beards, and are polite and hospitable.

I wish I had some of the assurance possessed by others, but I am oppressed with the apprehension that, after all, it may turn out that I have been following the Congo; and who would risk being put into a cannibal pot, and converted into a black man, for it?

May 22d.—Baganga are very black, with a tinge of copper color in some. Bridgeless noses all.

May 23d.—There seems but little prospect of Christianity spreading by ordinary means among Mohammedans. Their pride is a great obstacle, and is very industriously nurtured by its votaries. No new invention or increase of power on the part of Christians seem to disturb the self-complacent belief that ultimately all power and dominion in this world will fall into the hands of Moslems. Mohammed will appear at last in glory, with all his followers saved by him. When Mr. Stanley's Arab boy from Jerusalem told the Arab bin Saleh that he was a Christian, he was asked, "Why so? don't you know that all the world will soon be Mohammedan? Jerusalem is ours, all the world is ours, and in a short time we shall overcome all." Theirs are great expectations!

A family of ten whydah-birds (*Vidua purpurea*) come to the pomegranate-trees in our yard. The eight young ones, full-fledged, are fed by the dam, as young pigeons are. The food is brought up from the crop without the bowing and bending of the pigeon. They chirrup briskly for food: the dam gives most, while the red-breasted cock gives one or two, and then knocks the rest away.

May 24th.—Speke, at Kasengé Islet, inadvertently made a general statement thus: "The mothers of these savage people have infinitely less affection than many savage beasts of my acquaintance. I have seen a mother-bear, galled by frequent shots, obstinately meet her death by repeatedly returning under fire while endeavoring to rescue her young from the grasp of intruding men. But here, for a simple loin-cloth or two, human mothers eagerly exchanged their little offspring, delivering them into perpetual bondage to my Beluch soldiers."—SPEKE, pp. 234, 235. For the sake of the little story of "a bear-mother," Speke made a general assertion on a very small and exceptional foundation. Frequent inquiries among the most intelligent and far-traveled Arabs failed to find confirmation of this child-selling, except in the very rare case of a child cutting the upper front teeth before the under, and because this child is believed to be "moiko" (*unlucky*), and certain to bring death into the family. It is called an Arab child, and sold to the first Arab, or even left at his door. This is the only case the Arabs know of child-selling. Speke had only two Beluch soldiers with him, and the idea that they loaded themselves with infants at once stamps the tale as fabulous. He may have seen one sold—an extremely rare and exceptional case; but the inferences drawn are just like that of the Frenchman who thought the English so partial to suicide in November that they might be seen suspended from trees in the common highways.

In crossing Tanganyika three several times, I was detained at the islet Kasengé about ten weeks in all. On each occasion Arab traders were present, all eager to buy slaves, but none were offered; and they assured me that they had never seen the habit alleged to exist by Speke, though they had heard of the "unlucky" cases referred to. Every one has known of poor little foundlings in England, but our mothers are not credited with less affection than she-bears.

I would say to missionaries, Come on, brethren, to the real heathen. You have no idea how brave you are till you try. Leaving the coast tribes, and devoting yourselves heartily to the

savages, as they are called, you will find, with some drawbacks and wickednesses, a very great deal to admire and love. Many statements made about them require confirmation. You will never see women selling their infants: the Arabs never did, nor have I. An assertion of the kind was made by mistake.

Captive children are often sold, but not by their mothers. Famine sometimes reduces fathers to part with them, but the selling of children, as a general practice, is quite unknown, and, as Speke put it, quite a mistake.

May 25th, 26th.—Cold weather. Lewalé sends for all Arabs to make a grand assault, as it is now believed that Mirambo is dead, and only his son, with few people, remain.

Two whydah-birds, after their nest was destroyed several times, now try again in another pomegranate-tree in the yard. They put back their eggs, as they have the power to do, and build again.

The trout has the power of keeping back the ova when circumstances are unfavorable to their deposit. She can quite absorb the whole, but occasionally the absorbents have too much to do; the ovarium, and eventually the whole abdomen, seems in a state of inflammation, as when they are trying to remove a mortified human limb; and the poor fish, feeling its strength leaving it, true to instinct, goes to the entrance to the burn where it ought to have spawned, and, unable to ascend, dies. The defect is probably the want of the aid of a milter.

May 27th.—Another pair of the kind (in which the cock is red-breasted) had ten chickens; also rebuilds afresh. The red cock-bird feeds all the brood. Each little one puts his head on one side as he inserts his bill, chirruping briskly, and bothering him. The young ones lift up a feather as a child would a doll, and invite others to do the same, in play. So, too, with another pair. The cock skips from side to side with a feather in his bill, and the hen is pleased: nature is full of enjoyment. Near Kasangan-ga's I saw boys shooting locusts that settled on the ground with little bows and arrows.

Cock whydah-bird died in the night. The brood came and chirruped to it for food, and tried to make it feed them, as if not knowing death!

A wagtail dam refused its young a caterpillar till it had been killed: she ran away from it, but then gave it when ready to be swallowed. The first smile of an infant, with its toothless gums, is one of the pleasantest sights in nature. It is innocence claiming kinship, and asking to be loved in its helplessness.

May 28th.—Many parts of this interior land present most inviting prospects for well-sustained efforts of private benevolence. Karagué, for instance, with its intelligent friendly chief, Rumanika (Speke's Rumanika), and Bouganda, with its teeming population, rain, and friendly chief, who could easily be swayed by an energetic, prudent missionary. The evangelist must not depend on foreign support other than an occasional supply of beads and calico: coffee is indigenous, and so is sugar-cane. When detained by ulcerated feet in Manyema, I made sugar by pounding the cane in the common wooden mortar of the country, squeezing out the juice very hard, and boiling it till thick; the defect it had was a latent acidity, for which I had no lime, and it soon all fermented. I saw sugar afterward at Ujiji made in the same way, and that kept for months. Wheat and rice are cultivated by the Arabs in all this upland region; the only thing a missionary needs in order to secure an abundant supply is to follow the Arab advice as to the proper season for sowing. Pomegranates, guavas, lemons, and oranges are abundant in Unyanyembé; mangoes flourish, and grape-vines are beginning to be cultivated; papaws grow everywhere. Onions, radishes, pumpkins, and water-melons prosper, and so would most European vegetables, if the proper seasons were selected for planting, and the most important point attended to in bringing the seeds. These must never be soldered in tins or put in close boxes; a process of sweating takes place when they are confined, as in a box or hold of the ship, and the power of vegetating is destroyed; but garden seeds put up in common brown paper, and hung in the cabin on the voyage, and not exposed to the direct rays of the sun afterward, I have found to be as good as in England.

It would be a sort of Robinson Crusoe life, but with abundant materials for surrounding one's self with comforts, and improving the improvable among the natives. Clothing would require but small expense: four suits of strong tweed served me comfortably for five years. Woolen clothing is the best: if all wool, it wears long, and prevents chills. The temperature here in the beginning of winter ranges from 62° to 75° Fahr. In summer it seldom goes above 84°, as the country generally is from three thousand six hundred to four thousand feet high. Gently undulating plains, with outcropping tree-covered granite hills on the ridges, and springs in valleys, will serve as a description of the country.

May 29th.—Halima ran away, in a quarrel with Ntaoéka: I went over to Sultan bin Ali and sent a note after her, but she came back of her own accord, and only wanted me to come out-

side and tell her to enter. I did so, and added, "You must not quarrel again." She has been extremely good ever since I got her from Katombo or Moenemokaia: I never had to reprove her once. She is always very attentive and clever, and never stole, nor would she allow her husband to steal. She is the best spoke in the wheel. This, her only escapade, is easily forgiven, and I gave her a warm cloth for the cold, by way of assuring her that I had no grudge against her. I shall free her, and buy her a house and garden at Zanzibar, when we get there.* Smokes or haze begin, and birds, stimulated by the cold, build briskly.

May 30th, Sunday.—Sent over to Sultan bin Ali, to write another note to Lewalé, to say first note not needed.

May 31st.—The so-called Arab war with Mirambo drags its slow length along most wearily. After it is over, then we shall get Banyamwezi pagazi in abundance. It is not now known whether Mirambo is alive or not: some say that he died long ago, and his son keeps up his state instead.

In reference to this Nile source I have been kept in perpetual doubt and perplexity. I know too much to be positive. Great Lualaba, or Lualubba, as Manyuema say, may turn out to be the Congo and Nile—a shorter river, after all: the fountains flowing north and south seem in favor of its being the Nile. Great westing is in favor of the Congo. It would be comfortable to be positive like Baker. "Every drop from the passing shower to the roaring mountain torrent must fall into Albert Lake, a giant at its birth." How soothing to be positive!

June 1st, 1872.—Visited by Jemadar Hamees from Katanga, who gives the following information:

UNYANYEMBÉ, *Tuesday.*—Hamees bin Jumaadarsabel, a Beluch, came here from Katanga to-day. He reports that the three Portuguese traders, Jão, Domasiko, and Domasho, came to Katanga from Matiamvo. They bought quantities of ivory and returned: they were carried in mashilahs† by slaves. This Hamees gave them pieces of gold from the rivulet there, between the two copper or malachite hills, from which copper is dug. He says that Tipo Tipo is now at Katanga, and has purchased much ivory from Kayomba, or Kayombo, in Rua. He offers to guide me thither, going first to Meréré's, where Amran Masudi has now the upper hand, and Meréré offers to pay all the losses he has caused to Arabs and others. Two letters were sent by the

* Halima followed the doctor's remains to Zanzibar. It does seem hard that his death leaves her long services entirely unrequited.—ED.

† The Portuguese name for palanquin.

Portuguese to the East Coast; one is in Amran's hands. Hamees Wodin Tagh is alive and well. These Portuguese went nowhere from Katanga, so that they have not touched the sources of the Nile, for which I am thankful.

Tipo Tipo has made friends with Merosi, the Monyamwezé head man at Katanga, by marrying his daughter, and has formed the plan of assaulting Casembe in conjunction with him, because Casembe put six of Tipo Tipo's men to death. He will now be digging gold at Katanga till this man returns with gunpowder.

[Many busy calculations are met with here which are too involved to be given in detail. At one point we see a rough conjecture as to the length of the road through Fipa.]

On looking at the projected route by Meréré's, I see that it will be a saving of a large angle into Fipa=350' into Basango country south-south-west, or south and by west; this comes into lat. 10' S., and from this west-south-west 400' to long. of Katanga, skirting Bangweolo south shore in 12° S.=the whole distance=750', say 900'.

[Farther on we see that he reckoned on his work occupying him till 1874.]

If Stanley arrived the 1st of May at Zanzibar: allow=twenty days to get men and settle with them=May 20th, men leave Zanzibar 22d of May=now 1st of June.

On the road may be	10 days.
Still to come 30 days, June.....	30 "
Ought to arrive 10th or 15th of July.....	40 "

14th of June=Stanley being away now three months; say he left Zanzibar 24th of May=at Aden 1st of June=Suez, 8th of June, near Malta 14th of June.

Stanley's men may arrive in July next. Then engage pagazi half a month=August, five months of this year will remain for journey, the whole of 1873 will be swallowed up in work; but in February or March, 1874, please the Almighty Disposer of events, I shall complete my task and retire.

June 2d.—A second crop here, as in Angola. The lemons and pomegranates are flowering and putting out young fruits anew, though the crops of each have just been gathered. Wheat planted a month ago is now a foot high, and in three months will be harvested. The rice and dura are being reaped, and the hoes are busy getting virgin land ready. Beans, and Madagas-

car under-ground beans, voandzeia, and ground-nuts are ripe now. Mangoes are formed. The weather feels cold, min. 62°, max. 74°, and stimulates the birds to pair and build, though they are of broods scarcely weaned from being fed by their parents. Bees swarm, and pass over us. Sky clear, with fleecy clouds here and there.

June 7th.—Sultan bin Ali called. He says that the path by Fipa is the best: it has plenty of game, and people are friendly.* By going to Amran, I should get into the vicinity of Meréré, and possibly be detained, as the country is in a state of war. The Beluch would naturally wish to make a good thing of me, as he did of Speke. I gave him a cloth, and arranged the Sungomazé beads, but the box and beads weigh one hundred and forty pounds, or two men's loads. I visited Lewalé. Heard of Baker going to Unyoro Water, Lake Albert. Lewalé praises the road by Moeneyungo and Meréré, and says he will give a guide, but he never went that way.

June 10th.—Othman, our guide from Ujiji hither, called to-day, and says positively that the way by Fipa is decidedly the shortest and easiest: there is plenty of game, and the people are all friendly. He reports that Mirambo's head man, Merungwé, was assaulted and killed, and all his food, cattle, and grain used. Mirambo remains alone. He has, it seems, inspired terror in the Arab and Banyamwezi mind by his charms, and he will probably be allowed to retreat north by flight, and the war for a season close; if so, we shall get plenty of Banyamwezi pagazi, and be off, for which I earnestly long and pray.

June 13th.—Sangara, one of Mr. Stanley's men, returned from Bagamoio, and reports that my caravan is at Ugogo. He arrived to-day, and reports that Stanley and the American consul acted like good fellows, and soon got a party of over fifty off, as he heard while at Bagamoio, and he left. The main body, he thinks, are in Ugogo. He came on with the news, but the letters were not delivered to him. I do most fervently thank the good Lord of all for his kindness to me through these gentlemen. The men will come here about the end of this month. Bombay happily pleaded sickness as an excuse for not re-engaging, as several others have done. He saw that I got a clear view of his failings, and he could not hope to hoodwink me.

After Sangara came, I went over to Kukururu to see what the

* It will be seen that this was fully confirmed afterward by Livingstone's men: the fact may be of importance to future travelers.—ED.

Lewalé had received, but he was absent at Tabora. A great deal of shouting, firing of guns, and circumgyration by the men who had come from the war just outside the stockade of Nkasiwa (which is surrounded by a hedge of dark euphorbia, and stands in a level hollow), was going on as we descended the gentle slope toward it. Two heads had been put up as trophies in the village, and it was asserted that Marukwé, a chief man of Mirambo, had been captured at Uvinza, and his head would soon come too. It actually did come, and was put upon a pole.

I am most unfeignedly thankful that Stanley and Webb have acted nobly.

June 14th.—On June 22d Stanley was one hundred days gone: he must be in London now.

Syed bin Mohamad Margibbé called to say that he was going off toward Katanga to-morrow by way of Amran. I feel inclined to go by way of Fipa rather, though I should much like to visit Meréré. By-the-bye, he says too that the so-called Portuguese had filed teeth, and are therefore Mambarré.

June 15th.—Lewalé doubts Sangara, on account of having brought no letters. Nothing can be believed in this land unless it is in black and white, and but little even then: the most circumstantial details are often mere figments of the brain. The one half one hears may safely be called false, and the other half doubtful, or *not proven*.

Sultan bin Ali doubts Sangara's statements also, but says, "Let us wait and see the men arrive, to confirm or reject them." I incline to belief, because he says that he did not see the men, but heard of them at Bagamoio.

June 16th.—Nsaré chief, Msalala, came selling from Sakuma, on the north—a jocular man, always a favorite with the ladies. He offered a hoe as a token of friendship, but I bought it, as we are, I hope, soon going off, and it clears the tent floor and ditch round it in wet weather.

Mirambo made a sortie against a head man in alliance with the Arabs, and was quite successful, which shows that he is not so much reduced as report said.

Boiling points to-day about 9 A.M. There is a full degree of difference between boiling in an open pot and in Casella's apparatus.

205°·1 open pot	}	69° air.
206°·1 Casella		

About two hundred Baguha came here, bringing much ivory and palm-oil for sale, because there is no market nor goods at

Ujji for the produce. A few people came also from Buganda, bringing four tusks and an invitation to Syed Burghash to send for two housefuls of ivory which Mtéza has collected.

June 18th.—Sent over a little quinine to Sultan bin Ali—he is ailing of fever—and a glass of “moiko,” the shameful!

The Ptolemaic map defines people according to their food. The Elephantophagi, the Struthiophagi, the Ichthyophagi, and Anthropophagi. If we followed the same sort of classification, our definition would be the drink, thus: the tribe of stout-guzzlers, the roaring potheen-fuddlers, the whisky-fishoid-drinkers, the vin-ordinaire-bibbers, the lager-beer-swillers, and an outlying tribe of the brandy-cocktail persuasion.

[His keen enjoyment in noticing the habits of animals and birds serves a good purpose while waiting wearily and listening to disputed rumors concerning the Zanzibar porters. The little orphan-birds seem to get on somehow or other; perhaps the Englishman's eye was no bad protection, and his pity toward the fledglings was a good lesson, we will hope, to the children around the tembé at Kwihara.]

June 19th.—Whydahs, though full fledged, still gladly take a feed from their dam, putting down the breast to the ground, and cocking up the bill and chirruping in the most engaging manner and winning way they know. She still gives them a little, but administers a friendly shove off too. They all pick up feathers or grass, and hop from side to side of their mates, as if saying, “Come, let us play at making little houses.” The wagtail has shaken her young quite off, and has a new nest. She warbles prettily, very much like a canary, and is extremely active in catching flies, but eats crumbs of bread-and-milk too. Sun-birds visit the pomegranate flowers and eat insects therein too, as well as nectar. The young whydah-birds crouch closely together at night for heat. They look like a woolly ball on a branch. By day they engage in pairing, and coaxing each other. They come to the same twig every night. Like children, they try and lift heavy weights of feathers above their strength.

[How fully he hoped to reach the hill from which he supposed the Nile to flow, is shown in the following words written at this time:]

I trust in Providence still to help me. I know the four rivers, Zambesi, Kafué, Luapula, and Lomamé; their fountains must exist in one region.

An influential Muganda is dead of dysentery: no medicine had

any effect in stopping the progress of the disease. This is much colder than his country. Another is blind from ophthalmia.

Great hopes are held that the war which has lasted a full year will now be brought to a close, and Mirambo either be killed or flee. As he is undoubtedly an able man, his flight may involve much trouble and guerrilla warfare.

Clear cold weather, and sickly for those who have only thin clothing, and not all covered.

The women work very hard in providing for their husbands' kitchens. The rice is the most easily prepared grain: three women stand round a huge wooden mortar with pestles in their hands, a gallon or so of the unhusked rice—called mopunga here, and paddy in India—is poured in, and the three heavy pestles worked in exact time; each jerks up her body as she lifts the pestle and strikes it into the mortar with all her might, lightening the labor with some wild ditty the while, though one hears, by the strained voice, that she is nearly out of breath. When the husks are pretty well loosened, the grain is put into a large plate-shaped basket and tossed, so as to bring the chaff to one side; the vessel is then heaved downward, and a little horizontal motion given to it, which throws the refuse out; the partially cleared grain is now returned to the mortar, again pounded and cleared of husks, and a semicircular toss of the vessel sends all the remaining unhusked grain to one side, which is lifted out with the hand, leaving the chief part quite clean: they certainly work hard and well. The maize requires more labor by far: it is first pounded to remove the outer scales from the grain, then steeped for three days in water, then pounded, the scales again separated by the shallow-basket tossings, then pounded fine, and the fine white flour separated by the basket from certain hard rounded particles, which are cooked as a sort of granular porridge—"mtyéllé."

When Ntaoéka chose to follow us rather than go to the coast, I did not like to have a fine-looking woman among us unattached, and proposed that she should marry one of my three worthies, Chuma, Gardner, or Mabruki, but she smiled at the idea. Chuma was evidently too lazy ever to get a wife; the other two were contemptible in appearance, and she has a good presence, and is buxom. Chuma promised reform: he had been lazy, he admitted, because he had no wife. Circumstances led to the other women wishing Ntaoéka married, and on my speaking to her again she consented. I have noticed her ever since working hard from morning to night: the first up in the cold mornings, making fire and hot water, pounding, carrying water, wood, sweeping, cooking.

June 21st.—No jugglery or sleight-of-hand, as was recommended to Napoleon III., would have any effect in the civilization of the Africans; they have too much good sense for that. Nothing brings them to place thorough confidence in Europeans but a long course of well-doing. They believe readily in the supernatural as effecting any new process or feat of skill, for it is part of their original faith to ascribe every thing above human agency to unseen spirits. Goodness or unselfishness impresses their minds more than any kind of skill or power. They say, "You have different hearts from ours; all black men's hearts are bad, but yours are good." The prayer to Jesus for a new heart and right spirit at once commends itself as appropriate. Music has great influence on those who have musical ears, and often leads to conversion.

[Here and there he gives more items of intelligence from the war, which afford a perfect representation of the rumors and contradictions which harass the listener in Africa, especially if he is interested, as Livingstone was, in the re-establishment of peace between the combatants.]

Lewalé is off to the war with Mirambo: he is to finish it now. A continuous fusillade along his line of march west will expend much powder, but possibly get the spirits up. If successful, we shall get Banyamwezi pagazi in numbers.

Mirambo is reported to have sent one hundred tusks and one hundred slaves toward the coast to buy gunpowder. If true, the war is still far from being finished; but falsehood is fashionable.

June 26th.—Went over to Kwikuru and engaged Mohamad bin Syde to speak to Nkasiwa for pagazi; he wishes to go himself. The people sent by Mirambo to buy gunpowder in Ugogo came to Kitambi: he reported the matter to Nkasiwa that they had come, and gave them pombe. When Lewalé heard it, he said, "Why did Kitambi not kill them? he is a partaker in Mirambo's guilt." A large gathering yesterday at M'futu to make an assault on the last stockade in hostility.

[A few notes in another pocket-book are placed under this date. Thus:]

June 24th.—A continuous covering of forests is a sign of a virgin country. The earlier seats of civilization are bare and treeless, according to Humboldt. The civilization of the human race sets bounds to the increase of forests. It is but recently

that sylvan decorations rejoice the eyes of the Northern Europeans. The old forests attest the youthfulness of our civilization. The aboriginal woods of Scotland are but recently cut down. (Hugh Miller's "Sketches," p. 7.)

Mosses often evidence the primitive state of things at the time of the Roman invasion. Roman axe like African, a narrow, chisel-shaped tool, left sticking in the stumps.

The medical education has led me to a continual tendency to suspend the judgment. What a state of blessedness it would have been had I possessed the dead certainty of the homeopathic persuasion, and as soon as I found the lakes Bangweolo, Moero, and Kamolondo pouring out their waters down the great central valley, bellowed out, "Hurra! Eureka!" and gone home in firm and honest belief that I had settled it, and no mistake. Instead of that, I am even now not at all "cock-sure" that I have not been following down what may, after all, be the Congo.

June 25th.—Sent over to Tabora to try and buy a cow from Basakuma, or northern people, who have brought about one hundred for sale. I got two oxen for a coil of brass wire and seven dotis of cloth.

CHAPTER XXI.

Letters arrive at last.—Sore Intelligence.—Death of an old Friend.—Observations on the Climate.—Arab Caution.—Dearth of Missionary Enterprise.—The Slave-trade and its Horrors.—Progressive Barbarism.—Carping Benevolence.—Geology of Southern Africa.—The Fountain Sources.—African Elephants.—A venerable Piece of Artillery.—Livingstone on Materialism.—Bin Nassib.—The Baganda leave at last.—Enlists a new Follower.

[AND now the long-looked-for letters came in by various hands, but with little regularity. It is not here necessary to refer to the withdrawal of the Livingstone Relief Expedition, which took place as soon as Mr. Stanley confronted Lieutenant Dawson on his way inland. Suffice it to say that the various members of this expedition, of which his second son, Mr. Oswell Livingstone, was one, had already quitted Africa for England when these communications reached Unyanyembé.]

June 27th, 1872.—Received a letter from Oswell yesterday, dated Bagamoio, May 14th, which awakened thankfulness, anxiety, and deep sorrow.

June 28th.—Went over to Kwikuru yesterday to speak about pagazi. Nkasiwa was off at M'futu, to help in the great assault on Mirambo, which is hoped to be the last; but Mohamad bin Syde promised to arrange with the chief on his return. I was told that Nkasiwa has the head of Morukwé in a kirindo, or band-box, made of the inner bark of a tree; and when Morukwé's people have recovered they will come and redeem it with ivory and slaves, and bury it in his grave, as they did the head of Ishbo-sheth in Abner's grave in Hebron.

Dugumbé's man, who went off to Ujiji to bring ivory, returned to-day, having been attacked by robbers of Mirambo. The pagazi threw down all their loads and ran. None were killed, but they lost all.

June 29th.—Received a packet from Sheik bin Nasib containing a letter for him, and one *Pall Mall Gazette*, one *Overland Mail*, and four *Punches*. Provision has been made for my daughter by Her Majesty's Government of £300, but I do not understand the matter clearly.

July 2d, 1872.—Make up a packet for Dr. Kirk and Mr. Webb, of Zanzibar: explain to Kirk, and beg him to investigate and

punish, and put blame on right persons. Write Sir Bartle Frere and Agnes. Send large packet of astronomical observations and sketch-map to Sir Thomas Maclear by a native, Suleiman.

July 3d.—Received a note from Oswell, written in April last, containing the sad intelligence of Sir Roderick's departure from among us. Alas! alas! this is the only time in my life I ever felt inclined to use the word, and it bespeaks a sore heart. The best friend I ever had—true, warm, and abiding—he loved me more than I deserved: he looks down on me still. I must feel resigned to the loss by the Divine Will, but still I regret and mourn.

Wearisome waiting, this; and yet the men can not be here before the middle or end of this month. I have been sorely let and hindered in this journey, but it may have been all for the best. I will trust in Him to whom I commit my way.

July 5th.—Weary! weary!

July 7th.—Waiting wearily here, and hoping that the good and loving Father of all may favor me, and help me to finish my work quickly and well.

Temperature at 6 A.M. 61°; feels cold. Winds blow regularly from the east; if it changes to north-west, brings a thick mantle of cold, gray clouds. A typhoon did great damage at Zanzibar, wrecking ships, and destroying cocoa-nuts, carafu, and all fruits: happened five days after Syed Burghash's return from Mecca.

At the Loangwa of Zumbo we came to a party of hereditary hippopotamus-hunters, called Makombwé or Akombwé. They follow no other occupation; but when their game is getting scanty at one spot they remove to some other part of the Loangwa, Zambesi, or Shiré, and build temporary huts on an island, where their women cultivate patches. The flesh of the animals they kill is eagerly exchanged by the more settled people for grain. They are not stingy, and are everywhere welcome guests. I never heard of any fraud in dealing, or that they had been guilty of an outrage on the poorest: their chief characteristic is their courage. Their hunting is the bravest thing I ever saw. Each canoe is manned by two men: they are long, light craft, scarcely half an inch in thickness, about eighteen inches beam, and from eighteen to twenty feet long. They are formed for speed, and shaped somewhat like our racing-boats. Each man uses a broad, short paddle, and as they guide the canoe slowly down stream to a sleeping hippopotamus not a single ripple is raised on the smooth water: they look as if holding in their breath, and communicate by signs only. As they come near the

prey, the harpooner in the bow lays down his paddle and rises slowly up, and there he stands erect, motionless, and eager, with the long-handled weapon poised at arms-length above his head, till, coming close to the beast, he plunges it with all his might in toward the heart. During this exciting feat he has to keep his balance exactly. His neighbor in the stern at once backs his paddle, the harpooner sits down, seizes his paddle, and backs too, to escape. The animal, surprised and wounded, seldom returns the attack at this stage of the hunt. The next stage, however, is full of danger.

The barbed blade of the harpoon is secured by a long and very strong rope wound round the handle: it is intended to come out of its socket; and while the iron head is firmly fixed in the animal's body, the rope unwinds and the handle floats on the surface. The hunter next goes to the handle and hauls on the rope till he knows that he is right over the beast: when he feels the line suddenly slacken, he is prepared to deliver another harpoon the instant that hippo's enormous jaws appear, with a terrible grunt, above the water. The backing by the paddles is again repeated, but hippo often assaults the canoe, crunches it with his great jaws as easily as a pig would a bunch of asparagus, or shivers it with a kick by his hind foot. Deprived of their canoe, the gallant comrades instantly dive and swim to the shore under water. They say that the infuriated beast looks for them on the surface, and, being below, they escape his sight. When caught by many harpoons, the crews of several canoes seize the handles and drag him hither and thither till, weakened by loss of blood, he succumbs.

This hunting requires the greatest skill, courage, and nerve that can be conceived—double-armed and threefold brass, or whatever the "Æneid" says. The Makombwé are certainly a magnificent race of men; hardy and active in their habits, and well fed, as the result of their brave exploits: every muscle is well developed; and though not so tall as some tribes, their figures are compact, and finely proportioned. Being a family occupation, it has no doubt helped in the production of fine physical development. Though all the people among whom they sojourn would like the profits they secure by the flesh and curved tusks, and no game is preserved, I have met with no competitors to them except the Wayeiye of Lake Ngami and adjacent rivers.

I have seen our dragoon officers perform fencing and managing their horses so dexterously that every muscle seemed trained to its fullest power and efficiency; and perhaps had they been

brought up as Makombwé they might have equaled their daring and consummate skill: but we have no sport, except perhaps Indian tiger-shooting, requiring the courage and coolness this enterprise demands. The danger may be appreciated if one remembers that no sooner is blood shed in the water than all the crocodiles below are immediately drawn up stream by the scent, and are ready to act the part of thieves in a London crowd, or worse.

July 8th.—At noon, wet bulb 66° , dry 74° . These observations are taken from thermometers hung four feet from the ground on the cool side (south) of the house, and beneath an earthen roof, with complete protection from wind and radiation. Noon known by the shadows being nearly perpendicular. To show what is endured by a traveler, the following register is given of the heat on a spot, four feet from the ground, protected from the wind by a reed fence, but exposed to the sun's rays, slanting a little:

Noon.	Wet bulb, 78°	Dry bulb, 102°
2 P.M.	“ 77°	“ 99°
3 P.M.	“ 78°	102°
4 P.M.	“ 72°	88°
	(Agreeable marching now.)	
6 P.M.	“ 66°	“ 77°

July 9th.—Clear and cold the general weather: cold is penetrating. War forces have gone out of M'futu and built a camp. Fear of Mirambo rules them all: each one is nervously anxious not to die, and in no way ashamed to own it. The Arabs keep out of danger: “Better to sleep in a whole skin” is their motto.

Noon.—Spoke to Singeri about the missionary reported to be coming: he seems to like the idea of being taught and opening up the country by way of the Nile. I told him that all the Arabs confirmed Mtésa's cruelties, and that his people were more to blame than he: it was guilt before God. In this he agreed fully, but said, “What Arab was killed?” meaning, if they did not suffer, how can they complain?

6 A.M.	Wet bulb, 55°	Dry bulb, 57° min. 55°
9 A.M.	“ 74°	“ 82°
Noon.	“ 74°	“ 98°
	(Now becomes too hot to march.)	
3.30 P.M.	“ 75°	“ 90°

July 10th.

6 A.M.	“ 59°	“ 65° min. 55°
Noon.	“ 67°	“ 77° shady.
3 P.M.	“ 69°	“ 81° cloudy.
5 P.M.	“ 65°	“ 75° cloudy.

July 10th.—No great difficulty would be encountered in establishing a Christian mission a hundred miles or so from the East Coast. The permission of the Sultan of Zanzibar would be necessary, because all the tribes of any intelligence claim relationship, or have relations with him; the Banyamwezi even call themselves his subjects, and so do others. His permission would be readily granted, if respectfully applied for through the English consul. The Suaheli, with their present apathy on religious matters, would be no obstacle. Care to speak politely, and to show kindness to them, would not be lost labor in the general effect of the mission on the country, but all discussion on the belief of the Moslems should be avoided; they know little about it. Emigrants from Muscat, Persia, and India, who at present possess neither influence nor wealth, would eagerly seize any formal or offensive denial of the authority of their Prophet to fan their own bigotry, and arouse that of the Suaheli. A few now assume an air of superiority in matters of worship, and would fain take the place of Mullams, or doctors of the law, by giving authoritative dicta as to the times of prayer, positions to be observed, lucky and unlucky days, using cabalistic signs, telling fortunes, finding from the Koran when an attack may be made on any enemy, etc.; but this is done only in the field with trading-parties. At Zanzibar the regular Mullams supersede them.

No objection would be made to teaching the natives of the country to read their own languages in the Roman character. No Arab has ever attempted to teach them the Arabic Koran: they are called *guma*, hard, or difficult as to religion. This is not wonderful, since the Koran is never translated, and a very extraordinary desire for knowledge would be required to sustain a man in committing to memory pages and chapters of, to him, unmeaning gibberish. One only of all the native chiefs, Monyumgo, has sent his children to Zanzibar to be taught to read and write the Koran; and he is said to possess an unusual admiration of such civilization as he has seen among the Arabs. To the natives the chief attention of the mission should be directed. It would not be desirable, or advisable, to refuse explanation to others; but I have avoided giving offense to intelligent Arabs, who have pressed me, asking if I believed in Mohammed, by saying, "No, I do not: I am a child of Jesus bin Miriam," avoiding any thing offensive in my tone, and often adding that Mohammed found their forefathers bowing down to trees and stones, and did good to them by forbidding idolatry, and teaching the worship of the only One God. This they all know, and it pleases them to have it recognized.

It might be good policy to hire a respectable Arab to engage free porters, and conduct the mission to the country chosen, and obtain permission from the chief to build temporary houses. If this Arab were well paid, it might pave the way for employing others to bring supplies of goods and stores not produced in the country, as tea, coffee, sugar. The first porters had better all go back, save a couple or so, who have behaved especially well. Trust to the people among whom you live for general services, as bringing wood, water, cultivation, reaping, smith's work, carpenter's work, pottery, baskets, etc. Educated free blacks from a distance are to be avoided: they are expensive, and are too much of gentlemen for your work. You may in a few months raise natives who will teach reading to others better than they can, and teach you also much that the liberated never know. A cloth and some beads occasionally will satisfy them, while neither the food, the wages, nor the work will please those who, being brought from a distance, naturally consider themselves missionaries. Slaves also have undergone a process which has spoiled them for life: though liberated young, every thing of childhood and opening life possesses an indescribable charm. It is so with our own offspring, and nothing effaces the fairy scenes then printed on the memory. Some of my liberados eagerly bought green calabashes and tasteless squash with fine fat beef, because this trash was their early food; and an ounce of meat never entered their mouths. It seems indispensable that each mission should raise its own native agency. A couple of Europeans beginning and carrying on a mission without a staff of foreign attendants, implies coarse country fare, it is true, but this would be nothing to those who at home amuse themselves with fastings, vigils, etc. A great deal of power is thus lost in the Church. Fastings and vigils, without a special object in view, are time run to waste. They are made to minister to a sort of self-gratification, instead of being turned to account for the good of others. They are like groaning in sickness. Some people amuse themselves when ill with continuous moaning. The forty days of Lent might be annually spent in visiting adjacent tribes, and bearing unavoidable hunger and thirst with a good grace. Considering the greatness of the object to be attained, men might go without sugar, coffee, tea, etc. I went from September, 1866, to December, 1868, without either. A trader at Casembé's gave me a dish cooked with honey, and it nauseated, from its horrible sweetness; but at one hundred miles inland supplies could be easily obtained.

The expenses need not be large. Intelligent Arabs inform me

that, in going from Zanzibar to Casembe's, only \$3000 worth are required by a trader, say between £600 or £700, and he may be away three or more years; paying his way, giving presents to the chiefs, and filling two or three hundred mouths. He has paid for, say fifty muskets, ammunition, flints, and may return with four thousand pounds of ivory, and a number of slaves for sale; all at an outlay of £600 or £700. With the experience I have gained now, I could do all I shall do in this expedition for a like sum, or at least for £1000 less than it will actually cost me.

July 12th.—Two men come from Syde bin Habib report fighting as going on at discreet distances against Mirambo. Sheik But, son of Mohamad bin Saleh, is found guilty of stealing a tusk of two and a half frasilahs from the Lewalé. He has gone in disgrace to fight Mirambo: his father is disconsolate, naturally. Lewalé has been merciful.

When endeavoring to give some account of the slave-trade of East Africa, it was necessary to keep far within the truth, in order not to be thought guilty of exaggeration; but, in sober seriousness, the subject does not admit of exaggeration. To overdraw its evils is a simple impossibility. The sights I have seen, though common incidents of the traffic, are so nauseous that I always strive to drive them from memory. In the case of most disagreeable recollections I can succeed, in time, in consigning them to oblivion; but the slaving scenes come back unbidden, and make me start up at dead of night horrified by their vividness. To some this may appear weak and unphilosophical, since it is alleged that the whole human race has passed through the process of development. We may compare cannibalism to the stone age, and the times of slavery to the iron and bronze epochs. Slavery is as natural a step in human development as from bronze to iron.

While speaking of the stone age, I may add that in Africa I have never been fortunate enough to find one flint arrow-head or any other flint implement, though I had my eyes about me as diligently as any of my neighbors. No roads are made, no lands leveled, no drains digged, no quarries worked, nor any of the changes made on the earth's surface that might reveal fragments of the primitive manufacture of stone. Yet but little could be inferred from the negative evidence, were it not accompanied by the fact that flint does not exist in any part south of the equator. Quartz might have been used, but no remains exist, except the half-worn mill-stones, and stones, about the size of oranges, used for chipping and making rough the nether mill-stone. Glazed

pipes and earthenware, used in smelting iron, show that iron was smelted in the remotest ages in Africa. These earthenware vessels, and fragments of others of a finer texture, were found in the delta of the Zambesi, and in other parts, in close association with fossil bones, which, on being touched by the tongue, showed as complete an absence of animal matter as the most ancient fossils known in Europe. They were the bones of animals—as hippopotami, water-hogs, antelopes, crocodiles—identical with those now living in the country. These were the primitive fauna of Africa; and if vitrified iron from the prodigious number of broken smelting-furnaces all over the country was known from the remotest times, the Africans seem to have had a start in the race at a time when our progenitors were grubbing up flints to save a miserable existence by the game they might kill. Slave-trading seems to have been coeval with the knowledge of iron. The monuments of Egypt show that this curse has venerable antiquity. Some people say, “If so ancient, why try to stop an old established usage now?” Well, some believe that the affliction that befell the most ancient of all the patriarchs, Job, was small-pox. Why, then, stop the ravages of this venerable disease in London and New York by vaccination?

But no one expects any benevolent efforts from those who cavil and carp at efforts made by governments and peoples to heal the enormous open sore of the world. Some profess that they would rather give “their mite” for the degraded of our own countrymen than to “niggers!” Verily, it is “a mite;” and they most often forget, and make a gift of it to themselves. It is almost an axiom that those who do most for the heathen abroad are most liberal for the heathen at home. It is to this class we turn with hope. With others arguments are useless; and the only answer I care to give is the remark of an English sailor, who, on seeing slave-traders actually at their occupation, said to his companion, “Shiver my timbers, mate, if the devil don’t catch these fellows, we might as well have no devil at all.”

In conversing with a prince at Johanna, one of the Comoro islands lying off the north end of Madagascar, he took occasion to extol the wisdom of the Arabs in keeping strict watch over their wives. On suggesting that their extreme jealousy made them more like jailers than friends of their wives, or, indeed, that they thus reduced themselves to the level of the inferior animals, and each was like the bull of a herd, and not like a reasonable man—“fuguswa”—and that they gave themselves a vast deal of trouble for very small profit, he asserted that the jealousy was reasonable

because all women were bad; they could not avoid going astray. And on remarking that this might be the case with Arab women, but certainly did not apply to English women, for though a number were untrustworthy, the majority deserved all the confidence their husbands could place in them, he reiterated that women were universally bad. He did not believe that women ever would be good; and the English allowing their wives to gad about with faces uncovered only showed their weakness, ignorance, and unwisdom.

The tendency and spirit of the age are more and more toward the undertaking of industrial enterprises of such magnitude and skill as to require the capital of the world for their support and execution; as the Pacific Railroad, Suez Canal, Mont Cenis Tunnel, and railways in India and Western Asia, Euphrates Railroad, etc. The extension and use of railroads, steamships, telegraphs, break down nationalities, and bring peoples geographically remote into close connection commercially and politically. They make the world one, and capital, like water, tends to a common level.

[Geologists will be glad to find that the doctor took pains to arrange his observations at this time in the following form:]

A really enormous area of South Central Africa is covered with volcanic rocks, in which are imbedded angular fragments of older strata, possibly sandstone, converted into schist, which, though carried along in the molten mass, still retain impressions of plants of a low order, probably the lowest—Silurian—and distinct ripple-marks and rain-drops, in which no animal markings have yet been observed. The fewness of the organic remains observed is owing to the fact that here no quarries are worked, no roads are made, and as we advance north the rank vegetation covers up every thing. The only stone buildings in the country north of the Cape colony are the church and mission houses at Kuruman. In the walls there, the fragments, with impressions of fossil leaves, have been broken through in the matrix, once a molten mass of lava. The area which this basalt covers extends from near the Vaal River in the south to a point some sixty miles beyond the Victoria Falls, and the average breadth is about one hundred and fifty miles. The space is at least one hundred thousand square miles. Sandstone rocks stand up in it at various points like islands; but all are metamorphosed, and branches have flowed off from the igneous sea into valleys and defiles; and one can easily trace the hardening process of the fire as less and less, till at the outer end of the stream the rocks are merely

hardened. These branches equal in size all the rocks and hills that stand like islands, so that we are justified in assuming the area as at least one hundred thousand square miles of this basaltic sea.

The molten mass seems to have flowed over in successive waves, and the top of each wave was covered with a dark vitreous scum carrying scoriæ with angular fragments. This scum marks each successive overflow, as a stratum from twelve to eighteen inches or more in thickness. In one part sixty-two strata are revealed; but at the Victoria Falls (which are simply a rent) the basaltic rock is stratified as far as our eyes could see down the depth of three hundred and ten feet. This extensive sea of lava was probably sub-ærial, because bubbles often appear as coming out of the rock into the vitreous scum on the surface of each wave: in some cases they have broken, and left circular rings with raised edges, peculiar to any boiling viscous fluid. In many cases they have cooled as round pustules, as if a bullet were inclosed; on breaking them, the internal surface is covered with a crop of beautiful crystals of silver, with their heads all directed to the centre of the bubble, which otherwise is empty.

These bubbles in stone may be observed in the bed of the Kuruman River, eight or ten miles north of the village; and the mountain called "Amhan," west-north-west of the village, has all the appearance of having been an orifice through which the basalt boiled up, as water or mud does in a geyser.

The black basaltic mountains on the east of the Bamangwato, formerly called the Bakaa, furnish further evidence of the igneous eruptions being sub-ærial; for the basalt itself is columnar at many points, and at other points the tops of the huge crystals appear in groups, and the apices not flattened, as would have been the case had they been developed under the enormous pressure of an ocean. A few miles on their south a hot salt fountain boils forth and tells of interior heat. Another, far to the south-east, and of fresh water, tells the same tale.

Subsequently to the period of gigantic volcanic action, the outflow of fresh lime-water from the bowels of the earth seems to have been extremely large. The land, now so dry that one might wander in various directions (especially westward, to the Kalahari), and perish for lack of the precious fluid as certainly as if he were in the interior of Australia, was once bisected in all directions by flowing streams and great rivers, whose course was mainly to the south. These river-beds are still called by the natives "*melapo*" in the south, but in the north "*wadys*," both

words meaning the same thing—"river-beds in which no water ever now flows." To feed these, a vast number of gushing fountains poured forth for ages a perennial supply. When the eye of the fountain is seen, it is an oval or oblong orifice, the lower portion distinctly water-worn, and there, by diminished size, showing that, as ages elapsed, the smaller water supply had a manifestly lesser erosive power. In the sides of the mountain Amhan, already mentioned, good specimens of these water-worn orifices still exist, and are inhabited by swarms of bees, whose hives are quite protected from robbers by the hardness of the basaltic rocks. The points, on which the streams of water fell are hollowed by its action, and the space around which the water splashed is covered by calcareous tufa, deposited there by the evaporation of the sun.

Another good specimen of the ancient fountains is in a cave near Kolobeng, called "*Lepélolé*," a word by which the natives there sometimes designate the sea. The wearing power of the primeval waters is here easily traced in two branches—the upper, or more ancient, ending in the characteristic oval orifice, in which I deposited a Father Mathew's leaden temperance token: the lower branch is much the largest, as that by which the greatest amount of water flowed for a much longer period than the other. The cave *Lepélolé* was believed to be haunted, and no one dared to enter till I explored it, as a relief from more serious labor. The entrance is some eight or more feet high, and five or six wide, in reddish-gray sandstone rock, containing in its substance banks of well-rounded shingle. The whole range, with many of the adjacent hills on the south, bear evidence of the scorching to which the contiguity of the lava subjected them. In the hardening process, the silica was sometimes sweated out of this rock, and it exists now as pretty efflorescences of well-shaped crystals. But not only does this range, which stands eight or ten miles north of Kolobeng, exhibit the effects of igneous action; it shows on its eastern slope the effects of flowing water, in a large pot-hole called *Löe*, which has the reputation of having given exit to all the animals in South Africa, and also to the first progenitors of the whole Bechuana race. Their footsteps attest the truth of this belief. I was profane enough to be skeptical, because the large footstep of the first man, *Matsieng*, was directed as if going into instead of out of this famous pot-hole. Other huge pot-holes are met with all over the country, and at heights on the slopes of the mountains far above the levels of the ancient rivers.

Many fountains rose in the courses of the ancient river-beds, and the outflow was always in the direction of the current of the parent stream. Many of these ancient fountains still contain water, and form the stages on a journey, but the primitive waters seem generally to have been laden with lime in solution: this lime was deposited in vast lakes, which are now covered with calcareous tufa. One enormous fresh-water lake, in which probably sported the *Dyconodon*, was let off when the remarkable rent was made in the basalt which now constitutes the Victoria Falls. Another seems to have gone to the sea when a similar fissure was made at the falls of the Orange River. It is in this calcareous tufa alone that fossil animal remains have yet been found. There are no marine limestones except in friths which the elevation of the West and East Coasts have placed far inland in the Coanza and Somauli country, and these contain the same shells as now live in the adjacent seas.

Antecedently to the river system, which seems to have been a great southern Nile flowing from the sources of the Zambesi away south to the Orange River, there existed a state of fluvial action of greater activity than any we see now: it produced prodigious beds of well-rounded shingle and gravel. It is impossible to form an idea of their extent. The Loangwa flows through the bed of an ancient lake, whose banks are sixty feet thick, of well-rounded shingle. The Zambesi flows, above the Kebrabasa, through great beds of the same formation, and generally they are of hard crystalline rocks; and it is impossible to conjecture what the condition of the country was when the large pot-holes were formed up the hill-sides, and the prodigious attrition that rounded the shingle was going on. The land does not seem to have been submerged, because marine limestones (save in the exceptional cases noted) are wanting; and torrents cutting across the ancient river-beds reveal fresh-water shells identical with those that now inhabit its fresh waters. The calcareous tufa seems to be the most recent rock formed. At the point of junction of the great southern prehistoric Nile with an ancient fresh-water lake near Buchap, and a few miles from Likatlong, a mound was formed in an eddy caused by some conical lias toward the east bank of this rent within its bed, and the dead animals were floated into the eddy and sank: their bones crop out of the white tufa, and they are so well preserved that even the black tartar on buffalo and zebra's teeth remains: they are of the present species of animals that now inhabit Africa. This is the only case of fossils of these animals being found *in situ*. In 1855 I observed

similar fossils in banks of gravel in transitu all down the Zambesi above Kebrabasa; and about 1862 a bed of gravel was found in the delta with many of the same fossils that had come to rest in the great deposit of that river; but where the Zambesi digs them out is not known. In its course below the Victoria Falls I observed tufaceous rocks: these must contain the bones; for were they carried away from the great tufa lake bottom of Seshéké, down the Victoria Falls, they would all be ground into fine silt. The bones in the river and in the delta were all associated with pieces of coarse pottery, exactly the same as the natives make and use at the present day: with it we found fragments of a fine grain, only occasionally seen among Africans, and closely resembling ancient cinerary urns: none were better baked than is customary in the country now. The most ancient relics are deeply-worn granite, mica-schist, and sandstone mill-stones; the balls used for chipping and roughing them, of about the shape and size of an orange, are found lying near them. No stone weapons or tools ever met my eyes, though I was anxious to find them, and looked carefully over every ancient village we came to for many years. There is no flint to make celts, but quartz and rocks having a slaty cleavage are abundant. It is only for the finer work that they use iron tongs, hammers, and anvils, and with these they turn out work which makes English blacksmiths declare Africans never did. They are very careful of their tools; indeed, the very opposites to the flint-implement men, who seem sometimes to have made celts just for the pleasure of throwing them away: even the Romans did not seem to know the value of their money.

The ancient Africans seem to have been at least as early as the Asiatics in the art of taming elephants. The Egyptian monuments show them bringing tame elephants and lions into Egypt; and very ancient sculptures show the real African species, which the artist must have seen. They refused to sell elephants, which cost them months of hard labor to catch and tame, to a Greek commander of Egyptian troops for a few brass pots: they were quite right. Two or three tons of fine fat butcher-meat were far better than the price, seeing their wives could make any number of cooking-pots for nothing.

July 15th.—Reported to-day that twenty wounded men have been brought into M'futa from the field of fighting. About two thousand are said to be engaged on the Arab side, and the side of Mirambo would seem to be strong; but the assailants have the disadvantage of firing against a stockade, and are unprotected,

except by ant-hills, bushes, and ditches in the field. I saw the first kites to-day: one had spots of white feathers on the body below, as if it were a young one—probably come from the north.

July 17th.—Went over to Sultan bin Ali yesterday. Very kind as usual: he gave me guavas and a melon called "matanga." It is reported that one of Mirambo's chief men, Sorura, set sharp sticks in concealed holes, which acted like Bruce's "craw-taes" at Bannockburn, and wounded several, probably the twenty reported. This has induced the Arabs to send for a cannon they have, with which to batter Mirambo at a distance. The gun is borne past us this morning: a brass seven-pounder, dated 1679, carried by the Portuguese commander-in-chief to China, 1679, or one hundred and ninety-three years ago, and now to beat Mirambo by Arabs who have very little interest in the war.

Some of his people, out prowling two days ago, killed a slave. The war is not so near an end as many hoped.

[Mtésa's people, on their way back to Uganda, were stuck fast at Unyanyembé the whole of this time. It does not appear at all who the missionary was to whom he refers.]

Lewalé sends off the Baganda in a great hurry, after detaining them for six months or more till the war ended, and he now gets pagazi of Banyamwezi for them. This haste (though war is not ended) is probably because Lewalé has heard of a missionary through me.

Mirambo fires now from inside the stockade alone.

July 19th.—Visited Salim bin Seff, and was very hospitably entertained. He was disappointed that I could not eat largely. They live very comfortably: grow wheat, while flour and fruits grace their board. Salim says that goat's flesh at Zanzibar is better than beef, but here beef is better than goat's flesh. He is a stout, jolly fellow.

July 20th.—High cold winds prevail. Temperature, 6 A.M., 57°; noon, on the ground, 122°. It may be higher, but I am afraid to risk the thermometer, which is graduated to 140° only.

July 21st.—Bought two milch-cows (from a Motusi), which, with their calves, were seventeen dotis, or thirty-four fathoms. The Baganda are packing up to leave for home. They take a good deal of brandy and gin for Mtésa from the Moslems. Temperature at noon, 96°.

Another nest of wagtails flown. They eat bread-crumbs. The whydahs are busy pairing. Lewalé returns to-day from M'futu, on his own private business at Kwikuru. The success of the war

is a minor consideration with all. I wish my men would come, and let me off from this weary waiting.

Some philosophizing is curious. It represents our Maker forming the machine of the universe, setting it agoing, and able to do nothing more outside certain of his own laws. He, as it were, laid the egg of the whole, and, like an ostrich, left it to be hatched by the sun. We can control laws, but he can not! A fire set to this house would consume it, but we can throw on water and consume the fire. We control the elements, fire and water: is he debarred from doing the same, and more, who has infinite wisdom and knowledge? He surely is greater than his own laws. Civilization is only what has been done with natural laws. Some foolish speculations in morals resemble the idea of a Muganda, who said last night that if Mtésa did not kill people now and then, his subjects would suppose that he was dead!

July 23d.—The departure of the Baganda is countermanded, for fear of Mirambo capturing their gunpowder.

Lewalé interdicts them from going; he says, "You may go, but leave all the gunpowder here, because Mirambo will follow and take it all to fight with us." This is an after-thought, for he hurried them to go off. A few will go, and take the news and some goods to Mtésa, and probably a lot of Lewalé's goods to trade at Karagwé.

The Baganda are angry, for now their cattle and much of their property are expended here; but they say, "We are strangers, and what can we do but submit?" The Banyamwezi carriers would all have run away on the least appearance of danger. No troops are sent by Syed Burghash, though they were confidently reported long ago. All trade is at a stand-still.

July 24th.—The Bagohé retire from the war. This month is unlucky. I visited Lewalé and Nkasiwa, putting a blister on the latter, for paralytic arm, to please him. Lewalé says that a general flight from the war has taken place. The excuse is hunger.

He confirms the great damage done by a cyclone at Zanzibar to shipping, houses, cocoa-nut palms, mango-trees, and clove-trees, also houses and dhows, five days after Burghash returned. Sofeu volunteers to go with us, because Mohamad Bogharib never gave him any thing, and Bwana Mohinna has asked him to go with him. I have accepted his offer, and will explain to Mohamad, when I see him, that this is what he promised me in the way of giving men, but never performed.

July 27th.—At dawn a loud rumbling in the east as if of thunder, possibly a slight earthquake: no thunder-clouds visible.

Bin Nassib came last night and visited me before going home to his own house; a tall, brown, polite Arab. He says that he lately received a packet for Mr. Stanley from the American consul, sealed in tin, and sent it back: this is the eleventh that came to Stanley. A party of native traders who went with the Baganda were attacked by Mirambo's people, and driven back with the loss of all their goods and one killed. The fugitives returned this morning sorely downcast. A party of twenty-three loads left for Karagwé a few days ago, and the leader alone has returned: he does not know more than that one was killed. Another was slain on this side of M'futu by Mirambo's people yesterday; the country thus is still in a terribly disturbed state. Sheik bin Nassib says that the Arabs have rooted out fifty-two head men who were Mirambo's allies.

July 28th.—To Nkasiwa: blistered him, as the first relieved the pain, and pleased him greatly; hope he may derive benefit.

Cold east winds, and clouded thickly over all the sky.

July 29th.—Making flour of rice for the journey. Visited Sheik bin Nassib, who has a severe attack of fever: he can not avoid going to the war. He bought a donkey with the tusk he stole from Lewalé, and it died yesterday; now Lewalé says, "Give me back my tusk;" and the Arab replies, "Give me back my donkey." The father must pay, but his son's character is lost as well as the donkey. Bin Nassib gave me a present of wheaten bread and cakes.

July 30th.—Weary waiting this, and the best time for traveling passes over unused. High winds from the east every day bring cold, and, to the thinly-clad Arabs, fever. Bin Omari called: goes to Katanga with another man's goods to trade there.

July 31st.—We heard yesterday from Sahib bin Nassib that the caravan of his brother Kisessa was at a spot in Ugogo, twelve days off. My party had gone by another route. Thankful for even this, in my wearisome waiting.

CHAPTER XXII.

Short Years in Baganda.—Boys' Playthings in Africa.—Reflections.—Arrival of the Men.—Fervent Thankfulness.—An End of the weary Waiting.—Jacob Wainwright takes Service under the Doctor.—Preparations for the Journey.—Flagging and Illness.—Great Heat.—Approaches Lake Tanganyika.—The Borders of Fipa.—Lepidosirens and Vultures.—Capes and Islands of Lake Tanganyika.—Higher Mountains.—Large Bay.

August 1st, 1872.—A LARGE party of Baganda have come to see what is stopping the way to Mtésa—about ten head men and their followers; but they were told by an Arab in Usui that the war with Mirambo was over. About seventy of them come on here to-morrow, only to be dispatched back to fetch all the Baganda in Usui to aid in fighting Mirambo. It is proposed to take a stockade near the central one, and therein build a battery for the cannon, which seems a wise measure. These arrivals are a poor, slave-looking people, clad in bark-cloth, "mbuzu," and having shields with a boss in the centre, round, and about the size of the ancient Highlanders' targe, but made of reeds. The Baganda already here said that most of the new-comers were slaves, and would be sold for cloths. Extolling the size of Mtésa's country, they say it would take a year to go across it. When I joked them about it, they explained that a year meant five months—three of rain, two of dry, then rain again. Went over to apply medicine to Nkasiwa's neck to heal the outside: the inside is benefited somewhat, but the power will probably remain incomplete, as it now is.

August 3d.—Visited Salem bin Seff, who is ill of fever. They are hospitable men. Called on Sultan bin Ali, and home. It is he who effected the flight of all the Baganda pagazi, by giving ten strings of beads to Motusi to go and spread a panic among them by night: all bolted.

August 4th.—Wearisome waiting, and the sun is now rainy at midday, and will become hotter right on to the hot season in November; but this delay may be all for the best.

August 5th.—Visited Nkasiwa, and recommended shampooing the disabled limbs with oil or flour. He says that the pain is removed. More Baganda have come to Kwihara, and will be used for the Mirambo war.

In many parts one is struck by the fact of the children having so few games. Life is a serious business, and amusement is derived from imitating the vocations of the parents—hut-building, making little gardens, bows and arrows, shields, and spears. Elsewhere boys are very ingenious little fellows, and have several games; they also shoot birds with bows, and teach captured linnets to sing. They are expert in making guns and traps for small birds, and in making and using bird-lime. They make play-guns of reed, which go off with a trigger and spring, with a cloud of ashes for smoke. Sometimes they make double-barreled guns of clay, and have cotton-fluff as smoke. The boys shoot locusts with small toy-guns very cleverly. A couple of rufous, brown-headed, and dirty, speckle-breasted swallows appeared to-day for the first time this season, and lighted on the ground. This is the kind that builds here in houses, and as far south as Shupanga, on the Zambesi, and at Kuruman. Sun-birds visit a mass of spiders' web to-day: they pick out the young spiders. Nectar is but part of their food. The insects in or at the nectar could not be separated, and hence have been made an essential part of their diet. On closer inspection, however, I see that while seeming to pick out young spiders—and they probably do so—they end in detaching the outer coating of spiders' web from the inner stiff paper web, in order to make a nest between the two. The outer part is a thin coating of loose threads: the inner is tough paper, impervious web, just like, that which forms the wasp's hive, but stronger. The hen brings fine fibres and places them round a hole one inch and a half in diameter, then works herself in between the two webs, and brings cotton to line the inside formed by her body.

* * * What is the atonement of Christ? It is himself: it is the inherent and everlasting mercy of God made apparent to human eyes and ears. The everlasting love was disclosed by our Lord's life and death. It showed that God forgives, because he loves to forgive. He works by smiles if possible, if not by frowns; pain is only a means of enforcing love.

If we speak of strength, lo! he is strong. The Almighty; the Over Power; the Mind of the Universe. The heart thrills at the idea of his greatness.

* * * All the great among men have been remarkable at once for the grasp and minuteness of their knowledge. Great astronomers seem to know every iota of the Knowable. The Great Duke, when at the head of armies, could give all the particulars to be observed in a cavalry charge, and took care to have food

ready for all his troops. Men think that greatness consists in lofty indifference to all trivial things. The Grand Llama, sitting in immovable contemplation of nothing, is a good example of what a human mind would regard as majesty; but the Gospels reveal Jesus, the manifestation of the blessed God over all as minute in his care of all. He exercises a vigilance more constant, complete, and comprehensive, every hour and every minute, over each of his people than their utmost self-love could ever attain. His tender love is more exquisite than a mother's heart can feel.

August 6th.—Wagtails begin to discard their young, which feed themselves. I can think of nothing but "when will these men come?" Sixty days was the period named; now it is eighty-four. It may be all for the best, in the good providence of the Most High.

August 9th.—I do most devoutly thank the Lord for his goodness in bringing my men near to this. Three came to-day, and how thankful I am I can not express. It is well—the men who went with Mr. Stanley came again to me. "Bless the Lord, O my soul, and all that is within me bless his holy name." Amen.

August 10th.—Sent back the three men who came from the Safari, with four dotis and three pounds of powder. Called on the Lewalé to give the news as a bit of politeness; found that the old chief Nksiwa had been bumped by an ox, and a bruise on the ribs may be serious at his age: this is another delay from the war. It is only half-heartedly that any one goes.

[At last this trying suspense was put an end to by the arrival of a troop of fifty-seven men and boys, made up of porters hired by Mr. Stanley on the coast, and some more Nassick pupils sent from Bombay to join Lieutenant Dawson. We find the names of John and Jacob Wainwright among the latter on Mr. Stanley's list.

Before we incorporate these new recruits on the muster-roll of Dr. Livingstone's servants, it seems right to point to five names which alone represented at this time the list of his original followers; these were Susi, Chuma, and Amoda, who joined him in 1864 on the Zambesi, that is, eight years previously, and Mabruki and Gardner, Nassick boys hired in 1866. We shall see that the new-comers by degrees became accustomed to the hardships of travel, and shared with the old servants all the danger of the last heroic march home. Nor must we forget that it was to the intelligence and superior education of Jacob Wainwright (whom we now meet with for the first time) that we were indebted for the earliest account of the eventful eighteen months during which he was attached to the party.

And now all is pounding, packing, bargaining, weighing, and disputing among the porters. Amidst the inseparable difficulties of an African start, one thankful heart gathers comfort and courage:]

August 15th.—The men came yesterday (14th), having been seventy-four days from Bagamoio. Most thankful to the Giver of all good I am. I have to give them a rest of a few days, and then start.

August 16th.—An earthquake—"Kiti-ki-sha!"—about 7 P.M. shook me in my katanda with quick vibrations. They gradually became fainter: it lasted some fifty seconds, and was observed by many.

August 17th.—Preparing things.

August 18th.—Fando to be avoided, as extortionate. Went to bid adieu to Sultan bin Ali, and left goods with him for the return journey, and many cartridges, full and empty, nails for boat, two iron pillars, etc.*

August 19th.—Waiting for pagazi. Sultan bin Ali called; is going off to M'futu.

August 20th.—Weighed all the loads again, and gave an equal load of fifty pounds to each, and half-loads to the Nassickers. Mabruki Speke is left at Taborah with Sultan bin Ali. He has long been sick, and is unable to go with us.

August 21st.—Gave people an ox, and to a discarded wife a cloth, to avoid exposure by her husband stripping her. She is somebody's child!

August 22d.—Sunday. All ready, but ten pagazi lacking.

August 23d.—Can not get pagazi. Most are sent off to the war.

[At last the start took place. It is necessary to mention that Dr. Livingstone's plan in all his travels was to make one short stage the first day, and generally late in the afternoon. This, although nothing in point of distance, acted like the drill sergeant's "Attention!" The next morning every one was ready for the road, clear of the town, unencumbered with parting words, and by those parting pipes, of terrible memory to all hurrying Englishmen in Africa!]

* Without entering into the merits of a disputed point as to whether the men on their return journey would have been brought to a stand-still at Unyanyembé but for the opportune presence of Lieutenant Cameron and his party, it will be seen, nevertheless, that this entry fully bears out the assertion of the men that they had cloth laid by in store here for the journey to the coast.

It seems that, by an unfortunate mistake, a box of desiccated milk, of which the doctor was subsequently in great need, was left behind among these goods. The last words written by him will remind one of the circumstance. On their return, the unlucky box was the first thing that met Susi's eye!—Ed.

August 25th.—Started and went one hour to village of Manga or Yuba, by a granite ridge; the weather clear, and a fine breeze from the east refreshes. It is important to give short marches at first. Marched an hour and a quarter.

August 26th.—Two Nassickers lost a cow out of ten head of cattle. Marched to Borna of Mayonda. Sent back five men to look after the cow. Cow not found: she was our best milker.

August 27th.—Started for Ebulua and Kasekera of Mamba. Cross torrent, now dry, and through forest to village of Ebulua; thence to village of Kasekera, three hours and a half. Direction, south by west.

August 28th.—Reached Mayolé village in two hours and rested; south and by west. Water is scarce in front. Through flat forest to a marshy-looking piece of water, where we camp, after a march of an hour and a half; still south by west.

August 29th.—On through level forest without water. Trees present a dry, wintry aspect; grass dry, but some flowers shoot out, and fresh grass where the old growth has been burned off.

August 30th.—The two Nassickers lost all the cows yesterday, from sheer laziness. They were found a long way off, and one cow missing. Susi gave them ten cuts each with a switch. Engaging pagazi, and rest.

August 31st.—The Baganda boy Kassa was followed to Gunda, and I delivered him to his countrymen. He escaped from Mayolé village this morning, and came at 3 P.M.; his clothes in rags by running through the forest eleven hours, say twenty-two miles, and is determined not to leave us. Pass Kisari's village, a mile and a half distant, and on to Penta or Phintá to sleep, through perfectly flat forest. Three hours south by west.

September 1st, 1872.—The same flat forest to Chikulu, south and by west, four hours, twenty-five minutes. Manyara called, and is going with us to-morrow. Jangiagé presented a leg of Kongolo or Taghetsé, having a bunch of white hair beneath the *orbital sinus*. Bought food, and served out rations to the men for ten days, as water is scarce, and but little food can be obtained at the villages. The country is very dry and wintry-looking, but flowers shoot out. First clouds all over to-day. It is hot now. A flock of small swallows now appears: they seem tailless, and with white bellies.

September 2d.—The people are preparing their ten days' food. Two pagazi ran away with twenty-four dots of the men's calico. Sent after them, but with small hopes of capturing them.

September 3d.—Unsuccessful search.

September 4th.—Leave Chikulu's, and pass a large puff-adder in the way. A single blow on the head killed it, so that it did not stir. About three feet long, and as thick as a man's arm, a short tail, and flat, broad head. The men say this is a very good sign for our journey, though it would have been a bad sign, and suffering and death, had one trodden on it. Come to Liwané; large tree and waters. South-south-west four hours and a half.

September 5th.—A long hot tramp to Manyara's. He is a kind old man. Many of the men very tired and sick. South-south-west five hours and three-quarters.

September 6th.—Rest the caravan, as we shall have to make forced marches on account of tsetse fly.

September 7th.—Obliged to remain, as several are ill with fever.

September 8th.—On to N'gombo nullah. Very hot, and people ill. Tsetse. A poor woman of Ujiji followed one of Stanley's men to the coast. He cast her off here, and she was taken by another; but her temper seems too excitable. She set fire to her hut by accident, and in the excitement quarreled all round: she is a somebody's bairn nevertheless, a tall, strapping young woman: she must have been the pride of her parents.

September 9th.—Telekéza* at broad part of the nullah, then went on two hours, and passed the night in the forest.

September 10th.—On to Mwéras, and spent one night there by a pool in the forest. Village two miles off.

September 11th.—On eight hours and a half to Telekéza. Sun very hot, and marching fatiguing to all.

Majwara has an insect in the aqueous chamber of his eye. It moves about, and is painful.

We found that an old path from Mwaro has water, and must go early to-morrow morning, and so avoid the roundabout by Morefu. We shall thus save two days, which in this hot weather is much for us. We hear that Simba has gone to fight with Fipa. Two Banyamwezi volunteer.

September 12th.—We went by this water till 2 P.M., then made a march, and to-morrow get to villages. Got a buffalo, and remain overnight. Water is in hematite. I engaged four pagazi here, named Motepatonzé, Nsakusi, Muanamazungu, and Mayombo.

September 15th.—On to near range of hills. Much large game here. Ill.

September 16th.—Climbed over range about two hundred feet

* Midday halt.

high; then on westward to stockaded villages of Kamirambo. His land begins at the M'toni.

September 17th.—To Metambo River: one and a quarter broad, and marshy. Here begins the land of M'éra. Through forest with many strychnus-trees, three hours and a quarter, and arrive at M'éra's.

September 18th.—Remain at M'éra's to prepare food.

[There is a significant entry here: the old enemy was upon him. It would seem that his peculiar liability during these travels to one prostrating form of disease was now redoubled. The men speak of few periods of even comparative health from this date.]

September 19th.—Ditto, ditto, because I am ill with bowels, having eaten nothing for eight days. Simba wants us to pass by his village, and not by the straight path.

September 20th.—Went to Simba's; three hours and a half. About north-west. Simba sent a handsome present of food, a goat, eggs, and a fowl, beans, split rice, dura, and sesame. I gave him three dotis of superior cloth.

September 21st.—Rest here, as the complaint does not yield to medicine or time; but I begin to eat now, which is a favorable symptom. Under a lofty tree at Simba's, a kite, the common brown one, had two pure white eggs in its nest, larger than a fowl's, and very spherical. The Banyamwezi women are in general very coarse; not a beautiful woman among them, as is so common among the Batusi; squat, thick-set figures, and features too; a race of pagazi. On coming inland from sea-coast, the tradition says, they cut the end of a cone shell, so as to make it a little of the half-moon shape; this is their chief ornament. They are generally respectful in deportment, but not very generous: they have learned the Arab adage, "Nothing for nothing," and are keen slave-traders. The gingerbread palm of Speke is the *Hyphene*: the *Borassus* has a large seed, very like the *Coco-demer* of the Seychelle Islands, in being double; but it is very small compared to it.

September 22d.—Preparing food, and one man pretends inability to walk: send for some pagazi to carry loads of those who carry him. Simba sends copious libations of pombe.

September 23d.—The pagazi, after demanding enormous pay, walked off. We went on along rocky banks of a stream, and, crossing it, camped, because the next water is far off.

September 24th.—Recovering, and thankful, but weak; cross

broad sedgy stream, and so on to Boma Misonghi, west and by south.

September 25th.—Got a buffalo and m'juré, and remain to eat them. I am getting better slowly. The m'juré, or water-hog, was all eaten by hyenas during night; but the buffalo is safe.

September 26th.—Through forest, along the side of a sedgy valley. Cross its head-water, which has rust of iron in it, then west and by south. The forest has very many tsetse. Zebras calling loudly, and Senegal long claw in our camp at dawn, with its cry, "O-o-o-o-o-o-o-o-o-o."

September 27th.—On at dawn. No water expected, but we crossed three abundant supplies before we came to hill of our camp. Much game about here. Getting well again—thanks. About west three hours and three-quarters. No people, or marks of them. Flowers sprouting, in expectation of rains: much land burned off, but grass short yet.

September 28th.—At two hills, with mushroom-topped trees on west side. Crossed a good stream twelve feet broad and knee-deep.

Buffaloes grazing. Many of the men sick. While camping, a large musk-cat broke forth among us, and was killed. (Ya bude—musk.) Musk-cat (n'gawa), black, with white stripes: from point of nose to tip of tail, four feet; height at withers, one foot six inches.

September 29th.—Through much bamboo and low hills, to M'pokwa ruins and river. The latter in a deep rent in alluvial soil. Very hot, and many sick in consequence. Sombala fish abundant. Course west.

September 30th.—Away among low tree-covered hills of granite and sandstone. Found that Bangala had assaulted the village to which we went a few days ago, and all were fugitives. Our people found plenty of batatas* in the deserted gardens. A great help, for all were hungry.

October 1st, 1872, Friday.—On through much deserted cultivation in rich, damp soil. Surrounded with low tree-covered ranges. We saw a few people, but all are in terror.

October 2d.—Obtained m'tama in abundance for brass wire, and remained to grind it. The people have been without any for some days, and now rejoice in plenty. A slight shower fell at 5 A.M., but not enough to lay the dust.

October 3d.—Southward, and down a steep descent into a rich

* Sweet-potatoes.

valley with much green maize in ear. People friendly; but it was but one hour's march, so we went on, through hilly country, south-west. Men firing off ammunition had to be punished. We crossed the Katuma River in the bottom of a valley; it is twelve feet broad and knee-deep: camped in a forest. Farijala shot a fine buffalo. The weather disagreeably hot and sultry.

October 4th.—Over the same hilly country: the grass is burned off, but the stalks are disagreeable. Came to a fine valley, with a large herd of zebras feeding quietly; pretty animals. We went only an hour and a half to-day, as one sick man is carried, and it is hot and trying for all. I feel it much internally, and am glad to move slowly.

October 5th.—Up and down mountains; very sore on legs and lungs. Trying to save donkey's strength, I climbed and descended, and, as soon as I mounted, off he set as hard as he could run, and he felt not the bridle: the saddle was loose, but I stuck on till we reached water in a bamboo hollow with spring.

October 6th.—A long bamboo valley with giraffes in it. Range on our right stretches away from us, and that on the left dwindled down; all covered with bamboos, in tufts like other grasses: elephants eat them. Traveled west and by south two hours and three-quarters. Short marches, on account of carrying one sick man.

October 7th.—Over fine park-like country, with large belts of bamboo and fine, broad, shady trees. Went westward to the end of the left-hand range. Went four hours over a level forest with much hematite. Trees large and open. Large game evidently abounds, and waters generally are not far apart. Our neighbor got a zebra, a rhinoceros, and two young elephants.

October 8th.—Came on early, as sun is hot, and in two hours saw the Tanganyika from a gentle hill. The land is rough, with angular fragments of quartz: the rocks of mica schist are tilted up as if away from the Lake's longer axis. Some are upright, and some have basalt melted into the layers, and crystallized in irregular polygons. All are very tired; and in coming to a stockade we were refused admittance, because Malongwana had attacked them late, and we might seize them when in this stronghold. Very true; so we sit outside in the shade of a single palm (*Borassus*).

October 9th.—Rest, because all are tired, and several sick. This heat makes me useless, and constrains me to lie like a log. Inwardly I feel tired too. Jangeangé leaves us to-morrow, having found canoes going to Ujiji.

October 10th.—People very tired, and it being moreover Sunday, we rest. Gave each a keta of beads. Usowa chief Ponda.

October 11th.—Reach Kalema district, after two hours and three-quarters over black mud all deeply cracked, and many deep torrents now dry. Kalema is a stockade. We see Tanganyika, but a range of low hills intervenes. A rumor of war to-morrow.

October 12th.—We wait till 2 P.M., and then make a forced march toward Fipa. The people cultivate but little, for fear of enemies, so we can buy few provisions. We left a broad valley with a sand river in it, where we have been two days, and climbed a range of hills parallel to Tanganyika, of mica schist and gneiss, tilted away from the Lake. We met a buffalo on the top of one ridge: it was shot into, and lay down, but we lost it. Course south-west to brink of Tanganyika water.

October 13th.—Our course went along the top of a range of hills lying parallel with the Lake. A great part of yesterday was on the same range. It is a thousand feet above the water, and is covered with trees rather scraggy. At sunset the red glare on the surface made the water look like a sea of reddish gold; it seemed so near that many went off to drink, but were three or four hours in doing so. One can not see the other side on account of the smokes in the air; but this morning three capes jut out, and the last, bearing south-east from our camp, seems to go near the other side. Very hot weather. To the town of Fipa to-morrow. Course about south. Though we suffer much from the heat by traveling at this season, we escape a vast number of running and often muddy rills, also muddy paths, which would soon knock the donkey up. A milk-and-water sky portends rain. Tipo Tipo is reported to be carrying it with a high hand in Nsama's country, Itawa, insisting that all the ivory must be brought as his tribute—the conqueror of Nsama. Our drum is the greatest object of curiosity we have to the Banyamwezi. A very great deal of cotton is cultivated all along the shores of Lake Tanganyika; it is the Pernambuco kind, with the seeds clinging together, but of good and long fibre, and the trees are left standing all the year to enable them to become large: grain and ground-nuts are cultivated between them. The cotton is manufactured into coarse cloth, which is the general clothing of all.

October 14th.—Crossed two deep gullies with sluggish water in them, and one surrounding an old stockade. Camp on a knoll, overlooking modern stockade and Tanganyika very pleasantly. Saw two beautiful sultanas with azure-blue necks. We might have come here yesterday, but were too tired. Mukembé land

is ruled by Chief Kariaria; village, Mokaria. Mount M'Pumbwé goes into the Lake. N'Tambwé Mount; village, Kafumfwé. Kapufi is the chief of Fipa.

Noon, and about fifty feet above Lake; clouded over. Temperature, 91° noon; 94° 3 P.M.

October 15th.—Rest, and kill an ox. The dry heat is distressing, and all feel it sorely. I am right glad of the rest, but keep on as constantly as I can. By giving dura and maize to the donkeys, and riding on alternate days, they hold on; but I feel the sun more than if walking. The chief Kariaria is civil.

October 16th.—Leave Mokaia and go south. We crossed several bays of Tanganyika, the path winding considerably. The people set fire to our camp as soon as we started.

October 17th.—Leave a bay of Tanganyika, and go on to Mpimbwé: two lions growled savagely as we passed. Game is swarming here, but my men can not shoot except to make a noise. We found many *Lepidosirens* in a muddy pool, which a group of vultures were catching and eating. The men speared one of them, which had scales on; its tail had been bitten off by a cannibal brother: in length it was about two feet: there were curious roe-like portions near its backbone, yellow in color; the flesh was good. We climbed up a pass at the east end of Mpimbwé Mountain, and at a rounded mass of it found water.

October 18th.—Went on about south among mountains all day till we came down, by a little westing, to the Lake again, where there were some large villages, well stockaded, with a deep gully half round them. Ill with my old complaint again. Bubwé is the chief here. Food dear, because Simba made a raid lately. The country is Kilando.

October 19th.—Remained to prepare food and rest the people. Two islets, Nkoma and Kalengé, are here, the latter in front of us.

October 20th.—We got a water-buck and a large buffalo, and remained during the forenoon to cut up the meat, and started at 2 P.M.

Went on, and passed a large arm of Tanganyika, having a bar of hills on its outer border. Country swarming with large game. Passed two bomas, and spent the night near one of them. Course east, and then south.

October 21st.—Mokassa, a Moganda boy, has a swelling of the ankle, which prevents his walking. We went one hour to find wood to make a litter for him. The bomas round the villages are plastered with mud, so as to intercept balls or arrows. The trees are all cut down for these stockades, and the flats are cut up

with deep gullies. A great deal of cotton is cultivated, of which the people make their cloth. There is an arm of Tanganyika here, called Kafungia.

I sent a doti to the head man of the village, where we made the litter, to ask for a guide to take us straight south instead of going east to Fipa, which is four days off, and out of our course. Tipu Tipu is said to be at Morero, west of Tanganyika.

October 22d.—Turned back westward, and went through the hills down to some large islets in the Lake, and camped in villages destroyed by Simba. A great deal of cotton is cultivated here, about thirty feet above the Lake.

October 23d.—First east, and then passed two deep bays, at one of which we put up, as they had food to sell. The sides of the Tanganyika Lake are a succession of rounded bays, answering to the valleys which trend down to the shore between the numerous ranges of hills. In Lake Nyassa they seem made by the prevailing winds. We only get about one hour and a half south and by east. Rain probably fell last night, for the opposite shore is visible to-day. The mountain range of Banda slopes down as it goes south. This is the district of Motoshi. Wherever buffaloes are to be caught, falling traps are suspended over the path in the trees near the water.

October 24th.—There are many rounded bays in mountainous Fipa. We rested two hours in a deep, shady dell, and then came along a very slippery mountain-side to a village in a stockade. It is very hot to-day, and the first thunder-storm away in the east. The name of this village is Lindé.

October 25th.—The coast runs south-south-east to a cape. We went up south-east, then over a high steep hill to turn to south again, then down into a valley of Tanganyika, over another stony side, and down to a dell with a village in it. The west coast is very plain to-day; rain must have fallen there.

October 26th.—Over hills and mountains again, past two deep bays, and on to a large bay with a prominent islet on the south side of it, called Kitanda, from the chief's name. There is also a rivulet of fine water of the same name here.

October 27th.—Remained to buy food, which is very dear. We slaughtered a tired cow to exchange for provisions.

October 28th.—Left Kitanda, and came round the cape, going south. The cape farthest north bore north-north-west. We came to three villages and some large spreading trees, where we were invited by the head man to remain, as the next stage along the shore is long. Morilo islet is on the other or western side, at the

crossing-place. The people brought in a leopard in great triumph. Its mouth and all its claws were bound with grass and bands of bark, as if to make it quite safe, and its tail was curled round: drumming and lullilooing in plenty.

The chief Mosirwa, or Kasamané, paid us a visit, and is preparing a present of food. One of his men was bitten by the leopard in the arm before he killed it. Molilo, or Morilo, islet is the crossing-place of Banyamwezi when bound for Casembe's country, and is near to the Lofuko River, on the western shore of the Lake. The Lake is about twelve or fifteen miles broad, at latitude $7^{\circ} 52'$ S. Tipo Tipo is ruling in Itawa, and bound a chief in chains, but loosed him on being requested to do so by Syde bin Ali. It takes about three hours to cross at Morilo.

October 29th.—Crossed the Thembwa rivulet, twenty feet broad and knee-deep, and sleep on its eastern bank. Fine cold water, over stony bottom. The mountains now close in on Tanganyika, so there is no path but one, over which luggage can not be carried. The stage after this is six hours uphill before we come to water. This forced me to stop after only a short, crooked march of two hours and a quarter. We are now on the confines of Fipa. The next march takes us into Burungu.

October 30th.—The highest parts of the mountains are from five to seven hundred feet higher than the passes, say from thirteen to fifteen hundred feet above the Lake. A very rough march to-day; one cow fell, and was disabled. The stones are collected in little heaps and rows, which shows that all these rough mountains were cultivated. We arrive at a village on the Lake shore. Kirila islet is about a quarter of a mile from the shore. The Megunda people cultivated these hills in former times. Thunder all the morning, and a few drops of rain fell. It will ease the men's feet when it does fall. They call out earnestly for it, "Come, come with hail!" and prepare their huts for it.

October 31st.—Through a long pass, after we had climbed over Winelao. Came to an islet a mile and a half long, called Kapesa, and then into a long pass. The population of Megunda must have been prodigious, for all the stones have been cleared, and every available inch of soil cultivated. The population are said to have been all swept away by the Matuta.

Going south, we came to a very large arm of the Lake, with a village at the end of it in a stockade. This arm is seven or eight miles long and about two broad. We killed a cow to-day, and found peculiar flat worms in the substance of the liver, and some that were rounded.

CHAPTER XXIII.

False Guides.—Very difficult Traveling.—Donkey dies of Tsetse Bites.—The Kasonso Family.—A hospitable Chief.—The River Lofu.—The Nutmeg-tree.—Famine.—Ill.—Arrives at Chama's Town.—A Difficulty.—An immense Snake.—Account of Casembe's Death.—The Flowers of the Babisa Country.—Reaches the River Lopoposi.—Arrives at Chituñkuè's.—Terrible Marching.—The Doctor is borne through the flooded Country.

November 1st, 1872.—WE hear that an eruption of Babemba, on the Baulungu, destroyed all the food. We tried to buy food here, but every thing is hidden in the mountains: so we have to wait to-day till they fetch it. If in time, we shall make an afternoon's march. Raining to-day. The River Mulu from Chingolao gave us much trouble in crossing, from being filled with vegetation: it goes into Tanganyika. Our course south and east.

November 2d.—Deceived by a guide, who probably feared his countrymen in front. Went round a stony cape, and then to a land-locked harbor, three miles long by two broad. Here was a stockade, where our guide absconded. They told us that if we continued our march we should not get water for four hours; so we rested, having marched four hours and a quarter.

November 3d.—We marched this morning to a village where food was reported. I had to punish two useless men for calling out, "Posho! posho! posho!" (rations) as soon as I came near. One is a confirmed bangé-smoker;* the blows were given slightly, but I promised that the next should be severe. The people of Liemba village, having a cow or two, and some sheep and goats, eagerly advised us to go on to the next village, as being just behind a hill, and well provisioned. Four very rough hills were the penalty of our credulity, taking four hours of incessant toil in these mountain fastnesses. They hide their food, and the paths are the most difficult that can be found, in order to wear out their enemies. To-day we got to the River Luazi, having marched five hours and a half, and sighting Tanganyika near us twice.

November 4th.—All very tired. We tried to get food, but it

* Bangé, or hemp, in time produces partial idiocy if smoked in excess. It is used among all the interior tribes.

is very dear, and difficult to bargain for. Goods are probably brought from Fipa. A rest will be beneficial to us.

November 5th.—We went up a high mountain, but found that one of the cows could not climb up; so I sent back and ordered it to be slaughtered, waiting on the top of the mountain while the people went down for water.

November 6th.—Pass a deep, narrow bay and climb a steep mountain. Too much for the best donkey. After a few hours' climb, we look down on the Lake, with its many bays. A sleepy glare floats over it. Farther on we came on a ledge of rocks, and looked sheer down five or six hundred feet into its dark-green waters. We saw three zebras and a young python here, and fine flowers.

November 7th, Sunday.—Remained, but the head man forbade his people to sell us food. We keep quiet except to invite him to a parley, which he refuses, and makes loud lullulooing in defiance, as if he were inclined to fighting. At last, seeing that we took no notice of him, he sent us a present: I returned three times its value.

November 8th.—The large donkey is very ill, and unable to climb the high mountain in our front. I left men to coax him on, and they did it well. I then sent some to find a path out from the Lake mountains, for they will kill us all; others were dispatched to buy food, but the Lake folks are poor except in fish.

Swifts, in flocks, were found on the Lake when we came to it, and there are small migrations of swallows ever since. Though this is the very hottest time of year, and all the plants are burned off or quite dried, the flowers persist in bursting out of the hot, dry surface, generally without leaves. A purple ginger, with two yellow patches inside, is very lovely to behold, and it is alternated with one of a bright canary yellow; many trees, too, put on their blossoms. The sun makes the soil so hot that the radiation is as if it came from a furnace. It burns the feet of the people, and knocks them up. Subcutaneous inflammation is frequent in the legs, and makes some of my most hardy men useless. We have been compelled to slowness very much against my will. I, too, was ill, and became better only by marching on foot. Riding exposes one to the bad influence of the sun, while by walking the perspiration modifies beneficially the excessive heat. It is like the difference, in effect, of cold if one is in activity, or sitting and falling asleep on a stage-coach. I know ten hot fountains north of the Orange River: the farther north, the more hot and numerous they become.

[Just here we find a note, which does not bear reference to any thing that occurred at this time. Men, in the midst of their hard, earnest toil, perceive great truths with a sharpness of outline and a depth of conviction which is denied to the mere idle theorist: he says:]

The spirit of missions is the spirit of our Master: the very genius of His religion. A diffusive philanthropy is Christianity itself. It requires perpetual propagation to attest its genuineness.

November 9th.—We got very little food, and kill a calf to fill our mouths a little. A path east seems to lead out of these mountains of Tanganyika. We went on east this morning in highland open forest, then descended by a long slope to a valley in which there is water. Many Milenga gardens, but the people keep out of sight. The highlands are of a purple color, from the new leaves coming out. The donkey began to eat, to my great joy. Men sent off to search for a village return empty-handed, and we must halt. I am ill, and losing much blood.

November 10th.—Out from the Lake mountains, and along high ridges of sandstone and dolomite. Our guide volunteered to take the men on to a place where food can be bought—a very acceptable offer. The donkey is recovering: it was distinctly the effects of tsetse, for the eyes and all the mouth and nostrils swelled. Another died at Kwihara with every symptom of tsetse poison fully developed.

[The above remarks on the susceptibility of the donkey to the bite of the tsetse fly are exceedingly important. Hitherto Dr. Livingstone had always maintained, as the result of his own observations, that this animal, at all events, could be taken through districts in which horses, mules, dogs, and oxen would perish to a certainty. With the keen perception and perseverance of one who was exploring Africa with a view to open it up for Europeans, he laid great stress on these experiments, and there is no doubt that the distinct result which he here arrived at must have a very significant bearing on the question of travel and transport.

Still passing through the same desolate country, we see that he makes a note on the forsaken fields and the watch-towers in them. Cucumbers are cultivated in large quantities by the natives in Inner Africa, and the reader will no doubt call to mind the simile adopted by Isaiah some twenty-five hundred years ago, as he pictured the coming desolation of Zion, likening her to a "lodge in a garden of cucumbers."*]

* Isaiah i., 8.

November 11th.—Over gently undulating country, with many old gardens and watch-houses, some of great height: we reached the River Kalambo, which I know as falling into Tanganyika. A branch joins it at the village of Mosapasi: it is deep, and has to be crossed by a bridge, while the Kalambo is shallow, and say twenty yards wide, but it spreads out a good deal.

[Their journey of the twelfth and thirteenth led them over low ranges of sandstone and hematite, and past several strongly stockaded villages. The weather was cloudy and showery—a relief, no doubt, after the burning heat of the last few weeks. They struck the Halochéché River, a rapid stream fifteen yards wide and thigh-deep, on its way to the Lake, and arrived at Zombé's town, which is built in such a manner that the river runs through it, while a stiff palisade surrounds it. He says:]

It was entirely surrounded by M'toka's camp, and a constant fight maintained at the point where the line of stakes was weakened by the river running through. He killed four of the enemy, and then Chitimbwa and Kasonso coming to help him, the siege was raised.

M'toka compelled some Malongwana to join him, and plundered many villages: he has been a great scourge. He also seems to have made an attack upon an Arab caravan, plundering it of six bales of cloth and one load of beads, telling them that if they wanted to get their things back they must come and help him conquer Zombé. The siege lasted three months, till the two brothers of Zombé, before mentioned, came, and then a complete rout ensued. M'toka left nearly all his guns behind him: his allies, the Malongwana, had previously made their escape. It is two months since this rout, so we have been prevented by a kind Providence from coming soon enough. He was impudent and extortionate before, and much more now that he has been emboldened by success in plundering.

November 16th.—After waiting some time for the men, I sent men back yesterday to look after the sick donkey; they arrived, but the donkey died this morning. Its death was evidently caused by tsetse bite and bad usage by one of the men, who kept it forty-eight hours without water. The rain, no doubt, helped to a fatal end: it is a great loss to me.

November 17th.—We went on along the bottom of a high ridge that flanks the Lake on the west, and then turned up south-east to a village hung on the edge of a deep chasm in which flows the Aeezy.

November 18th.—We were soon overwhelmed in a pouring rain,

and had to climb up the slippery red path which is parallel and near to Mbétté's. One of the men picked up a little girl who had been deserted by her mother. As she was benumbed by cold and wet, he carried her; but when I came up he threw her into the grass. I ordered a man to carry her, and we gave her to one of the childless women: she is about four years old, and not at all negro-looking. Our march took us about south-west to Kampamba's, the son of Kasonso, who is dead.

November 19th.—I visited Kampamba. He is still as agreeable as he was before when he went with us to Liemba. I gave him two cloths as a present. He has a good-sized village. There are heavy rains now and then every day.

November 20th, 21st, 23d.—The men turn to stringing beads for future use, and to all except defaulters I give a present of two dotis, and a handful of beads each. I have diminished the loads considerably, which pleases them much. We have now three and a half loads of calico, and one hundred and twenty bags of beads. Several go idle, but have to do any odd work, such as helping the sick or any thing they are ordered to do. I gave the two Nasickers who lost the cow and calf only one doti; they were worth fourteen dotis. One of our men is behind, sick with dysentery. I am obliged to leave him, but have sent for him twice, and have given him cloth and beads.

November 24th.—Left Kampamba's to-day, and cross a meadow south-east of the village, in which the River Muanani rises. It flows into the Kapondosi, and so on to the Lake. We made good way with Kiteneka as our guide, who formerly accompanied Kampamba and ourselves to Liemba. We went over a flat country once covered with trees, but now these have all been cut down, say four to five feet from the ground; most likely for clearing, as the reddish soil is very fertile. Long lines of hills of denudation are in the distance, all directed to the Lake.

We came at last to Kasonso's successor's village, on the River Molulwé, which is say thirty yards wide and thigh-deep. It goes to the Lofu. The chief here gave a sheep—a welcome present, for I was out of flesh for four days. Kampamba is stingy, as compared with his father.

November 25th.—We came, in an hour's march, to a rivulet called the Casembe: the departed Kasonso lived here. The stream is very deep, and flows slowly to the Lofu. Our path lay through much pollarded forest, troublesome to walk in, as the stumps send out leafy shoots.

November 26th.—Started at day-break. The grass was loaded

with dew, and a heavy mist hung over every thing. Passed two villages of people come out to cultivate this very fertile soil, which they manure by burning branches of trees. The rivulet Loela flows here, and is also a tributary of the Lofu.

November 27th.—As it is Sunday, we stay here at N'dari's village, for we shall be in an uninhabited track to-morrow beyond the Lofu. The head man cooked six messes for us, and begged us to remain for more food, which we buy. He gave us a handsome present of flour and a fowl, for which I return him a present of a doti. Very heavy rain and high gusts of wind, which wet us all.

November 28th.—We came to the River Lofu in a mile. It is sixty feet across, and very deep. We made a bridge, and cut the banks down, so that the donkey and cattle could pass over. It took us two hours, during which time we hauled them all across with a rope. We were here misled by our guide, who took us across a marsh covered with tufts of grass, but with deep water between, that never dries: there is a path which goes round it. We came to another village with a river, which must be crossed. No stockade here, and the chief allowed us to camp in his town. There are long low lines of hills all about. A man came to the bridge to ask for toll-fee: as it was composed of one stick only, and unfit for our use because rotten, I agreed to pay provided he made it fit for our large company; but if I remade and enlarged it, I said he ought to give me a goat for the labor. He slunk away, and we laid large trees across where previously there was but one rotten pole.

November 29th.—Crossed the Loozi in two branches, and climbed up the gentle ascent of Malembé to the village of Chiwé, whom I formerly called Chibwé, being misled by the Yao tongue. Ilamba is the name of the rill at his place. The Loozi's two branches were waist-deep. The first was crossed by a natural bridge of a fig-tree growing across. It runs into the Lofu, which river rises in Isunga country at a mountain called Kwitetté. The Chambezé rises east of this, and at the same place as Louzua.

Chiwé presented a small goat with crooked legs and some millet flour, but he grumbled at the size of the fathom of cloth I gave. I offered another fathom and a bundle of needles, but he grumbled at this too, and sent it back. On this I returned his goat and marched.

[The road lay through the same country among low hills, for several miles, till they came, on December 1st, to a rivulet called Lovu Katanta, where, curiously enough, they found a nutmeg-

tree in full bearing. A wild species is found at Angola, on the West Coast, and it was probably of this description, and not the same species as that which is cultivated in the East. In two places he says:]

Who planted the nutmeg-tree on the Katanta?

[Passing on with heavy rain pouring down, they now found themselves in the Wemba country, the low tree-covered hills exhibiting here and there "fine-grained schist, and igneous rocks of red, white, and green color."]

December 3d, 1872.—No food to be got on account of M'toka's and Tipó Tipó's raids.

A stupid or perverse guide took us away to-day north-west or west-north-west. The villagers refused to lead us to Chipwité's, where food was to be had; he is south-west one day and a half off. The guide had us at his mercy, for he said, "If you go south-west you will be five days without food or people." We crossed the Kañomba, fifteen yards wide and knee-deep. Here our guide disappeared, and so did the path. We crossed the Lampussi twice: it is forty yards wide and knee-deep. Our course is west-north-west for about four hours and a half to-day. We camped, and sent men to search for a village that has food. My third barometer (aneroid) is incurably injured by a fall: the man who carried it slipped on a clayey path.

December 4th.—Waiting for the return of our men in a green wooded valley on the Lampussi River. Those who were sent yesterday return without any thing: they were directed falsely by the country people, where naught could be bought. The people themselves are living on grubs, roots, and fruits. The young plasterer Sphex is very fat, on coming out of its clay house, and a good relish for food. A man came to us demanding his wife and child; they are probably in hiding. The slaves of Tipó Tipó have been capturing people. "One sinner destroyeth much good!"

December 5th.—The people eat mushrooms and leaves. My men returned about 5 P.M. with two of Kafimbé's men, bringing a present of food to me. A little was bought, and we go on to-morrow, to sleep two nights on the way, and so to Kafimbé, who is a brother of Nsama's, and fights him.

December 6th.—We cross the Lampussi again, and up to a mountain, along which we go, and then down to some ruins. This took us five hours, and then, with two hours and a quarter more, we reach Sintila. We hasten along as fast as hungry men (four of them sick) can go, to get food.

December 7th.—Off at 6.15 A.M. A leopard broke in upon us last night and bit a woman. She screamed, and so did the donkey, and it ran off. Our course lay along between two ranges of low hills; then, where they ended, we went by a good-sized stream thirty yards or so across, and then down into a valley to Kafimbé's.

December 8th.—Very heavy rains. I visited Kafimbé. He is an intelligent and pleasant young man, who has been attacked several times by Kitandula, the successor of Nsama, of Itawa, and compelled to shift from Motononga to this rivulet, Motosi, which flows into the Kisi, and thence into Lake Moero.

December 9th.—Send off men to a distance for food, and wait, of course. Here there is none for either love or money. To-day a man came from the Arab party at Kumba-kumba's with a present of m'chelé and a goat. He reports that they have killed Casembe, whose people concealed from him the approach of the enemy till they were quite near. Having no stockade, he fell an easy prey to them. The conquerors put his head and all his ornaments on poles. His pretty wife escaped over Mofwé, and the slaves of the Arabs ran riot everywhere. We sent a return present of two dotis of cloth, one jorah of kaniké, one doti of colored cloth, three pounds of beads, and a paper of needles.

December 10th.—Left Kafimbé's. He gave us three men to take us into Chama's village, and came a mile along the road with us. Our road took us by a winding course from one little deserted village to another.

December 11th.—Being far from water, we went two hours across a plain dotted with villages to a muddy rivulet called the Mukubwé (it runs to Moero), where we found the village of a nephew of Nsama. This young fellow was very liberal in gifts of food, and in return I gave him two cloths. An Arab, Juma bin Seff, sent a goat to-day. They have been riding it rough-shod over all the inhabitants, and confess it.

December 12th.—Marenza sent a present of dura flour and a fowl, and asked for a little butter as a charm. He seems unwilling to give us a guide, though told by Kafimbé to do so. Many Garaganza about: they trade in leglets, ivory, and slaves. We went on half an hour to the River Mokoó, which is thirty yards wide, and carries off much water into Malunda, and so to Lake Moero.

When palm-oil-palms are cut down for toddy, they are allowed to lie three days, then the top shoot is cut off smoothly, and the

toddy begins to flow; and it flows for a month, or a month and a half or so, lying on the soil.

[The note made on the following day is written with a feeble hand, and scarce one penciled word tallies with its neighbor in form or distinctness—in fact, it is seen at a glance what exertion it cost him to write at all. He says no more than “ill” in one place, but this is the evident explanation; yet, with the same painstaking determination of old, the three rivers which they crossed have their names recorded, and the hours of marching and the direction are all entered in his pocket-book.]

December 13th.—Westward about by south, and crossed a river, Mokobwé, thirty-five yards. Ill, and after going south-west camped in a deserted village, south-west, traveling five hours. River Mekanda, 2d; Meñomba, 3d, where we camp.

December 14th.—Guides turned north-west, to take us to a son of Nsama, and so play the usual present into his hands. I objected when I saw their direction, but they said, “The path turns round in front.” After going a mile along the bank of the Meñomba, which has much water, Susi broke through and ran south, till he got a south-by-west path, which we followed, and came to a village having plenty of food. As we have now camped in the village, we sent the men off to recall the fugitive women, who took us for Kumba-kumba’s men. Crossed the Luperé, which runs into the Makobwé.

A leech crawling toward me in the village this morning elicited the Bemba idea that they fall from the clouds or sky—“mulu.” It is called here “mosunda a maluzé,” or leech of the rivers; “luba” is the Zanzibar name. In one place I counted nineteen leeches in our path, in about a mile. Rain had fallen, and their appearance out of their hiding-places suddenly after heavy rain may have given rise to the idea of their fall with it, as fishes do, and the thunder-frog is supposed to do. Always too cloudy and rainy for observations of stars.

December 15th.—The country is now level, covered with trees pollarded for clothing, and to make ashes of for manure. There are many deserted villages, few birds. Cross the River Lithabo, thirty yards wide and thigh-deep, running fast to the south-west, joined by a small one near. Reached village of Chipala, on the rivulet Chikatula, which goes to Moipanza. The Lithabo goes to Kalongwesi by a south-west course.

December 16th.—Off at 6 A.M. across the Chikatula, and in three-quarters of an hour crossed the Lopanza, twelve yards wide and waist-deep, being now in flood. The Lolola was before us in half

an hour, eight yards wide and thigh-deep, both streams perennial, and embowered in tall umbrageous trees that love wet: both flow to the Kalongwesi.

We came to quite a group of villages having food, and remain, as we got only dribbles in the last two camps. Met two Banyamwezi carrying salt to Lobemba, of Moambu. They went to Kabuiré for it, and now retail it on the way back.

At noon we got to the village of Kasiané, which is close to two rivulets, named Lopanza and Lolela. The head man, a relative of Nsama, brought me a large present of flour of dura, and I gave him two fathoms of calico.

Floods by these sporadic rain-falls have discolored waters, as seen in Lopanza and Lolela to-day. The grass is all springing up quickly, and the maleza growing fast. The trees generally in full foliage. Different shades of green, the dark prevailing, especially along rivulets, and the hills in the distance are covered with dark blue haze. Here, in Lobemba, they are gentle slopes of about two or three hundred feet, and sandstone crops out over their tops. In some parts clay schists appear, which look as if they had been fused, or were baked by intense heat.

The pugnacious spirit is one of the necessities of life. When people have little or none of it, they are subjected to indignity and loss. My own men walk into houses, where we pass the nights without asking any leave, and steal cassava without shame. I have to threaten and thrash, to keep them honest, while if we are at a village where the natives are a little pugnacious they are as meek as sucking doves. The peace plan involves indignity and wrong. I give little presents to the head men, and to some extent heal their hurt sensibilities. This is indeed much appreciated, and produces profound hand-clapping.

December 17th.—It looked rainy, but we waited half an hour, and then went on one hour and a half, when it set in, and forced us to seek shelter in a village. The head of it was very civil, and gave us two baskets of cassava and one of dura. I gave a small present first. The district is called Kisinga, and flanks the Kalongwezé.

December 18th.—Over same flat pollarded forest until we reached the Kalongwesé River on the right bank, and about a quarter of a mile east of the confluence of the Luéna or Kisaka. This side of the river is called Kisinga, the other is Chama's, and Kisinga too. The Luéna comes from Jangé in Casembe's land, or west-south-west of this. The Kalongwesé comes from the south-east of this, and goes away north-west. The donkey sends a foot ev-

ery now and then through the roof of cavities made apparently by ants, and sinks down eighteen inches or more, and nearly falls. These covered hollows are right in the paths.

December 19th.—So cloudy and wet that no observations can be taken for latitude and longitude at this real geographical point. The Kalongwesé is sixty or eighty yards wide and four yards deep, about a mile above the confluence of the Luéna. We crossed it in very small canoes, and swamped one twice, but no one was lost. Marched south about one hour and a quarter.

December 20th.—Shut in by heavy clouds. Wait to see if it will clear up. Went on at 7.15, drizzling, as we came near the mozumba, or chief's stockade. A son of Chama tried to mislead us by setting out west; but the path being grass-covered, I objected, and soon came on to the large, clear path. The guide ran off to report to the son, but we kept on our course, and he and the son followed us. We were met by a party, one of whom tried to regale us by vociferous singing and trumpeting on an antelope's horn, but I declined the deafening honor. Had we suffered the misleading, we should have come here to-morrow afternoon.

A wet bed last night, for it was in the canoe that was upset. It was so rainy that there was no drying it.

December 21st.—Arrived at Chama's. Heavy clouds drifting past, and falling drizzle. Chama's brother tried to mislead us yesterday, in hopes of making us wander hopelessly and helplessly. Failing in this, from my refusal to follow a grass-covered path, he ran before us to the chief's stockade, and made all the women flee, which they did, leaving their chickens damless. We gave him two handsome cloths, one for himself and one for Chama, and said we wanted food only, and would buy it. They are accustomed to the bullying of half-castes, who take what they like for nothing. They are alarmed at our behavior to-day, so we took quiet possession of the stockade, as the place that they put us in was on the open, defenseless plain. Seventeen human skulls ornament the stockade. They left their fowls and pigeons. There was no bullying. Our women went in to grind food, and came out without any noise. This flight seems to be caused by the foolish brother of the chief, and it is difficult to prevent stealing by my horde. The brother came drunk, and was taking off a large sheaf of arrows, when we scolded and prevented him.

December 22d.—We crossed a rivulet at Chama's village ten yards wide and thigh-deep, and afterward, in an hour and a half, came to a sedgy stream which we could barely cross. We hauled

a cow across bodily. Went on mainly south, and through much bracken.

December 23d.—Off at 6 A.M. in a mist, and in an hour and a quarter came to three large villages by three rills, called Misan-gwa, and much sponge; went on to other villages south, and a stockade.

December 24th.—Cloud in sky, with drifting clouds from south and south-west. Very wet and drizzling. Sent back Chama's arrows, as his foolish brother can not use them against us now: there are two hundred and fifteen in the bundle. Passed the Lopopussi, running west to the Lofubu, about seven yards wide: it flows fast over rocks, with heavy aquatic plants. The people are not afraid of us here, as they were so distressingly elsewhere. We hope to buy food here.

December 25th, Christmas-day.—I thank the good Lord for the good gift of his Son Christ Jesus our Lord. Slaughtered an ox, and gave a fundo and a half to each of the party. This is our great day, so we rest. It is cold and wet day and night. The head man is gracious and generous, which is very pleasant compared with awe, awe, and refusing to sell, or stop to speak, or show the way.

The White Nile carrying forward its large quasi-tidal wave, presents a mass of water to the Blue Nile which acts as a buffer to its rapid flood. The White Nile being at a considerable height when the Blue rushes down its steep slopes, presents its brother Nile with a soft cushion into which it plunges, and is restrained by the *vis inertiae* of the more slowly moving river, and, both united, pass on to form the great inundation of the year in Lower Egypt. The Blue River brings down the heavier portion of the Nile deposit, while the White River comes down with the black, finely divided matter from thousands of square miles of forest in Manyema, which probably gave the Nile its name, and is, in fact, the real fertilizing ingredient in the mud that is annually left. Some of the rivers in Manyema, as the Luia and Machila, are of inky blackness, and make the whole main stream of a very Nilotic hue. An acquaintance with these dark-flowing rivers, and scores of rills of water tinged as dark as strong tea, was all my reward for plunging through the terrible Manyema mud, or "glaur."

December 26th.—Along among the usual low tree-covered hills of red and yellow and green schists; paths wet and slippery. Came to the Lofubu, fifteen yards broad and very deep; water clear, flowing north-west to join Luéna or Kisaka: as the Lopo-

pussi goes west too into Lofubu, it becomes large, as we saw. We crossed by a bridge, and the donkey swam with men on each side of him. We came to three villages on the other side, with many iron furnaces. Wet and drizzling weather made us stop soon. A herd of buffaloes, scared by our party, rushed off, and broke the trees in their hurry; otherwise there is no game, or marks of game, visible.

December 27th.—Leave the villages on the Lofubu. A cascade comes down on our left. The country undulating deeply; the hills, rising at times three to four hundred feet, are covered with stunted wood. There is much of the common bracken fern and hart's-tongue. We cross one rivulet running to the Lofubu, and camp by a blacksmith's rill in the jungle. No rain fell to-day, for a wonder, but the lower tier of clouds still drifts past from north-west.

I killed a Naia Hadje snake seven feet long here; he reared up before me, and turned to fight. The under north-west stratum of clouds is composed of fluffy, cottony masses, the edges spread out as if on an electrical machine; the upper or south-east is of broad fields, like striated cat's hair. The north-west flies quickly, the south-east slowly away where the others come from. No observations have been possible through most of this month. People assert that the new moon will bring drier weather, and the clouds are preparing to change the north-west lower stratum into south-east, ditto, ditto, and the north-west will be the upper tier.

A man, ill and unable to come on, was left all night in the rain without fire. We sent men back to carry him. Wet and cold. We are evidently ascending, as we come near, the Chambezé. The north-east clouds came up this morning to meet the north-west, and thence the south-east came across, as if combating the north-west. So as the new moon comes soon, it may be a real change to drier weather.

4 P.M.—The man carried in here is very ill: we must carry him to-morrow.

December 29th.—Our man Chipangawazi died last night, and was buried this morning. He was a quiet, good man: his disease began at Kampamba's. New moon last night.

December 29th, or January 1st, 1873.—I am wrong two days.

December 29th.—After the burial, and planting four branches of moriña at the corners of the grave, we went on southward three hours and a quarter to a river, the Luongo, running strongly west and south to the Luapula; then after one hour crossed it, twelve yards wide and waist-deep. We met a man, with four

of his kindred, stripping off bark to make bark-cloth: he gives me the above information about the Luongo.

January 1st, 1873 (30th).—Came on at 6 A.M.; very cold. The rains have ceased for a time. Arrive at the village of the man who met us yesterday. As we have been unable to buy food, through the illness and death of Chipangawazi, I camp here.

January 2d.—Thursday: Wednesday was the 1st. I was two days wrong.

January 3d.—The villagers very anxious to take us to the west to Chikumbi's, but I refused to follow them, and we made our course to the Luongo. Went into the forest south, without a path, for one hour and a half, then through a flat forest: much fern, and no game. We camped in the forest at the Situngula rivulet. A little quiet rain through the night. A damp climate this: lichens on all the trees, even on those of two inches diameter. Our last cow died of injuries received in crossing the Lofubu. People buy it for food, so it is not an entire loss.

January 4th.—March south one hour to the Lopoposi, or Lopoposi stream, of twenty-five or thirty feet, and now breast-deep, flowing fast southward to join the Chambezé. Camped at Ketebé's at 2 P.M., on the rivulet Kizima, after very heavy rain.

January 5th.—A woman of our party is very ill; she will require to be carried to-morrow.

January 6th.—Ketebé, or Kapesha, very civil and generous. He sent three men to guide us to his elder brother Chungu. The men drum and sing harshly for him continually. I gave him half a pound of powder, and he lay on his back rolling and clapping his hands, and all his men lulliloed; then he turned on his front, and did the same. The men are very timid—no wonder, the Arab slaves do as they choose with them. The women burst out through the stockade in terror when my men broke into a chorus as they were pitching my tent. Cold, cloudy, and drizzling. Much cultivation far from the stockades.

The sponges here are now full and overflowing, from the continuous and heavy rains. Crops of mileza, maize, cassava, dura, tobacco, beans, ground-nuts, are growing finely. A border is made round each patch, manured by burning the hedge, and castor-oil plants, pumpkins, calabashes, are planted in it to spread out over the grass.

January 7th.—A cold, rainy day keeps us in a poor village very unwillingly. 3 P.M. fair, after rain all the morning: on to the rivulet Kamalopa, which runs to Kamolozzi and into Kapoposi.

January 8th.—Detained by heavy, continuous rains in the village Moenje. We are near Lake Bangweolo, and in a damp region. Got off in the afternoon in a drizzle. Crossed a rill six feet wide, but now very deep, and with large running sponges on each side; it is called the Kamalopa: then one hour beyond came to a sponge, and a sluggish rivulet one hundred yards broad, with broad sponges on either bank waist-deep, and many leeches. Came on through flat forest as usual south-west and south.

[We may here call attention to the alteration of the face of the country, and the prominent notice of "sponges." His men speak of the march from this point as one continual plunge in and out of morass, and through rivers which were only distinguishable from the surrounding waters by their deep currents and the necessity for using canoes. To a man reduced in strength, and chronically affected with dysenteric symptoms ever likely to be aggravated by exposure, the effect may be well conceived! It is probable that had Dr. Livingstone been at the head of a hundred picked Europeans, every man would have been down within the next fortnight. As it is, we can not help thinking of his company of followers, who must have been well led, and under the most thorough control to endure these marches at all, for nothing cows the African so much as rain. The next day's journey may be taken as a specimen of the hardships every one had to endure:]

January 9th.—Mosumba, of Chungu. After an hour we crossed the rivulet and sponge of Nkulumuna, one hundred feet of rivulet and two hundred yards of flood, besides some two hundred yards of sponge, full, and running off; we then, after another hour, crossed the large rivulet Lopopussi by a bridge which was forty-five feet long, and showed the deep water; then one hundred yards of flood thigh-deep, and two or three hundred yards of sponge. After this we crossed two rills, called Liñkanda, and their sponges, the rills in flood ten or twelve feet broad and thigh-deep. After crossing the last, we came near the Mosumba, and received a message to build our sheds in the forest, which we did.

Chungu knows what a nuisance a safari (caravan) makes itself. Cloudy day, and at noon heavy rain from north-west. The head man, on receiving two cloths, said he would converse about our food and show it to-morrow. No observations can be made, from clouds and rain.

January 10th.—Mosumba, of Chungu. Rest to-day, and get an insight into the ford: cold, rainy weather. When we pre-

pared to visit Chungu, we received a message that he had gone to his plantations to get millet. He then sent for us at 1 P.M. to come, but, on reaching the stockade, we heard a great keléle, or uproar, and found it being shut from terror. We spoke to the inmates, but in vain, so we returned. Chungu says that we should put his head on a pole like Casembe's! We shall go on without him to-morrow. The terror guns have inspired is extreme.

January 11th.—Chungu sent a goat and big basket of flour, and excused his fears because guns had routed Casembe, and his head was put on a pole: it was his young men that raised the noise. We remain to buy food, as there is scarcity at Mombo, in front. Cold and rainy weather; never saw the like; but this is among the sponges of the Nile, and near the northern shores of Bangweolo.

January 12th.—A dry day enabled us to move forward an hour to a rivulet and sponge, but by ascending it we came to its head, and walked over dry-shod; then one hour to another broad rivulet, Pinda, sluggish, and having one hundred yards of sponge on each side. This had a stockaded village, and the men, in terror, shut the gates. Our men climbed over and opened them, but I gave the order to move forward through flat forest till we came to a running rivulet of about twenty feet, but with one hundred yards of sponge on each side. The white sand had come out as usual, and formed the bottom. Here we entered a village, to pass the night. We passed mines of fine black iron ore ("motapo"); it is magnetic.

January 13th.—Storm-stayed by rain and cold at the village on the rivulet Kalambozi, near the Chambezé. Never was in such a spell of cold, rainy weather except in going to Loanda in 1853. Sent back for food.

January 14th.—Went on dry south-east, and then south two hours, to River Mazinga, and marched parallel to it till we came to the confluence of Kasié. Mosinga, twenty-five feet, waist-deep, with one hundred and fifty yards of sponge on right bank, and about fifty yards on left. There are many plots of cassava, maize, millet, dura, ground-nuts, voandzeia, in the forest, all surrounded with strong, high hedges, skillfully built, and manured with wood-ashes. The villagers are much afraid of us. After four hours and a half we were brought up by the deep rivulet Mpanda, to be crossed to-morrow in canoes. There are many flowers in the forest: marigolds, a white jonquil-looking flower without smell, many orchids, white, yellow, and pink asclepias, with bunches of French-white flowers, clematis (*Methoni*

ca gloriosa), gladiolus, and blue and deep-purple polygalas, grasses with white starry seed-vessels, and spikelets of brownish-red and yellow. Besides these, there are beautiful blue flowering bulbs, and new flowers of pretty, delicate form, and but little scent. To this list may be added balsams, compositæ of blood-red color and of purple; other flowers of liver color, bright canary-yellow, pink orchids on spikes thickly covered all round, and of three inches in length; spiderworts of fine blue or yellow, or even pink. Different colored asclepedials; beautiful yellow and red umbelliferous flowering plants; dill and wild parsnips; pretty flowery aloes, yellow and red, in one whorl of blossoms; pease, and many other flowering plants which I do not know. Very few birds, or any kind of game. The people are Babisa, who have fled from the west, and are busy catching fish in basket-traps.

January 15th.—Found that Chungu had let us go astray toward the Lake, and into an angle formed by the Mpanda and Lopopussi, and the Lake full of rivulets which are crossed with canoes. Chisupa, a head man on the other side of the Mpanda, sent a present, and denounced Chungu for heartlessness. We explained to one man our change of route, and went first north-east, then east, to the Monsinga, which we forded again at a deep place full of holes and rust-of-iron water, in which we floundered over three hundred yards. We crossed a sponge thigh-deep before we came to the Monsinga, then on in flat forest to a stockaded village; the whole march about east for six hours.

January 16th.—Away north-east and north, to get out of the many rivulets near the Lake, back to the River Lopopussi, which now looms large, and must be crossed in canoes. We have to wait in a village till these are brought, and have only got one hour and three quarters nearly north.

We were treated scurvily by Chungu. He knew that we were near the Chambezé, but hid the knowledge and himself too. It is terror of guns.

January 17th.—We are troubled for want of canoes, but have to treat gently with the owners; otherwise they would all run away, as they have around Chungu's, in the belief that we should return to punish their silly head man. By waiting patiently yesterday, we drew about twenty canoes toward us this morning, but all too small for the donkey; so we had to turn away back north-west to the bridge above Chungu's. If we had tried to swim the donkey across alongside a canoe, it would have been terribly strained, as the Lopopussi is here quite two miles wide,

and full of rushes, except in the main stream. It is all deep, and the country being very level as the rivulets come near to the Lake, they become very broad. Crossed two sponges with rivulets in their centre.

Much cultivation in the forest. In the second year the mileza and maize are sickly, and yellow white; in the first year, with fresh wood-ashes, they are dark-green, and strong. Very much of the forest falls for manure. The people seem very eager cultivators. Possibly mounds have the potash brought up in forming.

January 18th.—We lost a week by going to Chungu (a worthless, terrified head man), and came back to the ford of Lopopussi, which we crossed, only from believing him to be an influential man who would explain the country to us. We came up the Lopopussi three hours yesterday, after spending two hours in going down to examine the canoes. We hear that Syde bin Ali is returning from Katanga with much ivory.

January 19th.—After prayers we went on to a fine village, and on from it to the Mononsé, which, though only ten feet of deep stream flowing south, had some four hundred yards of most fatiguing, plunging, deep sponge, which lay in a mass of dark-colored rushes, that looked as if burned off: many leeches plagued us. We were now two hours out. We went on two miles to another sponge and village, but went round its head dry-shod, then two hours more to sponge Lovu. Flat forest as usual.

January 20th.—Tried to observe lunars in vain; clouded over all, thick and muggy. Came on disappointed, and along the Lovu one mile and a half. Crossed it by a felled tree lying over it. It is about six feet deep, with one hundred and fifty yards of sponge. Marched about two hours and a half: very unsatisfactory progress.

[In answer to a question as to whether Dr. Livingstone could possibly manage to wade so much, Susi says that he was carried across these sponges and the rivulets on the shoulders of Chowpéré or Chuma.]

January 21st.—Fundi lost himself yesterday, and we looked out for him. He came at noon, having wandered in the eager pursuit of two herds of eland: having seen no game for a long time, he lost himself in the eager hope of getting one. We went on two hours and a half, and were brought up by the River Malalanzi, which is about fifteen feet wide, waist-deep, and has three

hundred yards or more of sponge. Guides refused to come, as Chituñkuè, their head man, did not own them. We started alone: a man came after us and tried to mislead us in vain.

January 22d.—We pushed on through many deserted gardens and villages, the man evidently sent to lead us astray from our south-east course: he turned back when he saw that we refused his artifice. Crossed another rivulet, possibly the Lofu, now broad and deep, and then came to another of several deep streams, but sponge, not more than fifty feet in all. Here we remained, having traveled in fine drizzling rain all the morning. Population all gone from the war of Chitoka with this Chituñkuè.

No astronomical observations worth naming during December and January; impossible to take any, owing to clouds and rain.

It is trying beyond measure to be baffled by the natives lying, and misleading us wherever they can. They fear us very greatly, and with a terror that would gratify an anthropologist's heart. Their unfriendliness is made more trying, by our being totally unable to observe for our position. It is either densely clouded, or continually raining day and night. The country is covered with brackens, and rivulets occur at least one every hour of the march. These are now deep, and have a broad selvage of sponge. The lower stratum of clouds moves quickly from the north-west: the upper move slowly from south-east, and tell of rain near.

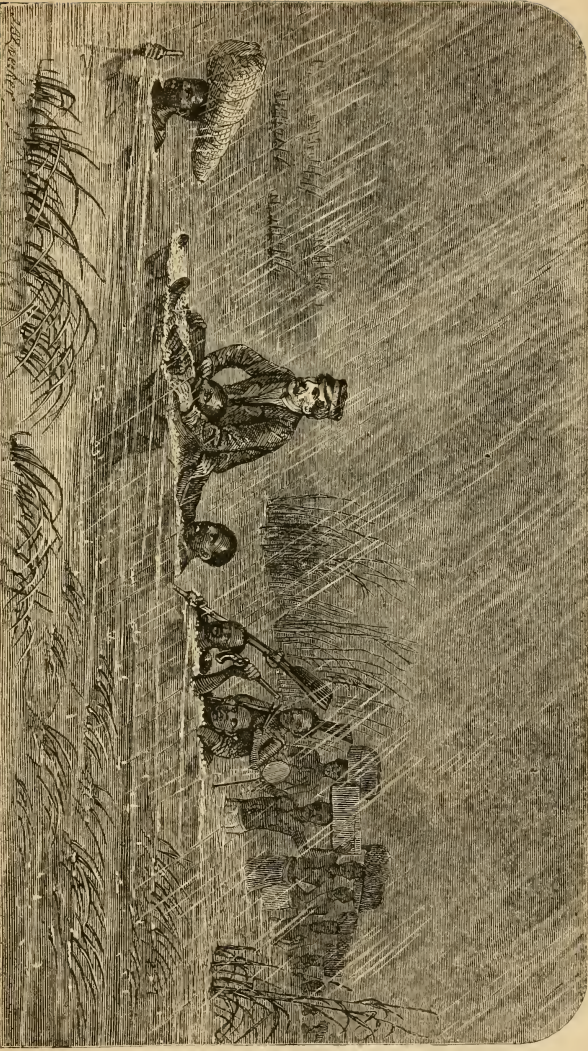
January 23d.—We have to send back to the villages of Chituñkuè to buy food. It was not reported to me that the country in front was depopulated for three days, so I send a day back. I do not know where we are, and the people are deceitful in their statements; unaccountably so, though we deal fairly and kindly. Rain, rain, rain, as if it never tired on this water-shed. The showers show little in the gauge, but keep every thing and every place wet and sloppy.

Our people return with a wretched present from Chituñkuè—bad flour and a fowl, evidently meant to be rejected; he sent also an exorbitant demand for gunpowder, and payment of guides. I refused his present, and must plod on without guides; and this is very difficult, from the numerous streams.

January 24th.—Went on east and north-east to avoid the deep part of a large river, which requires two canoes, but the men sent by the chief would certainly hide them. Went one hour and three-quarter's journey to a large stream, through drizzling rain, at least three hundred yards of deep water, among sedges and sponges of one hundred yards. One part was neck-deep for fifty yards, and the water cold. We plunged in elephants' foot-prints

one hour and a half, then came on one hour to a small rivulet ten feet broad, but waist-deep; bridge covered and broken down. Carrying me across one of the broad, deep, sedgy rivers is really a very difficult task. One we crossed was at least two thousand feet broad, or more than three hundred yards. The first part, the main stream, came up to Susi's mouth, and wetted my seat and legs. One held up my pistol behind, then one after another took a turn; and when he sank into a deep elephant's foot-print, he required two to lift him, so as to gain a footing on the level, which was over waist-deep. Others went on, and bent down the grass, to insure some footing on the side of the elephant's path. Every ten or twelve paces brought us to a clear stream, flowing fast in its own channel, while over all a strong current came bodily through all the rushes and aquatic plants. Susi had the first spell, then Farijala, then a tall, stout, Arab-looking man, then Amoda, then Chanda, then Wadé Salé; and each time I was lifted off bodily, and put on another pair of stout, willing shoulders, and fifty yards put them out of breath: no wonder! It was sore on the women-folk of our party. It took us full an hour and a half for all to cross over, and several came over turn to help me and their friends. The water was cold, and so was the wind, but no leeches plagued us. We had to hasten on the building of sheds after crossing the second rivulet, as rain threatened us. After 4 P.M. it came on a pouring, cold rain, when we were all under cover. We are anxious about food. The Lake is near, but we are not sure of provisions, as there have been changes of population. Our progress is distressingly slow. Wet, wet, wet; sloppy weather truly, and no observations, except that the land near the Lake being very level, the rivers spread out into broad friths and sponges. The streams are so numerous that there has been a scarcity of names. Here we have Loou and Luéna. We had two Loous before, and another Luéna.

January 25th.—Kept in by rain. A man from Unyanyembé joined us this morning. He says that he was left sick. Rivulets and sponges again, and through flat forest, where, as usual, we can see the slope of the land by the leaves being washed into heaps in the direction which the water in the paths wished to take. One hour and a half more, and then to the River Loou, a large stream with bridge destroyed. Sent to make repairs before we go over it, and then passed. The river is deep, and flows fast to the south-west, having about two hundred yards of safe flood flowing in long grass; clear water. The men built their huts and had their camp ready by 3 P.M. A good day's work,



"THE MAIN STREAM CAME UP TO SUSI'S MOUTH."

W. B. Woodcut

not hindered by rain. The country all depopulated, so we can buy nothing. Elephants and antelopes have been here lately.

January 26th.—I arranged to go to our next river, Luena, and ascend it till we found it small enough for crossing, as it has much "tinga-tinga," or yielding spongy soil; but another plan was formed by night, and we were requested to go down the Looou. Not wishing to appear overbearing, I consented, until we were, after two hours' southing, brought up by several miles of tinga-tinga. The people in a fishing village ran away from us, and we had to wait for some sick ones. The women are collecting mushrooms. A man came near us, but positively refused to guide us to Matipa, or anywhere else.

The sick people compelled us to make an early halt.

January 27th.—On again through streams, over sponges and rivulets thigh-deep. There are marks of gnu and buffalo. I lose much blood, but it is a safety-valve for me, and I have no fever or other ailments.

January 28th.—A dreary, wet morning, and no food that we know of near. It is drop, drop, drop, and drizzling from the north-west. We killed our last calf but one last night, to give each a mouthful. At 9.30 we were allowed by the rain to leave our camp, and march south-east for two hours to a strong, deep rivulet ten feet broad only, but waist-deep, and one hundred and fifty yards of flood, all deep too. Sponge about forty yards in all, and running fast out. Camped by a broad prairie, or bouga.

January 29th.—No rain in the night, for a wonder. We tramped one hour and a quarter to a broad sponge, having at least three hundred yards of flood, and clear water flowing south-west, but no usual stream. All was stream flowing through the rushes, knee and thigh deep. On still with the same, repeated again and again, till we came to broad, branching sponges, at which I resolved to send out scouts south, south-east, and south-west. The music of the singing-birds, the music of the turtle-doves, the screaming of the frankolin, proclaim man to be near.

January 30th.—Remain waiting for the scouts. Manuasera returned at dark, having gone about eight hours south, and seen the Lake and two islets. Smoke now appeared in the distance; so he turned, and the rest went on to buy food where the smoke was. Wet evening.

CHAPTER XXIV.

Entangled among the Marshes of Bangweolo.—Great Privations.—Obliged to return to Chituñkuè's.—At the Chief's Mercy.—Agreeably surprised with the Chief.—Start once more.—Very difficult March.—Robbery exposed.—Fresh Attack of Illness.—Sends Scouts out to find Villages.—Message to Chirubwé.—An Ant Raid.—Awaits News from Matipa.—Distressing Perplexity.—The Bougas of Bangweolo.—Constant Rain above and Flood below.—Ill.—Susi and Chuma sent as Envoys to Matipa.—Reach Bangweolo.—Arrive at Matipa's Islet.—Matipa's Town.—The Donkey suffers in Transit.—Tries to go on to Kabinga's.—Dr. Livingstone makes a Demonstration.—Solution of the Transport Difficulty.—Susi and Detachment sent to Kabinga's.—Extraordinary Extent of Flood.—Reaches Kabinga's.—An Upset.—Crosses the Chambezé.—The River Muanakazi.—They separate into Companies by Land and Water.—A disconsolate Lion.—Singular Caterpillars.—Observations on Fish.—Coasting along the southern Flood of Lake Bangweolo.—Dangerous State of Dr. Livingstone.

February 1st, 1873.—WAITING for the scouts. They return unsuccessful—forced to do so by hunger. They saw a very large river flowing into the Lake, but did not come across a single soul. Killed our last calf, and turn back for four hard days' travel to Chituñkuè's. I send men on before us to bring food back toward us.

February 2d.—March smartly back to our camp of 28th ult. The people bear their hunger well. They collect mushrooms and plants, and often get lost in this flat, featureless country.

February 3d.—Return march to our bridge on the Lofu, five hours. In going, we went astray, and took six hours to do the work of five. Tried lunars in vain. Either sun or moon in clouds. On the Luéna.

February 4th.—Return to camp on the rivulet, with much *Methonica gloriosa* on its banks; our camp being on its left bank of the 26th. It took long to cross the next river, probably the Kwalé, though the elephants' foot-prints are all filled up now. Camp among deserted gardens, which afford a welcome supply of cassava and sweet-potatoes. The men who were sent on before us slept here last night, and have deceived us by going more slowly without loads than we who are loaded.

February 5th.—Arrived at Chituñkuè's, crossing two broad, deep brooks, and on to the Malalenzi, now swollen, having at least two hundred yards of flood and more than three hundred yards of sponge. Saluted by a drizzling shower. We are now at Chituñkuè's mercy.

We find the chief more civil than we expected. He said each chief had his own land and his own peculiarities. He was not responsible for others. We were told that we had been near to Matipa and other chiefs. He would give us guides if we gave him a cloth and some powder.

We returned over these forty-one miles in fifteen hours, through much deep water. Our scouts played us false both in time and beads: the head men punished them. I got lunars, for a wonder. Visited Chitunkubwé, as his name properly is. He is a fine, jolly-looking man, of a European cast of countenance, and very sensible and friendly. I gave him two cloths, for which he seemed thankful, and promised good guides to Matipa's. He showed me two of Matipa's men who had heard us firing guns to attract one of our men who had strayed; these men followed us. It seems we had been close to human habitations, but did not know it. We have lost half a month by this wandering, but it was all owing to the unfriendliness of some, and the fears of all. I begged for a more northerly path, where the water is low. It is impossible to describe the amount of water near the Lake. Rivulets without number. They are so deep as to damp all ardor. I passed a very large striped spider, in going to visit Chitunkubwé. The stripes were of yellowish green, and it had two most formidable reddish mandibles, the same shape as those of the red-headed white ant. It seemed to be eating a kind of ant with a light-colored head, not seen elsewhere. A man killed it, and all the natives said that it was most dangerous. We passed gardens of dura; leaves all split up with hail, and forest-leaves all punctured.

February 6th.—Chitunkubwé gave a small goat and a large basket of flour, as a return present. I gave him three-quarters of a pound of powder, in addition to the cloth.

February 7th.—This chief showed his leanings by demanding prepayment for his guides. This being a preparatory step to their desertion, I resisted, and sent men to demand what he meant by his words; he denied all, and said that his people lied, not he. We take this for what it is worth. He gives two guides to-morrow morning, and visits us this afternoon.

February 8th.—The chief dawdles, although he promised great things yesterday. He places the blame on his people, who did not prepare food on account of the rain. Time is of no value to them. We have to remain over to-day. It is most trying to have to wait on frivolous pretenses. I have endured such vexatious delays. The guides came at last with quantities of food,

which they intend to bargain with my people on the way. A Nassicker who carried my saddle was found asleep near my camp.

February 9th.—Slept in a most unwholesome, ruined village. Rank vegetation had run over all, and the soil smelled offensively. Crossed a sponge, then a rivulet, and sponge running into the Miwalé River; then, by a rocky passage, we crossed the Mofiri, or great Tinga-tinga, a water running strongly, waist and breast deep, above thirty feet broad here, but very much broader below. After this we passed two more rills and the River Methonūa, but we build a camp above our former one. The human ticks, called “papasi” by the Suaheli, and “karapatos” by the Portuguese, made even the natives call out against their numbers and ferocity.

February 10th.—Back again to our old camp on the Lovu, or Lofu, by the bridge. We left in a drizzle, which continued from 4 A.M. to 1 P.M. We were three hours in it, and all wet, just on reaching camp, by two hundred yards of flood mid-deep; but we have food.

February 11th.—Our guides took us across country, where we saw tracks of buffaloes; and in a meadow, the head of a sponge, we saw a herd of hartbeests. A drizzly night was followed by a morning of cold, wet fog, but in three hours we reached our old camp. It took us six hours to do this distance before, and five on our return. We camped on a deep bridged stream, called the Kiachibwé.

February 12th.—We crossed the Kasoso, which joins the Mokisya, a river we afterward crossed: it flows north-west, then over the Mofungwé. The same sponges everywhere.

February 13th.—In four hours we came within sight of the Luéna and Lake, and saw plenty of elephants and other game, but very shy. The forest-trees are larger. The guides are more at a loss than we are, as they always go in canoes in the flat rivers and rivulets. Went east, then south-east round to south.

February 14th.—Public punishment to Chirango for stealing beads, fifteen cuts: diminished his load to forty pounds, giving him blue and white beads to be strung. The water stands so high in the paths that I can not walk dry-shod, and I found in the large bougas, or prairies, in front that it lay knee-deep; so I sent on two men to go to the first villages of Matipa for large canoes to navigate the Lake, or give us a guide to go east to the Chambezé, to go round on foot. It was Halima who informed Chirango, as he offered her beads for a cloth of a kind which

she knew had not hitherto been taken out of the baggage. This was so far faithful in her, but she has an outrageous tongue. I remain because of an excessive hemorrhagic discharge.

[We can not but believe Livingstone saw great danger in these constant recurrences of his old disorder: we find a trace of it in the solemn reflections which he wrote in his pocket-book, immediately under the above words:]

If the good Lord gives me favor, and permits me to finish my work, I shall thank and bless him, though it has cost me untold toil, pain, and travel. This trip has made my hair all gray.

February 15th, Sunday.—Service. Killed our last goat while waiting for messengers to return from Matipa's. Evening: the messenger came back, having been foiled by deep tinga-tinga and bouga. He fired his gun three times, but no answer came; so, as he had slept one night away, he turned, but found some men hunting, whom he brought with him. They say that Matipa is on Chirubé islet; a good man, too, but far off from this.

February 16th.—Sent men by the hunter's canoe to Chirubé, with a request to Matipa to convey us west if he has canoes, but if not, to tell us truly, and we will go east and cross the Chambezé where it is small. Chitunkubwé's men ran away, refusing to wait till we had communicated with Matipa. Here the water stands under-ground about eighteen inches from the surface. The guides played us false, and this is why they escaped.

February 17th.—The men will return to-morrow, but they have to go all the way out to the islet of Chirubé to Matipa's.

Suffered a furious attack at midnight from the red Sirafu, or driver-ants. Our cook fled first at their onset. I lighted a candle, and remembering Dr. Van der Kemp's idea that no animal will attack man unprovoked, I lay still. The first came on my foot quietly, then some began to bite between the toes, then the larger ones swarmed over the foot and bit furiously, and made the blood start out. I then went out of the tent, and my whole person was instantly covered as close as small-pox (not confluent) on a patient. Grass fires were lighted, and my men picked some off my limbs and tried to save me. After battling for an hour or two, they took me into a hut not yet invaded, and I rested till they came, the pests, and routed me out there too! Then came on a steady pour of rain, which held on till noon, as if trying to make us miserable. At 9 A.M. I got back into my tent. The large Sirafu have mandibles curved like reaping-sickles, and very sharp—as fine at the point as the finest needle or a bee's sting.

Their office is to remove all animal refuse, cockroaches, etc., and they took all my fat. Their appearance sets every cockroach in a flurry, and all ants, white and black, get into a panic. On man they insert the sharp, curved mandibles, and then with six legs push their bodies round so as to force the points by lever power. They collect in masses in their runs, and stand with mandibles extended, as if defying attack. The large ones stand thus at bay while the youngsters hollow out a run half an inch wide and about an inch deep. They remained with us till late in the afternoon, and we put hot ashes on the defiant hordes. They retire to enjoy the fruits of their raid, and come out fresh another day.

February 18th.—We wait, hungry and cold, for the return of the men who have gone to Matipa, and hope the good Lord will grant us influence with this man.

Our men have returned to-day, having obeyed the native who told them to sleep instead of going to Matipa. They bought food, and then believed that the islet Chirubé was too far off, and returned with a most lame story. We shall make the best of it by going north-west, to be near the islets and buy food, till we can communicate with Matipa. If he fails us by fair means, we must seize canoes and go by force. The men say fear of me makes them act very cowardly. I have gone among the whole population kindly and fairly, but I fear I must now act rigidly; for when they hear that we have submitted to injustice, they at once conclude that we are fair game for all, and they go to lengths in dealing falsely that they would never otherwise attempt. It is, I can declare, not my nature, nor has it been my practice, to go as if "my back were up."

February 19th.—A cold, wet morning keeps us in this uncomfortable spot. When it clears up we go to an old stockade, to be near an islet to buy food. The people, knowing our need, are extortionate. We went on at 9 A.M., over an extensive water-covered plain. I was carried three miles to a canoe, and then in it we went westward, in branches of the Luena, very deep, and flowing west, for three hours. I was carried three miles to a canoe, and we were then near enough to hear Bangweolo bellowing. The water on the plain is four, five, and seven feet deep. There are rushes, ferns, papyrus, and two lotuses, in abundance. Many dark-gray caterpillars clung to the grass, and were knocked off as we paddled or poled. Camped in an old village of Matipa's, where, in the west, we see the Luena enter Lake Bangweolo; but all is flat prairie, or bouga, filled with fast-flowing water, save a

few islets covered with palms and trees. Rain continued sprinkling us from the north-west all the morning. Elephants had run riot over the ruins, eating a species of grass now in seed. It resembles millet, and the donkey is fond of it. I have only seen this and one other species of grass in seed eaten by the African elephant. Trees, bulbs, and fruits are his dainties, although ants, whose hills he overturns, are relished. A large party in canoes came with food as soon as we reached our new quarters: they had heard that we were in search of Matipa. All are eager for calico, though they have only raw cassava to offer. They are clothed in bark-cloth and skins. Without canoes no movement can be made in any direction, for it is water everywhere—water above and water below.

February 20th.—I sent a request to a friendly man to give me men, and a large canoe to go myself to Matipa; he says that he will let me know to-day if he can. Heavy rain by night, and drizzling by day. No definite answer yet, but we are getting food; and Matipa will soon hear of us, as he did when we came and returned back for food. I engaged another man to send a canoe to Matipa, and I showed him his payment, but retain it here till he comes back.

February 21st.—The men engaged refuse to go to Matipa's: they have no honor. It is so wet we can do nothing. Another man spoken to about going says that they run the risk of being killed by some hostile people on another island between this and Matipa's.

February 22d.—A wet morning. I was ill all yesterday, but escape fever by hemorrhage. A heavy mantle of north-west clouds came floating over us daily. No astronomical observation can possibly be taken. I was never in such misty, cloudy weather in Africa. A man turned up at 9 A.M. to carry our message to Matipa: Susi and Chuma went with him. The good Lord go with them, and lend me influence and grant me help!

February 23d, Sunday.—Service. Rainy.

February 24th.—Tried hard for a lunar, but the moon was lost in the glare of the sun.

February 25th.—For a wonder it did not rain till 4 P.M. The people bring food, but hold out for cloth, which is inconvenient.

Susi and Chuma not appearing, may mean that the men are preparing canoes and food to transport us.

February 26th.—Susi returned this morning with good news from Matipa, who declares his willingness to carry us to Kabendé for the five bundles of brass wire I offered. It is not on Chirubé,

but amidst the swamps of the main-land on the Lake's north side. Immense swampy plains all around except at Kabendé. Matipa is at variance with his brothers on the subject of the lordship of the lands and the produce of the elephants, which are very numerous. I am devoutly thankful to the Giver of all for favoring me so far, and hope that He may continue His kind aid.

No mosquitoes here, though Speke, at the Victoria Nyanza, said they covered the bushes and grass in myriads, and struck against the hands and face most disagreeably.

February 27th.—Waiting for other canoes to be sent by Matipa. His men say that there is but one large river on the south of Lake Bangweolo, and called Luomba. They know the mountains on the south-east as I do, and on the west, but say they do not know any on the middle of the water-shed. They plead their youth as an excuse for knowing so little.

Matipa's men proposed to take half our men, but I refused to divide our force: they say that Matipa is truthful.

February 28th.—No night rain after 8 P.M., for a wonder. Baker had fifteen hundred men in health on June 15th, 1870, at lat. $9^{\circ} 26'$ N., and one hundred and sixty on sick-list; many dead. Liberated three hundred and five slaves. His fleet was thirty-two vessels: wife and he well. I wish that I met him. Matipa's men not having come, it is said they are employed bringing the carcass of an elephant to him. I propose to go near to him tomorrow, some in canoes and some on foot. The good Lord help me! New moon this evening.

March 1st, 1873.—Embarked women and goods in canoes, and went three hours south-east to Bangweolo. Stopped on an island where people were drying fish over fires. Heavy rain wetted us all as we came near the islet: the drops were as large as half-crowns, by the marks they made. We went over flooded prairie four feet deep, and covered with rushes, and two varieties of lotus, or sacred lily; both are eaten, and so are papyrus. The buffaloes are at a loss in the water. Three canoes are behind. The men are great cowards. I took possession of all the paddles and punting-poles, as the men showed an inclination to move off from our islet. The water in the country is prodigiously large: plains extending farther than the eye can reach have four or five feet of clear water, and the Lake and adjacent lands for twenty or thirty miles are level. We are on a miserable, dirty, fishy island, called Motovinza: all are damp. We are surrounded by scores of miles of rushes, an open sward, and many lotus-plants, but no mosquitoes.

March 2d.—It took us seven hours' and a half punting to bring us to an island, and then the miserable weather rained constantly, on our landing into the boma (stockade), which is well peopled. The prairie is ten hours long, or about thirty miles, by punting. Matipa is on an island too, with four bomas on it. A river, the Molonga, runs past it, and is a protection.* The men wear a curious head-dress of skin or hair, and large upright ears.

March 3d.—Matipa paid off the men who brought us here. He says that five sangos, or coils (which brought us here), will do to take us to Kabendé, and I sincerely hope that they will. His canoes are off bringing the meat of an elephant. There are many dogs in the village, which they use in hunting to bring elephants to bay. I visited Matipa at noon: he is an old man, slow of tongue, and self-possessed. He recommended our crossing to the south bank of the Lake to his brother, who has plenty of cattle, and to go along that side where there are few rivers and plenty to eat. Kabendé's land was lately overrun by Banyanwezi, who now inhabit that country, but as yet have no food to sell. Moanzabamba was the founder of the Babisa tribe, and used the curious plaits of hair which form such a singular head-dress here, like large ears. I am rather in a difficulty, as I fear I must give the five coils for a much shorter task; but it is best not to appear unfair, although I will be the loser. He sent a man to catch a sampa for me; it is the largest fish in the Lake, and he promised to have men ready to take my men over to-morrow. Matipa never heard from any of the elders of his people that any of his forefathers ever saw a European. He knew perfectly about Pereira, Lacerda, and Monteiro going to Casembe, and my coming to the islet Mpabala. No trace seems to exist of Captain Singleton's march.† The native name of Pereira is "Moendawé;" of Lacerda, "Charlie;" of Monteiro's party, "Makabalwé," or the donkey-men, but no other name is heard. The following is a small snatch of Babisa lore. It was told by an old man who came to try for some beads, and seemed much interested about printing. He was asked if there were any marks made

* It will be observed that these islets were in reality slight eminences standing above water on the flooded plains which border on Lake Bangweolo. The men say that the actual deep-water Lake lay away to their right; and on being asked why Dr. Livingstone did not make a short cut across to the southern shore, they explain that the canoes could not live for an hour on the Lake, but were merely suited for punting about over the flooded land.—ED.

† Defoe's book, "Adventures of Captain Singleton," is alluded to. It would almost appear as if Defoe must have come across some unknown African traveler who gave him materials for this work.—ED.

on the rocks in any part of the country, and this led to his story. Lukerenga came from the west a long time ago to the River Lu-alaba. He had with him a little dog. When he wanted to pass over, he threw his mat on the water, and this served as a raft, and they crossed the stream. When he reached the other side, there were rocks at the landing-place, and the mark is still to be seen on the stone, not only of his foot, but of a stick which he cut with his hatchet, and of his dog's feet: the name of the place is Uchéwa.

March 4th.—Sent canoes off to bring our men over to the island of Matipa. They brought ten, but the donkey could not come as far through the "tinga-tinga" as they, so they took it back for fear that it should perish. I spoke to Matipa this morning to send more canoes, and he consented. We move outside, as the town swarms with mice, and is very closely built, and disagreeable. I found mosquitoes in the town.

March 5th.—Time runs on quickly. The real name of this island is Masumbo, and the position may be probably long. $31^{\circ} 3' W.$; lat. $10^{\circ} 11' S.$ Men not arrived yet. Matipa very slow.

March 6th.—Building a camp outside the town for quiet and cleanliness, and no mice to run over us at night. This islet is some twenty or thirty feet above the general flat country and adjacent water.

At 3 P.M. we moved up to the highest part of the island, where we can see around us, and have the fresh breeze from the Lake. Rainy, as we went up, as usual.

March 7th.—We expect our men to-day. I tremble for the donkey! Camp sweet and clean, but it, too, has mosquitoes, from which a curtain protects me completely—a great luxury, but unknown to the Arabs, to whom I have spoken about it. Abed was overjoyed by one I made for him: others are used to their bites, as was the man who said that he would get used to a nail through the heel of his shoe. The men came at 3 P.M., but eight had to remain, the canoes being too small. The donkey had to be tied down, as he rolled about on his legs, and would have forced his way out. He bit Mabruki Speke's lame hand, and came in stiff from lying tied all day. We had him shampooed all over, but he could not eat dura; he feels sore. Susi did well under the circumstances, and we had plenty of flour ready for all. Chanza is near Kabinga, and this last chief is coming to visit me in a day or two.

March 8th.—I press Matipa to get a fleet of canoes equal to our number, but he complains of their being stolen by rebel sub-



Dr. Livingstone's Mosquito Curtain.

jects. He tells me his brother Kabinga would have been here some days ago but for having lost a son, who was killed by an elephant: he is mourning for him, but will come soon. Kabinga is on the other side of the Chambezé. A party of male and female drummers and dancers is sure to turn up at every village: the first here had a leader that used such violent antics, perspiration ran off his whole frame. I gave a few strings of beads, and the performance is repeated to-day by another lot; but I rebel, and allow them to dance unheeded. We got a sheep, for a wonder, for a doti: fowls and fish alone could be bought, but Kabinga has plenty of cattle.

There is a species of carp with red ventral fin, which is caught, and used in very large quantities: it is called "pumbo." The people dry it over fires as preserved provisions. Sampa is the largest fish in the Lake; it is caught by a hook. The Luéna goes into Bangweolo at Molandangao. A male msobé had faint white stripes across the back, and one well-marked yellow stripe along the spine. The hip had a few faint white spots, which showed by having longer hair than the rest: a kid of the same species had a white belly.

The eight men came from Motovinza this afternoon, and now all our party is united. The donkey shows many sores inflicted by the careless people, who think that force alone can be used to inferior animals.

March 11th.—Matipa says "Wait; Kabinga is coming, and he

has canoes." Time is of no value to him. His wife is making him pombe, and will drown all his cares; but mine increase and plague me. Matipa and his wife each sent me a huge calabash of pombe: I wanted only a little to make bread with.

By putting leaven in a bottle and keeping it from one baking to another (or three days), good bread is made, and the dough being surrounded by banana-leaves or maize-leaves (or even forest-leaves of hard texture and no taste, or simply by broad leafy grass), is preserved from burning in an iron pot. The inside of the pot is greased, then the leaves put in all round, and the dough poured in, to stand and rise in the sun.

Better news comes: the son of Kabinga is to be here to-night, and we shall concoct plans together.

March 12th.—The news was false; no one came from Kabinga. The men strung beads to-day, and I wrote part of my dispatch for Earl Granville.

March 13th.—I went to Matipa, and proposed to begin the embarkation of my men at once, as they are many, and the canoes are only sufficient to take a few at a time. He has sent off a big canoe to reap his millet; when it returns he will send us over to see for ourselves where we can go. I explained the danger of setting my men astray.

March 14th.—Rains have ceased for a few days. Went down to Matipa, and tried to take his likeness for the sake of the curious hat he wears.

March 15th.—Finish my dispatch so far.

March 16th, Sunday.—Service. I spoke sharply to Matipa for his duplicity. He promises every thing, and does nothing: he has, in fact, no power over his people. Matipa says that a large canoe will come to-morrow, and next day men will go to Kabinga to reconnoitre. There may be a hitch there which we did not take into account: Kabinga's son, killed by an elephant, may have raised complications: blame may be attached to Matipa, and in their dark minds it may appear all important to settle the affair before having communication with him. Ill all day with my old complaint.

March 17th.—The delay is most trying. So many detentions have occurred, they ought to have made me of a patient spirit.

As I thought, Matipa told us to-day that it is reported he has some Arabs with him who will attack all the Lake people forthwith, and he is anxious that we shall go over to show them that we are peaceful.

March 18th.—Sent off men to reconnoitre at Kabinga's and to



Matipa and his Wife.

make a camp there. Rain began again, after nine days' dry weather. North-west wind, but in the morning fleecy clouds came from south-east in patches. Matipa is acting the villain, and my men are afraid of him: they are all cowards, and say that they are afraid of me; but this is only an excuse for their cowardice.

March 19th.—Thanks to the Almighty Preserver of men for sparing me thus far on the journey of life! Can I hope for ultimate success? So many obstacles have arisen. Let not Satan prevail over me, oh! my good Lord Jesus!*

8 A.M.—Got about twenty people off to canoes. Matipa not friendly. They go over to Kabinga on the south-west side of the Chambezé, and thence we go overland. 9 A.M.—Men came back and reported Matipa false again: only one canoe had come. I made a demonstration by taking quiet possession of his village and house. Fired a pistol through the roof, and called my men, ten being left to guard the camp: Matipa fled to another village. The people sent off at once and brought three canoes, so at 11 A.M. my men embarked quietly. They go across the Chambezé and build a camp on its left bank. All Kabinga's cattle are kept on an island called Kalilo, near the mouth of the Chambezé, and

* This was written on his last birthday.—Ed.

are perfectly wild: they are driven into the water like buffaloes, and pursued when one is wanted for meat. No milk is ever obtained, of course.

March 20th.—Cold north-west weather, but the rain-fall is small, as the south-east stratum comes down below the north-west by day. Matipa sent two large baskets of flour (cassava), a sheep, and a cock. He hoped that we should remain with him till the water of the overflow dried, and help him to fight his enemies; but I explained our delays, and our desire to complete our work and meet Baker.

March 21st.—Very heavy north-west rain and thunder by night and by morning. I gave Matipa a coil of thick brass wire, and his wife a string of large neck-beads, and explained my hurry to be off. He is now all fair, and promises largely: he has been much frightened by our warlike demonstration. I am glad I had to do nothing but make a show of force.

March 22d.—Susi not returned from Kabinga. I hope that he is getting canoes, and men also, to transport us all at one voyage. It is flood as far as the eye can reach; flood four and six feet deep and more, with three species of rushes, two kinds of lotus, or sacred lily, papyrus, arum, etc. One does not know where land ends and lake begins: the presence of land-grass proves that this is not always overflowed.

March 23d.—Men returned at noon. Kabinga is mourning for his son killed by an elephant, and keeps in seclusion. The camp is formed on the left bank of the Chambezé.

March 24th.—The people took the canoes away, but in fear sent for them. I got four, and started with all our goods, first giving a present, that no blame should follow me. We punted six hours to a little islet without a tree, and no sooner did we land than a pitiless, pelting rain came on. We turned up a canoe to get shelter. We shall reach the Chambezé to-morrow. The wind tore the tent out of our hands, and damaged it too: the loads are all soaked, and, with the cold, it is bitterly uncomfortable. A man put my bed into the bilge, and never said "Bale out," so I was safe for a wet night, but it turned out better than I expected. No grass, but we made a bed of the loads, and a blanket fortunately put into a bag.

March 25th.—Nothing earthly will make me give up my work in despair. I encourage myself in the Lord my God, and go forward.

We got off from our miserably small islet of ten yards at 7 A.M., a grassy sea on all sides, with a few islets in the far distance.

Four varieties of rushes around us, triangular and fluted, rise from eighteen inches to two feet above the water. The caterpillars seem to eat each other, and a web is made round others: the numerous spiders may have been the workmen of the nest. The wind on the rushes makes a sound like the waves of the sea. The flood extends out in slightly depressed arms of the Lake for twenty or thirty miles, and far too broad to be seen across: fish abound, and ant-hills alone lift up their heads; they have trees on them. Lukutu flows from east to west to the Chambezé, as does the Lubanseusi also. After another six hours' punting over the same wearisome prairie, or bouga, we heard the merry voices of children. It was a large village, on a flat, which seems flooded at times, but much cassava is planted on mounds, made to protect the plants from the water, which stood in places in the village; but we got a dry spot for the tent. The people offered us huts. We had, as usual, a smart shower on the way to Kasenga, where we slept. We passed the islet Luangwa.

March 26th.—We started at 7.30, and got into a large stream out of the Chambezé, called Mabziwa. One canoe sank in it, and we lost a slave-girl of Amoda. Fished up three boxes and two guns, but the boxes, being full of cartridges, were much injured; we lost the donkey's saddle too. After this mishap, we crossed the Lubanseusi near its confluence with the Chambezé, three hundred yards wide and three fathoms deep, and a slow current. We crossed the Chambezé. It is about four hundred yards wide, with a quick, clear current of two knots, and three fathoms deep, like the Lubanseusi; but that was slow in current, but clear also. There is one great lock after another, with thick mats of hedges, formed of aquatic plants between. The volume of water is enormous. We punted five hours, and then camped.

March 27th.—I sent canoes and men back to Matipa's to bring all the men that remained, telling them to ship them at once on arriving, and not to make any talk about it. Kabinga keeps his distance from us, and food is scarce. At noon he sent a man to salute me in his name.

March 28th.—Making a pad for a donkey, to serve instead of a saddle. Kabinga attempts to sell a sheep at an exorbitant price, and says that he is weeping over his dead child. Mabruki Speke's hut caught fire at night, and his cartridge-box was burned.

March 29th.—I bought a sheep for one hundred strings of beads. I wished to begin the exchange by being generous, and told his messenger so; then a small quantity of maize was brought, and I

grumbled at the meanness of the present: there is no use in being bashful, as they are not ashamed to grumble too. The man said that Kabinga would send more when he had collected it.

March 30th, Sunday.—A lion roars mightily. The fish-hawk utters his weird voice in the morning, as if he lifted up to a friend at a great distance, in a sort of falsetto key.

5 P.M.—Men returned, but the large canoe having been broken by the donkey, we have to go back and pay for it, and take away about twenty men now left. Matipa kept all the payment from his own people, and so left us in the lurch; thus another five days is lost.

March 31st.—I sent the men back to Matipa's for all our party. I give two dotis to repair the canoe. Islanders are always troublesome, from a sense of security in their fastnesses. Made stirrups of thick brass wire fourfold; they promise to do well. Sent Kabinga a cloth and a message, but he is evidently a niggard, like Matipa; we must take him as we find him; there is no use in growling. Seven of our men returned, having got a canoe from one of Matipa's men. Kabinga, it seems, was pleased with the cloth, and says that he will ask for maize from his people, and buy it for me; he has rice growing. He will send a canoe to carry me over the next river.

April 3d, 1873.—Very heavy rain last night. Six inches fell in a short time. The men at last have come from Matipa's.

April 4th.—Sent over to Kabinga to buy a cow, and got a fat one for two dotis and a half, to give the party a feast ere we start. The kambari fish of the Chambezé is three feet three inches in length.

Two others, the "polwé" and "lopatakwo," all go up the Chambezé to spawn when the rains begin. Casembe's people make caviare of the spawn of the "pumbo."

[The next entry is made in a new pocket-book, numbered XVII. For the first few days pen and ink were used; afterward a well-worn stump of pencil, stuck into a steel pen-holder and attached to a piece of bamboo, served his purpose.]

April 5th.—March from Kabinga's on the Chambezé, our luggage in canoes, and men on land. We punted on flood six feet deep, with many ant-hills all about, covered with trees. Course south-south-east, for five miles, across the River Lobingla, sluggish, and about three hundred yards wide.

April 6th.—Leave in the same way, but men were sent from Kabinga to steal the canoes which we paid his brother Mateysa

handsomely for. A stupid drummer, beating the alarm in the distance, called us inland. We found the main body of our people had gone on, and so by this our party got separated,* and we pulled and punted six or seven hours south-west in great difficulty, as the fishermen we saw refused to show us where the deep water lay. The whole country south of the Lake was covered with water, thickly dotted over with lotus-leaves and rushes. It has a greenish appearance, and it might be well on a map to show the spaces annually flooded by a broad wavy band, twenty, thirty, and even forty miles out from the permanent banks of the Lake: it might be colored light green. The broad estuaries, fifty or more miles, into which the rivers form themselves, might be colored blue, but it is quite impossible at present to tell where land ends and Lake begins: it is all water, water everywhere, which seems to be kept from flowing quickly off by the narrow bed of the Luapula, which has perpendicular banks, worn deep down in new red sandstone. It is the Nile apparently enacting its inundations, even at its sources. The amount of water spread out over the country constantly excites my wonder; it is prodigious. Many of the ant-hills are cultivated and covered with dura, pumpkins, beans, maize, but the waters yield food plentifully in fish and lotus-roots. A species of wild rice grows, but the people neither need it nor know it. A party of fishermen fled from us, but by coaxing we got them to show us deep water. They then showed us an islet, about thirty yards square, without wood, and desired us to sleep there. We went on, and then they decamped.

Pitiless pelting showers wetted every thing; but near sunset we saw two fishermen paddling quickly off from an ant-hill, where we found a hut, plenty of fish, and some fire-wood. There we spent the night, and watched by turns, lest thieves should come and haul away our canoes and goods. Heavy rain. One canoe sank, wetting every thing in her. The leaks in her had been stopped with clay, and a man sleeping near the stern had displaced this frail calking. We did not touch the fish, and I can not conjecture who has inspired fear in all the inhabitants.

April 7th.—Went on south-west, and saw two men, who guided us to the River Muanakazi, which forms a connecting link between the River Lotingila and the Lolotikila, about the southern borders of the flood. Men were hunting, and we passed near

* Dr. Livingstone's object was to keep the land-party marching parallel to him while he kept nearer to the Lake in a canoe.—Ed.

large herds of antelopes, which made a rushing, plunging sound as they ran and sprang away among the waters. A lion had wandered into this world of water and ant-hills, and roared night and morning, as if very much disgusted: we could sympathize with him! Near to the Muanakazi, at a broad bank in shallow water near the river, we had to unload and haul. Our guides left us, well pleased with the payment we had given them. The natives beating a drum on our east made us believe them to be our party, and some thought that they heard two shots. This misled us, and we went toward the sound through papyrus, tall rushes, arums, and grass, till tired out, and took refuge on an ant-hill for the night. Lion roaring. We were lost in stiff, grassy prairies, from three to four feet deep in water, for five hours. We fired a gun in the stillness of the night, but received no answer; so on the 8th we sent a small canoe at day-break to ask for information and guides from the village where the drums had been beaten. Two men came, and they thought likewise that our party was south-east: but in that direction the water was about fifteen inches in spots and three feet in others, which caused constant dragging of the large canoe all day, and at last we unloaded at another branch of the Muanakazi with a village of friendly people. We slept there.

All hands at the large canoe could move her only a few feet. Putting all their strength to her, she stopped at every haul with a jerk, as if in a bank of adhesive plaster. I measured the crown of a papyrus-plant, or palm; it was three feet across horizontally, its stalk eight feet in height. Hundreds of a large dark-gray, hairy caterpillar have nearly cleared off the rushes in spots, and now live on each other. They can make only the smallest progress by swimming, or rather wriggling, in the water: their motion is that of a watch-spring thrown down, dilating and contracting.

April 9th.—After two hours' threading the very winding, deep channel of this southern branch of the Muanakazi, we came to where our land-party had crossed it and gone on to Gandochité, a chief on the Lolotikila. My men were all done up, so I hired a man to call some of his friends to take the loads; but he was stopped by his relations in the way, saying, "You ought to have one of the traveler's own people with you." He returned, but did not tell us plainly or truly till this morning.

[The recent heavy exertions, coupled with constant exposure and extreme anxiety and annoyance, no doubt brought on the severe attack which is noticed, as we see in the words of the next few days.]



THE LAST MILE OF DR. LIVINGSTONE'S TRAVELS.

April 10th.—The head man of the village explained, and we sent two of our men, who had a night's rest with the turn-again fellow of yesterday. I am pale, bloodless, and weak, from bleeding profusely ever since the 31st of March last: an artery gives off a copious stream, and takes away my strength. Oh, how I long to be permitted by the Over Power to finish my work!

April 12th.—Cross the Muanakazi. It is about one hundred or one hundred and thirty yards broad, and deep. Great loss of *aīua* made me so weak I could hardly walk, but tottered along nearly two hours, and then lay down quite done. Cooked coffee—our last—and went on, but in an hour I was compelled to lie down. Very unwilling to be carried, but, on being pressed, I allowed the men to help me along by relays to Chinama, where there is much cultivation. We camped in a garden of dura.

April 13th.—Found that we had slept on the right bank of the Lolotikila, a sluggish, marshy-looking river, very winding, but here going about south-west. The country is all so very flat that the rivers down here are of necessity tortuous. Fish and other food abundant, and the people civil and reasonable. They usually partake largely of the character of the chief, and this one, Gondochité, is polite. The sky is clearing, and the south-east wind is the lower stratum now. It is the dry season well begun. Seventy-three inches is a higher rain-fall than has been observed anywhere else, even in Northern Manyuema; it was lower by inches than here far south on the water-shed. In fact this is the very heaviest rain-fall known in these latitudes: between fifty and sixty is the maximum.

One sees interminable grassy prairies, with lines of trees, occupying quarters of miles in breadth, and these give way to bouga, or prairie, again. The bouga is flooded annually, but its vegetation consists of dry-land grasses. Other bouga extend out from the Lake up to forty miles, and are known by aquatic vegetation, such as lotus, papyrus, arums, rushes of different species, and many kinds of purely aquatic subaqueous plants which send up their flowers only to fructify in the sun, and then sink to ripen, one bunch after another. Others, with great cabbage-looking leaves, seem to remain always at the bottom. The young of fish swarm, and bob in and out from the leaves. A species of soft moss grows on most plants, and seems to be good fodder for fishes, fitted by hooked or turned-up noses to guide it into their maws.

One species of fish has the lower jaw turned down into a hook, which enables the animal to hold its mouth close to the plant as it glides up or down, sucking in all the soft pulpy food. The

superabundance of gelatinous nutriment makes these swarmers increase in bulk with extraordinary rapidity, and the food supply of the people is plenteous in consequence. The number of fish caught by weirs, baskets, and nets now, as the waters decline, is prodigious. The fish feel their element becoming insufficient for comfort, and retire from one bouga to another toward the Lake; the narrower parts are duly prepared by weirs to take advantage of their necessities: the sun heat seems to oppress them, and forces them to flee. With the south-east aërial current comes heat and sultriness. A blanket is scarcely needed till the early hours of the morning, and here, after the turtle-doves and cocks give out their warning calls to the watchful, the fish-eagle lifts up his remarkable voice. It is pitched in a high falsetto key, very loud, and seems as if he were calling to some one in the other world. Once heard, his weird, unearthly voice can never be forgotten—it sticks to one through life.

We were four hours in being ferried over the Loitikila, or Lolotikila, in four small canoes, and then two hours south-west down its left bank to another river, where our camp has been formed. I sent over a present to the head man, and a man returned with the information that he was ill at another village, but his wife would send canoes to-morrow to transport us over, and set us on our way to Muanazambamba, south-west, and over Lolotikila again.

April 14th.—At a branch of the Lolotikila.

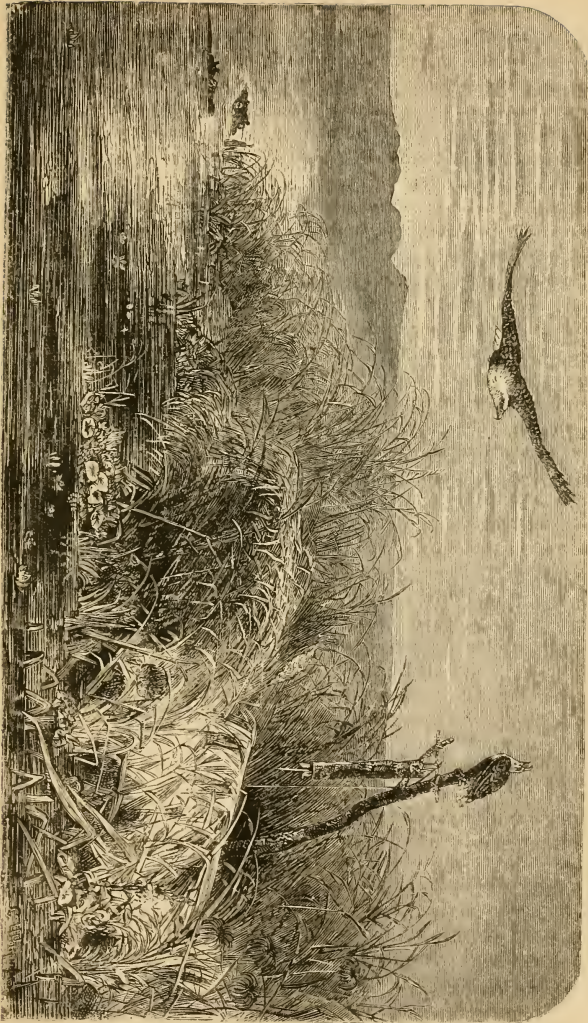
April 15th.—Cross Lolotikila again (where it is only fifty yards) by canoes, and went south-west an hour. I, being very weak, had to be carried part of the way. Am glad of resting; *aĩma* flowed copiously last night. A woman, the wife of the chief, gave a present of a goat and maize.

April 16th.—Went south-west two and a half hours, and crossed the Lombatwa River of one hundred yards in width, rush-deep, and flowing fast in aquatic vegetation, papyrus, etc., into the Loitikila. In all, about three hours south-west.

April 17th.—A tremendous rain after dark burst all our now rotten tents to shreds. Went on, at 6.35 A.M., for three hours, and I, who was suffering severely all night, had to rest. We got water near the surface by digging in yellow sand. Three hills now appear in the distance. Our course, south-west three hours and three-quarters to a village on the Kazya River. A Nyassa man declared that his father had brought the heavy rain of the 16th on us. We crossed three sponges.

April 18th.—On leaving the village on the Kazya, we forded

FISH EAGLE ON HIPPOPOTAMUS TRAP.



it, and found it seventy yards broad, waist to breast deep all over. A large weir spanned it, and we went on the lower side of that. Much papyrus and other aquatic plants in it. Fish are returning now with the falling waters, and are guided into the rush-cones set for them. Crossed two large sponges, and I was forced to stop at a village after traveling south-west for two hours: very ill all night, but remembered that the bleeding and most other ailments in this land are forms of fever. Took two-scruple doses of quinine, and stopped it quite.

April 19th.—A fine bracing south-east breeze kept me on the donkey across a broad sponge and over flats of white sandy soil, and much cultivation, for an hour and a half, when we stopped at a large village on the right bank of _____, * and men went over to the chief Muanzambamba to ask canoes to cross to-morrow. I am excessively weak, and but for the donkey, could not move a hundred yards. It is not all pleasure, this exploration. The Lavusi hills are a relief to the eye in this flat upland. Their forms show an igneous origin. The River Kazya comes from them, and goes direct into the Lake. No observations now, owing to great weakness: I can scarcely hold a pencil, and my stick is a burden. Tent gone: the men build a good hut for me and the luggage. South-west one hour and a half.

April 20th, Sunday.—Service. Cross over the sponge Moenda for food, and to be near the head man of these parts, Muanzambamba. I am excessively weak. Village on Moenda sponge. 7 A.M.—Cross Lokulu in a canoe. The river is about thirty yards broad, very deep, and flowing in marshes two knots, from south-south-east to north-north-west, into Lake.

* He leaves room for a name which perhaps in his exhausted state he forgot to ascertain.

CHAPTER XXV.

Dr. Livingstone rapidly sinking.—Last Entries in his Diary.—Susi and Chuma's additional Details.—Great Agony in his last Illness.—Carried across Rivers and through Flood.—Inquiries for the Hill of the Four Rivers.—Kalunganjov's Kindness.—Crosses the Mohlamo into the District of Ilala in great Pain.—Arrives at Chitambo's Village.—Chitambo comes to visit the dying Traveler.—The last Night.—Livingstone expires in the Act of praying.—The Account of what the Men saw.—Remarks on his Death.—Council of the Men.—Leaders selected.—The Chief discovers that his Guest is dead.—Noble Conduct of Chitambo.—A separate Village built by the Men wherein to prepare the Body for Transport.—The Preparation of the Corpse.—Honor shown by the Natives to Dr. Livingstone.—Additional Remarks on the Cause of Death.—Interment of the Heart at Chitambo's, in Ilala of the Wabisa.—An Inscription and memorial Sign-posts left to denote Spot.

[WE have now arrived at the last words written in Dr. Livingstone's diary: a copy of the two pages in his pocket-book which contains them is, by the help of photography, set before the reader. It is evident that he was unable to do more than make the shortest memoranda, and to mark on the map which he was making the streams which enter the Lake as he crossed them. From the 22d to the 27th of April he had not strength to write down any thing but the several dates. Fortunately Susi and Chuma give a very clear and circumstantial account of every incident which occurred on these days, and we shall therefore add what they say, after each of the doctor's entries. He writes:]

April 21st.—Tried to ride, but was forced to lie down, and they carried me back to vil. exhausted.

[The men explain this entry thus: This morning the doctor tried if he were strong enough to ride on the donkey, but he had only gone a short distance when he fell to the ground utterly exhausted and faint. Susi immediately undid his belt and pistol, and picked up his cap, which had dropped off, while Chuma threw down his gun and ran to stop the men on ahead. When he got back, the doctor said, "Chuma, I have lost so much blood, there is no more strength left in my legs: you must carry me." He was then assisted gently to his shoulders, and, holding the man's head to steady himself, was borne back to the village and placed in the hut he had so recently left. It was necessary to let the chief Muanzambamba know what had happened, and for this purpose Dr. Livingstone dispatched a messenger. He was directed to ask him to supply a guide for the next day, as he trusted then

20th April 1873 = S. service
cross over ^{span} the Moenda
for food & to be near the
head men of these parts
Muaniza-bamba. I am
excessively weak -
w/ on ~~the~~ Moenda ^{span} 7th Apr.

25.88 } 66°
26.12 } clouds
25.70 } high

cross Lukulu in a canoe
R. is about 30 yds broad
very deep and flowing
in marshes - 2 knots
from S S E to N N W
into Lake

21st M. ~~had~~ ~~to~~ ride but was
forced to be down and
they carried me back to
rail. exhausted

22nd carried in Kitanda
over Muga S W 2 1/4

23 [?] 80	1 1/2
24 80	1.
25 ^{1/2} 80	1
26 to	2 1/2

w Kalungadopus
 total 33' = 8 1/4

27 knocked up goats
 and remain = new
 sent to buy milch
 goats. We are on the
 banks of R. Mohilano

to have recovered so far as to be able to march. The answer was, "Stay as long as you wish, and when you want guides to Kalunganjovu's you shall have them."]

April 22d.—Carried on kitanda over Buga south-west two and a quarter.*

[His servants say that, instead of rallying, they saw that his strength was becoming less and less; and in order to carry him they made a kitanda of wood, consisting of two side-pieces of seven feet in length, crossed with rails three feet long and about four inches apart, the whole lashed strongly together. This frame-work was covered with grass, and a blanket laid on it. Slung from a pole, and borne between two strong men, it made a tolerable palanquin, and on this the exhausted traveler was conveyed to the next village through a flooded grass plain. To render the kitanda more comfortable, another blanket was suspended across the pole, so as to hang down on either side, and allow the air to pass under while the sun's rays were fended off from the sick man. The start was deferred this morning until the dew was off the heads of the long grass sufficiently to insure his being kept tolerably dry.

The excruciating pains of his dysenteric malady caused him the greatest exhaustion as they marched, and they were glad enough to reach another village in two hours and a quarter, having traveled south-west from the last point. Here another hut was built. The name of the halting-place is not remembered by the men, for the villagers fled at their approach; indeed the noise made by the drums sounding the alarm had been caught by the doctor some time before, and he exclaimed with thankfulness on hearing it, "Ah, now we are near!" Throughout this day the following men acted as bearers of the kitanda: Chowpéré, Songo-lo, Chuma, and Adiamberi. Sowféré, too, joined in at one time.]

April 23d.—(No entry except the date.)

[They advanced another hour and a half through the same expanse of flooded, treeless waste, passing numbers of small fish-weirs set in such a manner as to catch the fish on their way back to the Lake, but seeing nothing of the owners, who had either hidden themselves or taken to flight on the approach of the caravan. Another village afforded them a night's shelter, but it seems not to be known by any particular name.]

April 24th.—(No entry except the date.)

[But one hour's march was accomplished to-day, and again they halted among some huts—place unknown. His great prostration

* Two hours and a quarter in a south-westerly direction.

made progress exceedingly painful, and frequently, when it was necessary to stop the bearers of the kitanda, Chuma had to support the doctor from falling.]

April 25th.—(No entry except the date.)

[In an hour's course south-west they arrived at a village in which they found a few people. While his servants were busy completing the hut for the night's encampment, the doctor, who was lying in a shady place on the kitanda, ordered them to fetch one of the villagers. The chief of the place had disappeared, but the rest of his people seemed quite at their ease, and drew near to hear what was going to be said. They were asked whether they knew of a hill on which four rivers took their rise. The spokesman answered that they had no knowledge of it; they themselves, said he, were not travelers, and all those who used to go on trading expeditions were now dead. In former years Malenga's town, Kutchinyama, was the assembling-place of the Wabisa traders, but these had been swept off by the Mazitu. Such as survived had to exist as best they could among the swamps and inundated districts around the Lake. Whenever an expedition was organized to go to the coast, or in any other direction, travelers met at Malenga's town to talk over the route to be taken: then would have been the time, said they, to get information about every part. Dr. Livingstone was here obliged to dismiss them, and explained that he was too ill to continue talking, but he begged them to bring as much food as they could for sale to Kalunganjovu's.]

April 26th.—(No entry except the date.)

[They proceeded as far as Kalunganjovu's town, the chief himself coming to meet them on the way, dressed in Arab costume and wearing a red fez. While waiting here, Susi was instructed to count over the bags of beads, and on reporting that twelve still remained in stock, Dr. Livingstone told him to buy two large tusks if an opportunity occurred, as he might run short of goods by the time they got to Ujiji, and could then exchange them with the Arabs there for cloth, to spend on their way to Zanzibar.]

To-day, *April 27th*, 1873, he seems to have been almost dying. No entry at all was made in his diary after that which follows, and it must have taxed him to the utmost to write:]

"Knocked up quite, and remain—recover—sent to buy milch-goats. We are on the banks of the Molilamo."

[They are the last words that David Livingstone wrote. From this point we have to trust entirely to the narrative of the men. They explain the above sentence as follows: Salimané, Amisi,



EVENING. ILALA, APRIL 29TH, 1873.

Hamsani, and Laedé, accompanied by a guide, were sent off to endeavor, if possible, to buy some milch-goats on the upper part of the Molilamo.* They could not, however, succeed; it was always the same story—the Mazitu had taken every thing. The chief, nevertheless, sent a substantial present of a kid and three baskets of ground-nuts, and the people were willing enough to exchange food for beads. Thinking he could eat some mapira corn pounded up with ground-nuts, the doctor gave instructions to the two women, M'sozi and M'toweka, to prepare it for him, but he was not able to take it when they brought it to him.]

April 28th.—Men were now dispatched in an opposite direction, that is, to visit the villages on the right bank of the Molilamo as it flows to the Lake; unfortunately, they met with no better result, and returned empty-handed.

On *April 29th*, Kalunganjovu and most of his people came early to the village. The chief wished to assist his guest to the utmost, and stated that as he could not be sure that a sufficient number of canoes would be forthcoming unless he took charge of matters himself, he should accompany the caravan to the crossing-place, which was about an hour's march from the spot. "Every thing should be done for his friend," he said.

They were ready to set out. On Susi's going to the hut, Dr. Livingstone told him that he was quite unable to walk to the door to reach the kitanda, and he wished the men to break down one side of the little house, as the entrance was too narrow to admit it, and in this manner to bring it to him where he was: this was done, and he was gently placed upon it, and borne out of the village.

Their course was in the direction of the stream, and they followed it till they came to a reach where the current was uninterrupted by the numerous little islands which stood partly in the river, and partly in the flood on the upper waters. Kalunganjovu was seated on a knoll, and actively superintended the embarkation, while Dr. Livingstone told his bearers to take him to a tree at a little distance off, that he might rest in the shade till most of the men were on the other side. A good deal of care was required, for the river, by no means a large one in ordinary times, spread its waters in all directions, so that a false step, or a stumble in any unseen hole, would have drenched the invalid and the bed also on which he was carried.

* The name Molilamo is allowed to stand, but in Dr. Livingstone's map we find it Lulimala, and the men confirm this pronunciation.—Ed.

The passage occupied some time, and then came the difficult task of conveying the doctor across, for the canoes were not wide enough to allow the kitanda to be deposited in the bottom of either of them. Hitherto, no matter how weak, Livingstone had always been able to sit in the various canoes they had used on like occasions, but now he had no power to do so. Taking his bed off the kitanda, they laid it in the bottom of the strongest canoe, and tried to lift him; but he could not bear the pain of a hand being passed under his back. Beckoning to Chuma, in a faint voice he asked him to stoop down over him as low as possible, so that he might clasp his hands together behind his head, directing him at the same time how to avoid putting any pressure on the lumbar region of the back; in this way he was deposited in the bottom of the canoe, and quickly ferried across the Molilamo by Chowpéré, Susi, Farijala, and Chuma. The same precautions were used on the other side: the kitanda was brought close to the canoe, so as to prevent any unnecessary pain in disembarking.

Susi now hurried on ahead to reach Chitambo's village, and superintend the building of another house. For the first mile or two they had to carry the doctor through swamps and splashes, glad to reach something like a dry plain at last.

It would seem that his strength was here at its very lowest ebb. Chuma, one of his bearers on these, the last weary miles the great traveler was destined to accomplish, says that they were every now and then implored to stop and place their burden on the ground. So great were the pangs of his disease during this day that he could make no attempt to stand, and if lifted for a few yards a drowsiness came over him, which alarmed them all excessively. This was specially the case at one spot where a tree stood in the path. Here one of his attendants was called to him, and, on stooping down, he found him unable to speak from faintness. They replaced him in the kitanda, and made the best of their way on the journey. Some distance farther on great thirst oppressed him: he asked them if they had any water, but, unfortunately, for once, not a drop was to be procured. Hastening on for fear of getting too far separated from the party in advance, to their great comfort they now saw Farijala approaching with some, which Susi had thoughtfully sent off from Chitambo's village.

Still wending their way on, it seemed as if they would not complete their task, for again at a clearing the sick man entreated them to place him on the ground, and to let him stay where

he was. Fortunately at this moment some of the outlying huts of the village came in sight, and they tried to rally him by telling him that he would quickly be in the house that the others had gone on to build; but they were obliged, as it was, to allow him to remain for an hour in the native gardens outside the town.

On reaching their companions, it was found that the work was not quite finished, and it became necessary, therefore, to lay him under the broad eaves of a native hut till things were ready.

Chitambo's village at this time was almost empty. When the crops are growing, it is the custom to erect little temporary houses in the fields, and the inhabitants, leaving their more substantial huts, pass the time in watching their crops, which are scarcely more safe by day than by night; thus it was that the men found plenty of room and shelter ready to their hand. Many of the people approached the spot where he lay whose praises had reached them in previous years, and in silent wonder they stood round him, resting on their bows. Slight drizzling showers were falling, and as soon as possible his house was made ready, and banked round with earth.

Inside it, the bed was raised from the floor by sticks and grass, occupying a position across and near to the bay-shaped end of the hut: in the bay itself bales and boxes were deposited, one of the latter doing duty for a table, on which the medicine-chest and sundry other things were placed. A fire was lighted outside, nearly opposite the door, while the boy, Majwara, slept just within, to attend to his master's wants in the night.

On *April 30th*, 1873, Chitambo came early to pay a visit of courtesy, and was shown into the doctor's presence; but he was obliged to send him away, telling him to come again on the morrow, when he hoped to have more strength to talk to him, and he was not again disturbed. In the afternoon he asked Susi to bring his watch to the bedside, and explained to him the position in which to hold his hand, that it might lie in the palm while he slowly turned the key.

So the hours stole on till night-fall. The men silently took to their huts, while others, whose duty it was to keep watch, sat round the fires, all feeling that the end could not be far off. About 11 P.M., Susi, whose hut was close by, was told to go to his master. At the time there were loud shouts in the distance, and, on entering, Dr. Livingstone said, "Are our men making that noise?" "No," replied Susi; "I can hear, from the cries, that the people are scaring away a buffalo from their dura-fields."

A few minutes afterward he said slowly, and evidently wandering, "Is this the Luapula?" Susi told him they were in Chitambo's village, near the Molilamo, when he was silent for a while. Again, speaking to Susi, in Suaheli this time, he said, "Sikun'gapi kuenda Luapula?" (How many days is it to the Luapula?)

"Na zani zikutatu, Bwana" (I think it is three days, master), replied Susi.

A few seconds after, as if in great pain, he half sighed, half said, "Oh dear, dear!" and then dozed off again.

It was about an hour later that Susi heard Majwara again outside the door, "Bwana wants you, Susi." On reaching the bed, the doctor told him he wished him to boil some water, and for this purpose he went to the fire outside, and soon returned with the copper kettle full. Calling him close, he asked him to bring his medicine-chest, and to hold the candle near him, for the man noticed he could hardly see. With great difficulty Dr. Livingstone selected the calomel, which he told him to place by his side; then, directing him to pour a little water into a cup, and to put another empty one by it, he said in a low, feeble voice, "All right; you can go out now." These were the last words he was ever heard to speak.

It must have been about 4 A.M. when Susi heard Majwara's step once more. "Come to Bwana, I am afraid; I don't know if he is alive." The lad's evident alarm made Susi run to arouse Chuma, Chowperé, Matthew, and Muanuaséré, and the six men went immediately to the hut.

Passing inside, they looked toward the bed. Dr. Livingstone was not lying on it, but appeared to be engaged in prayer, and they instinctively drew backward for the instant. Pointing to him, Majwara said, "When I lay down he was just as he is now, and it is because I find that he does not move that I fear he is dead." They asked the lad how long he had slept? Majwara said he could not tell, but he was sure that it was some considerable time: the men drew nearer.

A candle, stuck by its own wax to the top of the box, shed a light sufficient for them to see his form. Dr. Livingstone was kneeling by the side of his bed, his body stretched forward, his head buried in his hands upon the pillow. For a minute they watched him: he did not stir, there was no sign of breathing; then one of them, Matthew, advanced softly to him and placed his hands to his cheeks. It was sufficient; life had been extinct some time, and the body was almost cold: Livingstone was dead.

His sad-hearted servants raised him tenderly up and laid him

full length on the bed; then, carefully covering him, they went out into the damp night air to consult together. It was not long before the cocks crew, and it is from this circumstance—coupled with the fact that Susi spoke to him some time shortly before midnight—that we are able to state with tolerable certainty that he expired early on the 1st of May.

It has been thought best to give the narrative of these closing hours as nearly as possible in the words of the two men who attended him constantly, both here and in the many illnesses of like character which he endured in his last six years' wanderings: in fact, from the first moment of the news arriving in England, it was felt to be indispensable that they should come home to state what occurred.

* * * * *

The men have much to consider as they cower around the watch-fire, and little time for deliberation. They are at their farthest point from home, and their leader has fallen at their head; we shall see presently how they faced their difficulties.

* * * * *

Several inquiries will naturally arise, on reading this distressing history; the foremost, perhaps, will be with regard to the entire absence of every thing like a parting word to those immediately about him, or a farewell line to his family and friends at home. It must be very evident to the reader that Livingstone entertained very grave forebodings about his health during the last two years of his life, but it is not clear that he realized the near approach of death when his malady suddenly passed into a more dangerous stage.

It may be said, "Why did he not take some precautions or give some strict injunctions to his men to preserve his note-books and maps at all hazards, in the event of his decease?" Did not his great ruling passion suggest some such precaution?

Fair questions, but, reader, you have all—every word written, spoken, or implied.

Is there, then, no explanation? Yes; we think past experience affords it, and it is offered to you by one who remembers, moreover, how Livingstone himself used to point out to him in Africa the peculiar features of death by malarial poisoning.

In full recollection of eight deaths on the Zambesi and Shiré districts, not a single parting word or direction in any instance can be recalled. Neither hope nor courage give way as death approaches. In most cases, a comatose state of exhaustion supervenes, which, if it be not quickly arrested by active measures,

passes into complete insensibility: this is almost invariably the closing scene.

In Dr. Livingstone's case, we find some departure from the ordinary symptoms.* He, as we have seen by the entry of the 18th of April, was alive to the conviction that malarial poison is the basis of every disorder in Tropical Africa, and he did not doubt but that he was fully under its influence while suffering so severely. As we have said, a man of less endurance in all probability would have perished in the first week of the terrible approach to the Lake, through the flooded country and under the continual downpour that he describes. It tried every constitution, saturated every man with fever-poison, and destroyed several, as we shall see a little farther on. The greater vitality in his iron system very likely staved off for a few days the last state of coma to which we refer; but there is quite sufficient to show us that only a thin margin lay between the heavy drowsiness of the last few days before reaching Chitambo's, and the final and usual symptom that brings on unconsciousness and inability to speak.

On more closely questioning the men, one only elicits that they imagine he hoped to recover as he had so often done before; and if this really was the case, it will in a measure account for the absence of any thing like a dying statement; but still they speak again and again of his drowsiness, which in itself would take away all ability to realize vividly the seriousness of the situation. It may be that at the last a flash of conviction for a moment lighted up the mind; if so, what greater consolation can those have who mourn his loss, than the account that the men give of what they saw when they entered the hut?

Livingstone had not merely turned himself, he had risen to pray; he still rested on his knees, his hands were clasped under his head: when they approached him, he seemed to live. He had not fallen to right or left when he rendered up his spirit to God. Death required no change of limb or position; there was merely the gentle settling forward of the frame unstrung by pain, for the Traveler's perfect rest had come. Will not time show that the men were scarcely wrong when they thought "he yet speaketh"—ay, perhaps far more clearly to us than he could have done by word, or pen, or any other means!

Is it, then, presumptuous to think that the long-used, fervent prayer of the wanderer sped forth once more—that the constant

* The great loss of blood may have had a bearing on the case.

supplication became more perfect in weakness, and that from his "loneliness" David Livingstone, with a dying effort, yet again besought Him for whom he labored to break down the oppression and woe of the land.

* * * * *

Before daylight the men were quietly told in each hut what had happened, and that they were to assemble. Coming together as soon as it was light enough to see, Susi and Chuma said that they wished every body to be present while the boxes were opened, so that, in case money or valuables were in them, all might be responsible. Jacob Wainwright (who could write, they knew) was asked to make some notes which should serve as an inventory, and then the boxes were brought out from the hut.

Before he left England in 1865, Dr. Livingstone arranged that his traveling equipment should be as compact as possible. An old friend gave him some exceedingly well-made tin boxes, two of which lasted out the whole of his travels. In these his papers and instruments were safe from wet and from white ants, which have to be guarded against more than any thing else. Besides the articles mentioned below, a number of letters and dispatches in various stages were likewise inclosed, and one can never sufficiently extol the good feeling which after his death invested all these writings with something like a sacred care in the estimation of his men. It was the doctor's custom to carry a small metallic note-book in his pocket: a quantity of these have come to hand, filled from end to end; and as the men preserved every one that they found, we have almost a daily entry to fall back upon. Nor was less care shown for his rifles, sextants, his Bible and Church-service, and the medicine-chest.

Jacob's entry is as follows, and it was thoughtfully made at the back end of the same note-book that was in use by the doctor when he died. It runs as follows:

"11 o'clock night, 28th April.

"In the chest was found about a shilling and a half, and in other chest his hat, 1 watch, and 2 small boxes of measuring instrument, and in each box there was one. 1 compass, 3 other kind of measuring instrument. 4 other kind of measuring instrument. And in other chest 3 drachmas and half half scrople."

A word is necessary concerning the first part of this. It will be observed that Dr. Livingstone made his last note on the 27th of April. Jacob, referring to it as the only indication of the day of the month, and fancying, moreover, that it was written on the

preceding day, wrote down "28th April." Had he observed that the few words opposite the 27th in the pocket-book related to the stay at Kalunganjovu's village, and not to any portion of the time at Chitambo's, the error would have been avoided. Again, with respect to the time. It was about 11 o'clock P.M. when Susi last saw his master alive, and therefore this time is noted; but both he and Chuma feel quite sure, from what Majwara said, that death did not take place till some hours after.

It was not without some alarm that the men realized their more immediate difficulties: none could see better than they what complications might arise in an hour.

They knew the superstitious horror connected with the dead to be prevalent in the tribes around them, for the departed spirits of men are universally believed to have vengeance and mischief at heart as their ruling idea in the land beyond the grave. All rites turn on this belief. The religion of the African is a weary attempt to propitiate those who show themselves to be still able to haunt and destroy, as war comes or an accident happens.

On this account it is not to be wondered at that chief and people make common cause against those who wander through their territory, and have the misfortune to lose one of their party by death. Who is to tell the consequences? Such occurrences are looked on as most serious offenses, and the men regarded their position with no small apprehension.

Calling the whole party together, Susi and Chuma placed the state of affairs before them, and asked what should be done. They received a reply from those whom Mr. Stanley had engaged for Dr. Livingstone, which was hearty and unanimous. "You," said they, "are old men in traveling and in hardships; you must act as our chiefs, and we will promise to obey whatever you order us to do." From this moment we may look on Susi and Chuma as the captains of the caravan. To their knowledge of the country, of the tribes through which they were to pass, but, above all, to the sense of discipline and cohesion which was maintained throughout, their safe return to Zanzibar at the head of their men must, under God's good guidance, be mainly attributed.

All agreed that Chitambo ought to be kept in ignorance of Dr. Livingstone's decease, or otherwise a fine so heavy would be inflicted upon them as compensation for damage done that their means would be crippled, and they could hardly expect to pay their way to the coast. It was decided that, come what might, the body *must be borne to Zanzibar*. It was also arranged to take it secretly, if possible, to a hut at some distance off, where the

necessary preparations could be carried out, and for this purpose some men were now dispatched with axes to cut wood, while others went to collect grass. Chuma set off to see Chitambo, and said that they wanted to build a place outside the village, if he would allow it, for they did not like living among the huts. His consent was willingly given.

Later on in the day two of the men went to the people to buy food, and divulged the secret: the chief was at once informed of what had happened, and started for the spot on which the new buildings were being set up. Appealing to Chuma, he said, "Why did you not tell me the truth? I know that your master died last night. You were afraid to let me know, but do not fear any longer. I, too, have traveled, and more than once have been to Bwani (the coast), before the country on the road was destroyed by the Mazitu. I know that you have no bad motives in coming to our land, and death often happens to travelers in their journeys." Re-assured by this speech, they told him of their intention to prepare the body, and to take it with them. He, however, said it would be far better to bury it there, for they were undertaking an impossible task; but they held to their resolution. The corpse was conveyed to the new hut the same day on the kitanda, carefully covered with cloth and a blanket.

May 2d, 1873.—The next morning Susi paid a visit to Chitambo, making him a handsome present, and receiving in return, a kind welcome. It is only right to add that the men speak on all occasions with gratitude of Chitambo's conduct throughout, and say that he is a fine, generous fellow. Following out his suggestion, it was agreed that all honors should be shown to the dead, and the customary mourning was arranged forthwith.

At the proper time, Chitambo, leading his people, and accompanied by his wives, came to the new settlement. He was clad in a broad red cloth, which covered the shoulders, while the wrapping of native cotton cloth, worn round the waist, fell as low as his ankles. All carried bows, arrows, and spears, but no guns were seen. Two drummers joined in the loud wailing lamentation, which so indelibly impresses itself on the memories of people who have heard it in the East, while the band of servants fired volley after volley in the air, according to the strict rule of Portuguese and Arabs on such occasions.

As yet, nothing had been done to the corpse.

A separate hut was now built, about ninety feet from the principal one. It was constructed in such a manner that it should

be open to the air at the top, and sufficiently strong to defy the attempts of any wild beast to break through it. Firmly driven boughs and saplings were planted side by side and bound together, so as to make a regular stockade. Close to this building the men constructed their huts, and, finally, the whole settlement had another high stockade carried completely around it.

Arrangements were made the same day to treat the corpse on the following morning. One of the men, Saféné, while in Kallanganjovu's district, bought a large quantity of salt: this was purchased of him for sixteen strings of beads; there was, besides, some brandy in the doctor's stores, and with these few materials they hoped to succeed in their object.

Farijala was appointed to the necessary task. He had picked up some knowledge of the method pursued in making *post-mortem* examinations while a servant to a doctor at Zanzibar, and at his request Carras, one of the Nassick boys, was told off to assist him. Previous to this, however, early on May 3d, a special mourner arrived. He came with the anklets which are worn on these occasions, composed of rows of hollow seed-vessels filled with rattling pebbles, and in low, monotonous chant sang, while he danced, as follows:

“Lélo kwa Engérése,
Muana sisi oa konda:
’Tu kamb’ tamb’ Engérése;”

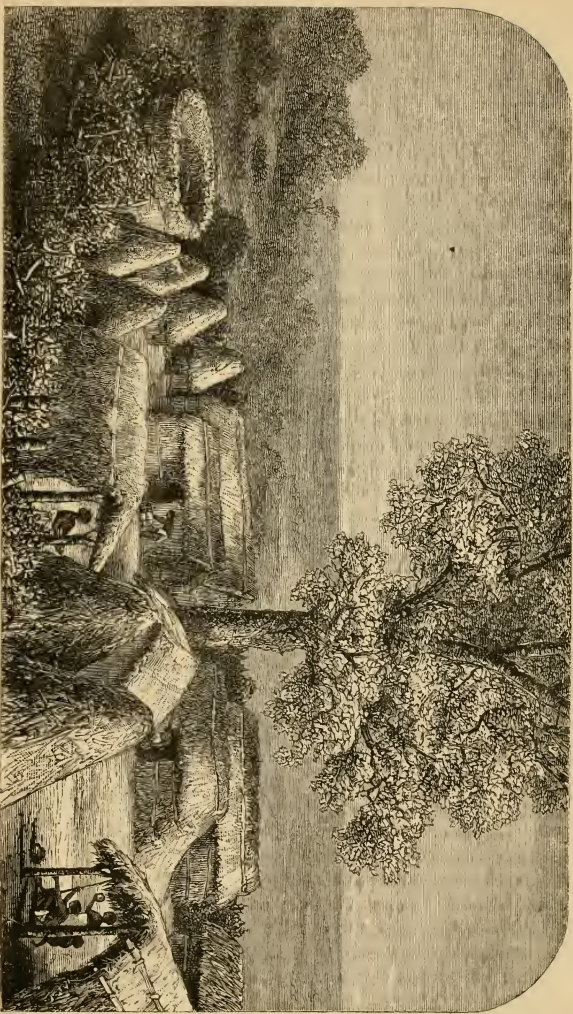
which, translated, is,

“To-day the Englishman is dead,
Who has different hair from ours:
Come round to see the Englishman.”

His task over, the mourner and his son, who accompanied him in the ceremony, retired with a suitable present of beads.

The emaciated remains of the deceased traveler were soon afterward taken to the place prepared. Over the heads of Farijala and Carras, Susi, Chuma, and Muanuaséré held a thick blanket as a kind of screen, under which the men performed their duties. Tofiké and John Wainwright were present. Jacob Wainwright had been asked to bring his Prayer-book with him, and stood apart against the wall of the inclosure.

In reading about the lingering sufferings of Dr. Livingstone as described by himself, and subsequently by these faithful fellows, one is quite prepared to understand their explanation, and to see why it was possible to defer these operations so long after death: they say that his frame was little more than skin and bone. Through an incision carefully made, the viscera were re-



Stockade around the body.

TEMPORARY VILLAGE IN WHICH DR. LIVINGSTONE'S BODY WAS PREPARED.

Tree with inscription.

moved, and a quantity of salt was placed in the trunk. All noticed one very significant circumstance in the autopsy. A clot of coagulated blood, as large as a man's hand, lay in the left side,* while Farijala pointed to the state of the lungs, which they described as dried up, and covered with black-and-white patches.

The heart, with the other parts removed, were placed in a tin box, which had formerly contained flour, and decently and reverently buried in a hole dug some four feet deep on the spot where they stood. Jacob was then asked to read the Burial Service, which he did in the presence of all. The body was left to be fully exposed to the sun. No other means were taken to preserve it, beyond placing some brandy in the mouth and some on the hair; nor can one imagine for an instant that any other process would have been available either for Europeans or natives, considering the rude appliances at their disposal. The men kept watch day and night to see that no harm came to their sacred charge. Their huts surrounded the building, and, had force been used to enter its strongly-barred door, the whole camp would have turned out in a moment. Once a day the position of the body was changed, but at no other time was any one allowed to approach it.

No molestation of any kind took place during the fourteen days' exposure. At the end of this period preparations were made for retracing their steps. The corpse, by this time tolerably dried, was wrapped round in some calico, the legs being bent inward at the knees to shorten the package. The next thing was to plan something in which to carry it, and, in the absence of planking or tools, an admirable substitute was found by stripping from a myonga-tree enough of the bark in one piece to form a cylinder, and in it their master was laid. Over this case a piece of sail-cloth was sewn, and the whole package was lashed securely to a pole, so as to be carried by two men.

Jacob Wainwright was asked to carve an inscription on the large mvula-tree which stands by the place where the body rested, stating the name of Dr. Livingstone and the date of his death; and, before leaving, the men gave strict injunctions to Chitambo to keep the grass cleared away, so as to save it from the bush-fires which annually sweep over the country and destroy so many trees. Besides this, they erected close to the spot two high, thick posts, with an equally strong cross-piece, like a lintel and door.

* It has been suggested by one who attended Dr. Livingstone professionally in several dangerous illnesses in Africa, that the ultimate cause of death was acute splenitis.
--Ed.

posts in form, which they painted thoroughly with the tar that was intended for the boat: this sign they think will remain for a long time, from the solidity of the timber. Before parting with Chitambo, they gave him a large tin biscuit-box and some newspapers, which would serve as evidence to all future travelers that a white man had been at his village.

The chief promised to do all he could to keep both the tree and the timber sign-posts from being touched, but added that he hoped the English would not be long in coming to see him, because there was always the risk of an invasion of Mazitu, when he would have to fly, and the tree might be cut down for a canoe by some one, and then all trace would be lost. All was now ready for starting.

CHAPTER XXVI.

They begin the homeward March from Ilala.—Illness of all the Men.—Deaths.—Muanamazungu.—The Luapula.—The Donkey killed by a Lion.—A Disaster at N'kossu's.—Native Surgery.—Approach Chawende's Town.—Inhospitable Reception.—An Encounter.—They take the Town.—Leave Chawende's.—Reach Chiwaie's.—Strike the old Road.—Wire-drawing.—Arrive at Kumba-kumba's.—John Wainwright disappears.—Unsuccessful Search.—Reach Tanganyika.—Leave the Lake.—Cross the Lambalamfipa Range.—Immense Herds of Game.—News of East-Coast Search Expedition.—Confirmation of News.—They reach Baula.—Avant-couriers sent forward to Unyanyembé.—Chuma meets Lieutenant Cameron.—Start for the Coast.—Sad Death of Dr. Dillon.—Clever Precautions.—The Body is effectually concealed.—Girl killed by a Snake.—Arrival on the Coast.—Concluding Remarks.

THE homeward march was then begun. Throughout its length we shall content ourselves with giving the approximate number of days occupied in traveling and halting. Although the memories of both men are excellent—standing the severest test when they are tried by the light of Dr. Livingstone's journals, or "set on" at any passage of his travels—they kept no precise record of the time spent at villages where they were detained by sickness, and so the exactness of a diary can no longer be sustained.

To return to the caravan. They found on this, the first day's journey, that some other precautions were necessary to enable the bearers of the mournful burden to keep to their task. Sending to Chitambo's village, they brought thence the cask of tar which they had deposited with the chief, and gave a thick coating to the canvas outside. This answered all purposes; they left the remainder at the next village, with orders to send it back to head-quarters, and then continued their course through Ilala, led by their guides in the direction of the Luapula.

A moment's inspection of the map will explain the line of country to be traversed. Susi and Chuma had traveled with Dr. Livingstone in the neighborhood of the north-west shores of Bangweolo in previous years. The last fatal road from the north might be struck by a march in a due north-east direction, if they could but hold out so far without any serious misfortune; but, in order to do this, they must first strike northward so as to reach the Luapula, and then crossing it at some part not necessarily far

from its exit from the Lake, they could at once lay their course for the south end of Tanganyika.

There were, however, serious indications among them. First one and then the other dropped out of the file, and by the time they reached a town belonging to Chitambo's brother—and on the third day only since they set out—half their number were *hors de combat*. It was impossible to go on. A few hours more, and all seemed affected. The symptoms were intense pain in the limbs and face, great prostration, and, in the bad cases, inability to move. The men attributed it to the continual wading through water before the doctor's death. They think that illness had been waiting for some further slight provocation, and that the previous days' tramp, which was almost entirely through plashy boughs, or swamps, turned the scale against them.

Susi was suffering very much. The disease settled in one leg, and then quickly shifted to the other. Songolo nearly died. Kaniki and Bahati, two of the women, expired in a few days, and all looked at its worst. It took them a good month to rally sufficiently to resume their journey.

Fortunately, in this interval, the rains entirely ceased, and the natives day by day brought an abundance of food to the sick men. From them they heard that the districts they were now in were notoriously unhealthy, and that many an Arab had fallen out from the caravan march, to leave his bones in these wastes. One day five of the party made an excursion to the westward, and on their return reported a large deep river flowing into the Luapula on the left bank. Unfortunately no notice was taken of its name, for it would be of considerable geographical interest.

At last they were ready to start again, and came to one of the border villages in Ilala the same night; but the next day several fell ill for the second time, Susi being quite unable to move.

Muanamazungu, at whose place these relapses occurred, was fully aware of every thing that had taken place at Chitambo's, and showed the men the greatest kindness. Not a day passed without his bringing them some present or other, but there was a great disinclination among the people to listen to any details connected with Dr. Livingstone's death. Some return for their kindness was made by Farijala shooting three buffaloes near the town: meat and good-will go together all over Africa, and the liberal sportsman scores points at many a turn. A cow was purchased here for some brass bracelets and calico, and on the twentieth day all were sufficiently strong on their legs to push forward.

The broad waters of the long-looked for Luapula soon hove in sight. Putting themselves under a guide, they were conducted to the village of Chisalamalama, who willingly offered them canoes for the passage across the next day.*

As one listens to the report that the men give of this mighty river, he instinctively bends his eyes on a dark burden laid in the canoe! How ardently would he have scanned it whose body thus passes across these waters, and whose spirit, in its last hours' sojourn in this world, wandered in thought and imagination to its stream!

It would seem that the Luapula at this point is double the width of the Zambesi at Shupanga. This gives a breadth of fully four miles. A man could not be seen on the opposite bank: trees looked small: a gun could be heard, but no shouting would ever reach a person across the river—such is the description given by those who were well able to compare the Luapula with the Zambesi. Taking to the canoes, they were able to use the "m'phondo," or punting-pole, for a distance through reeds, then came clear, deep water for some four hundred yards, again a broad, reedy expanse, followed by another deep part, succeeded in turn by another current not so broad as those previously paddled across, and then, as on the starting side, gradually shoaling water, abounding in reeds. Two islands lay just above the crossing-place. Using pole and paddle alternately, the passage took them fully two hours across this enormous torrent, which carries off the waters of Bangweolo toward the north.

A sad mishap befell the donkey the first night of camping beyond the Luapula, and this faithful and sorely-tried servant was doomed to end his career at this spot!

According to custom, a special stable was built for him close to the men. In the middle of the night a great disturbance, coupled with the shouting of Amoda, aroused the camp. The men rushed out, and found the stable broken down, and the donkey gone. Snatching some logs, they set fire to the grass, as it was pitch dark, and by the light saw a lion close to the body of the poor animal, which was quite dead. Those who had caught up their guns on the first alarm fired a volley, and the lion made off. It was evident that the donkey had been seized by the nose, and instantly killed. At daylight the spoor showed that the

* The men consider it five days' march "only carrying a gun" from the Molilamo to the bank of the Luapula—this in rough reckoning, at the rate of native traveling, would give a distance of say one hundred and twenty to one hundred and fifty miles.



An old Servant destroyed.

guns had taken effect. The lion's blood lay in a broad track (for he was apparently injured in the back, and could only drag himself along); but the foot-prints of a second lion were too plain to make it advisable to track him far in the thick cover he had reached, and so the search was abandoned. The body of the donkey was left behind; but two canoes remained near the village, and it is most probable that it went to make a feast at Chisalamalama's.

Traveling through incessant swamp and water, they were fain to make their next stopping-place in a spot where an enormous ant-hill spread itself out—a small island in the waters. A fire was lighted, and by employing hoes, most of them dug something like a form to sleep in on the hard earth.

Thankful to leave such a place, their guide led them next day to the village of Kawinga, whom they describe as a tall man, of singularly light color, and the owner of a gun, a unique weapon in these parts, but one already made useless by wear and tear. The next village, N'kossu's, was much more important. The people, called Kawendé, formerly owned plenty of cattle, but now they are reduced: the Banyamwezi have put them under

the harrow, and but few herds remain. We may call attention to the somewhat singular fact that the hump quite disappears in the Lake breed: the cows would pass for respectable short-horns.*

A present was made to the caravan of a cow; but it seems that the rule, "First catch your hare," is in full force in N'kossu's pastures. The animals are exceedingly wild, and a hunt has to be set on foot whenever beef is wanted; it was so in this case. Saféné and Muanaséré, with their guns, essayed to settle the difficulty. The latter, an old hunter as we have seen, was not likely to do much harm; but Saféné, firing wildly at the cow, hit one of the villagers, and smashed the bone of the poor fellow's thigh. Although it was clearly an accident, such things do not readily settle themselves down on this assumption in Africa. The chief, however, behaved very well. He told them a fine would have to be paid on the return of the wounded man's father, and it had better be handed to him, for by law the blame would fall on him, as the entertainer of the man who had brought about the injury. He admitted that he had ordered all his people to stand clear of the spot where the disaster occurred, but he supposed that in this instance his orders had not been heard. They had not sufficient goods in any case to respond to the demand. The process adopted to set the broken limb is a sample of native surgery which must not be passed over.

First of all, a hole was dug, say two feet deep and four in length, in such a manner that the patient could sit in it with his legs out before him. A large leaf was then bound round the fractured thigh, and earth thrown in, so that the patient was buried up to the chest. The next act was to cover the earth which lay over the man's legs with a thick layer of mud: then plenty of sticks and grass were collected, and a fire lighted on the top directly over the fracture. To prevent the smoke smothering the sufferer, they held a tall mat as a screen before his face, and the operation went on. After some time the heat reached the limbs under-ground. Bellowing with fear, and covered with perspiration, the man implored them to let him out. The authorities concluding that he had been under treatment a sufficient time, quickly burrowed down and lifted him from the hole. He was now held perfectly fast, while two strong men stretched the wounded limb with all their might! Splints duly prepared were afterward bound round it, and we must hope that in due time

* This comparison was got at from the remarks made by Susi and Chuma at an agricultural show; they pointed out the resemblance borne by the short-horns and by the Alderney bulls to several breeds near Lake Bumba.—ED.



Kawendé Surgery.

benefit accrued; but as the ball had passed through the limb, we must have our doubts on the subject. The villagers told Chuma that after the Banyamwezi engagements they constantly treated bad gunshot-wounds in this way with perfect success.

Leaving N'kossu's, they rested one night at another village belonging to him, and then made for the territory of the Wa Ussi. Here they met with a surly welcome, and were told they must pass on. No doubt the intelligence that they were carrying their master's body had a great deal to do with it, for the news seemed to spread with the greatest rapidity in all directions. Three times they camped in the forest, and, for a wonder, began to find some dry ground. The path lay in the direct line of Chawendé's town, parallel to the north shore of the Lake, and at no great distance from it.

Some time previously a solitary Unyamwesi had attached himself to the party at Chitankooi's, where he had been left sick by a passing caravan of traders: this man now assured them the country before them was well known to him.

Approaching Chawendé's, according to native etiquette, Amoda and Sabouri went on in front to inform the chief, and to ask leave

to enter his town. As they did not come back, Muanuaséré and Chuma set off after them, to ascertain the reason of the delay. No better success seemed to attend this second venture; so, shouldering their burdens, all went forward in the track of the four messengers.

In the mean time Chuma and Muanuaséré met Amoda and Sabouri coming back toward them with five men. They reported that they had entered the town, but found it a very large stockaded place; moreover, two other villages of equal size were close to it. Much pombe-drinking was going on. On approaching the chief, Amoda had rested his gun against the principal hut innocently enough. Chawendé's son, drunk and quarrelsome, made this a cause of offense, and swaggering up, he insolently asked them how they dared to do such a thing. Chawendé interfered, and for the moment prevented further disagreeables; in fact, he himself seems to have been inclined to grant the favor which was asked: however, there was danger brewing, and the men retired.

When the main body met them returning, tired with their fruitless errand, a consultation took place. Wood there was none. To scatter about and find materials with which to build shelter for the night would only offer a great temptation to these drunken, excited people to plunder the baggage. It was resolved to make for the town.

When they reached the gate of the stockade they were flatly refused admittance, those inside telling them to go down to the river and camp on the bank. They replied that this was impossible: that they were tired, it was very late, and nothing could be found there to give them shelter. Meeting with no different answer, Saféné said, "Why stand talking to them? let us get in somehow or other;" and, suiting the action to the word, they pushed the men back who stood in the gate-way. Saféné got through, and Muanuaséré climbed over the top of the stockade, followed by Chuma, who instantly opened the gate wide and let his companions through. Hostilities might still have been averted had better counsel prevailed.

The men began to look about for huts in which to deposit their things, when the same drunken fellow drew a bow and fired at Muanuaséré. The man called out to the others to seize him, which was done in an instant. A loud cry now burst forth that the chief's son was in danger, and one of the people hurling a spear, wounded Sabouri slightly in the thigh: this was the signal for a general scrimmage.

Chawendé's men fled from the town; the drums beat the as-

sembly in all directions, and an immense number flocked to the spot from the two neighboring villages, armed with their bows, arrows, and spears. An assault instantly began from the outside. N'chisé was shot with an arrow in the shoulder through the palisade, and N'taru in the finger. Things were becoming desperate. Putting the body of Dr. Livingstone and all their goods and chattels in one hut, they charged out of the town, and fired on the assailants, killing two and wounding several others. Fearing that they would only gather together in the other remaining villages and renew the attack at night, the men carried these quickly one by one, and subsequently burned six others, which were built on the same side of the river; then crossing over, they fired on the canoes which were speeding toward the deep water of Bangweolo, through the channel of the Lopopussi, with disastrous results to the fugitive people.

Returning to the town, all was made safe for the night. By the fortunes of war, sheep, goats, fowls, and an immense quantity of food fell into their hands, and they remained for a week to recruit. Once or twice they found men approaching at night to throw fire on the roofs of the huts from outside, but, with this exception, they were not interfered with. On the last day but one, a man approached and called to them at the top of his voice not to set fire to the chief's town (it was his that they occupied); for the bad son had brought all this upon them; he added that the old man had been overruled, and they were sorry enough for his bad conduct.

Listening to the account given of this occurrence, one can not but lament the loss of life, and the whole circumstances of the fight. While, on the one hand, we may imagine that the loss of a cool, conciliatory, brave leader was here felt in a grave degree, we must also see that it was known far and wide that this very loss was now a great weakness to his followers. There is no surer sign of mischief in Africa than these trumpery charges of bewitching houses by placing things on them: some such overstrained accusation is generally set in the front rank when other difficulties are to come: drunkenness is pretty much the same thing in all parts of the world, and gathers misery around it as easily in an African village as in an English city. Had the cortége submitted to extortion and insult, they felt that their night by the river would have been a precarious one, even if they had been in a humor to sleep in a swamp when a town was at hand. These things gave occasion to them to resort to force. The desperate nature of their whole enterprise in starting for Zanzibar

perhaps had accumulated its own stock of determination, and now it found vent under evil provocation. If there is room for any other feeling than regret, it lies in the fact that, on mature consideration and in sober moments, the people who suffered cast the real blame on the right shoulders.

For the next three days after leaving Chawendé's, they were still in the same inundated fringe of bouga which surrounds the Lake, and on each occasion had to camp at night-fall wherever a resting-place could be found in the jungle, reaching Chama's village on the fourth day. A delay of forty-eight hours was necessary, as Susi's wife fell ill; and for the next few marches she was carried in a kitanda. They met an Unyamwezi man here, who had come from Kumba-kumba's town in the Wa Ussi district. He related to them how on two occasions the Wanyamwezi had tried to carry Chawendé's town by assault, but had been repulsed both times. It would seem that, with the strong footing these invaders have in the country, armed as they are besides with the much-dreaded guns, it can only be a matter of time before the whole rule, such as it is, passes into the hands of the new-comers.

The next night was spent in the open, before coming to the scattered huts of Ngumbu's, where a motley group of stragglers, for the most part Wabisa, were busy felling the trees and clearing the land for cultivation. However, the little community gave them a welcome, in spite of the wide-spread report of the fighting at Chawendé's, and dancing and drumming were kept up till morning.

One more night was passed in the plain, and they reached a tributary of the Lopopussi River, called the M'Pamba: it is a considerable stream, and takes one up to the chest in crossing. They now drew near to Chiwaie's town, which they describe as a very strong place, fortified with a stockade and ditch. Shortly before reaching it some villagers tried to pick a quarrel with them for carrying flags. It was their invariable custom to make the drummer-boy, Majwara, march at their head, while the union-jack and the red colors of Zanzibar were carried in a foremost place in the line. Fortunately a chief of some importance came up and stopped the discussion, or there might have been more mischief, for the men were in no temper to lower their flag, knowing their own strength pretty well by this time. Making their settlement close to Chiwaie's, they met with much kindness, and were visited by crowds of the inhabitants.

Three days' journey brought them to Chiwaie's uncle's village; sleeping two nights in the jungle, they made Chungu's, and in an-

other day's march found themselves, to their great delight, at Kapesha's. They knew their road from this point, for on the southern route with Dr. Livingstone they had stopped here, and could therefore take up the path that leads to Tanganyika. Hitherto their course had been easterly, with a little northing; but now they turned their backs to the Lake, which they had held on the right hand since crossing the Luapula, and struck almost north.

From Kapesha's to Lake Bangweolo is a three days' march, as the crow flies, for a man carrying a burden. They saw a large quantity of iron and copper wire being made here by a party of Unyamwezi. The process is as follows: A heavy piece of iron, with a funnel-shaped hole in it, is firmly fixed in the fork of a tree. A fine rod is then thrust into it, and a line attached to the first few inches which can be coaxed through. A number of men haul on this line, singing and dancing in tune, and thus it is drawn through the first drill; it is subsequently passed through others to render it still finer, and excellent wire is the result. Leaving Kapesha, they went through many of the villages already enumerated in Dr. Livingstone's diary. Chama's people came to see them as they passed by him, and, after some mutterings and growlings, Kasonga gave them leave to buy food at his town. Reaching Chama's head-quarters, they camped outside, and received a civil message, telling them to convey his orders to the people on the banks of the Kalongwesé, that the travelers must be ferried safely across. They found great fear and misery prevailing in the neighborhood, from the constant raids made by Kumba-kumba's men.

Leaving the Kalongwesé behind them, they made for M'sama's son's town, meeting four men on the way who were going from Kumba-kumba to Chama to beat up recruits for an attack on the Katanga people. The request was sure to be met with alarm and refusal, but it served very well to act the part taken by the wolf in the fable. A grievance would immediately be made of it, and Chama "eaten up" in due course for daring to gainsay the stronger man. Such is too frequently the course of native oppression. At last Kumba-kumba's town came in sight. Already the large district of Itawa has tacitly allowed itself to be put under the harrow by this ruffianly Zanzibar Arab. Black-mail is levied in all directions, and the petty chiefs, although really under tribute to Nsama, are sagacious enough to keep in with the powers that be. Kumba-kumba showed the men a storehouse full of elephants' tusks. A small detachment was sent off to try and gain tidings of one of the Nassiek boys, John, who had

mysteriously disappeared a day or two previously on the march. At the time no great apprehensions were felt, but as he did not turn up, the grass was set on fire in order that he might see the smoke if he had wandered, and guns were fired. Some think he purposely went off rather than carry a load any farther; while others fear he may have been killed. Certain it is that after a five days' search in all directions no tidings could be gained either here or at Chama's, and nothing more was heard of the poor fellow.

Numbers of slaves were collected here. On one occasion they saw five gangs bound neck to neck by chains, and working in the gardens outside the towns.

The talk was still about the break-up of Casembe's power, for it will be recollected that Kumba-kumba and Pemba-motu had killed him a short time before; but by far the most interesting news that reached them was that a party of Englishmen, headed by Dr. Livingstone's son, on their way to relieve his father, had been seen at Bagamoio some months previously.

The chief showed them every kindness during their five days' rest, and was most anxious that no mishap should by any chance occur to their principal charge. He warned them to beware of hyenas, at night more especially, as the quarter in which they had camped had no stockade round it as yet.

Marching was now much easier, and the men quickly found they had crossed the water-shed. The Lovu ran in front of them on its way to Tanganyika. The Kalongwesé, we have seen, flows to Lake Moero in the opposite direction. More to their purpose it was, perhaps, to find the terror of Kumba-kumba dying away as they traveled in a north-easterly direction, and came among the Mwambi. As yet no invasion had taken place. A young chief, Chungu, did all he could for them, for when the doctor explored these regions before, Chungu had been much impressed with him: and now, throwing off all the native superstition, he looked on the arrival of the dead body as a cause of real sorrow.

Asoumani had some luck in hunting, and a fine buffalo was killed near the town. According to native game laws (which in some respects are exceedingly strict in Africa), Chungu had a right to a fore-leg—had it been an elephant, the tusk next the ground would have been his, past all doubt—in this instance, however, the men sent in a plea that theirs was no ordinary case, and that hunger had laws of its own: they begged to be allowed to keep the whole carcass, and Chungu not only listened to their story, but willingly waived his claim to the chief's share.

It is to be hoped that these sons of Tafuna, the head and father of the Amambwi a lungu, may hold their own. They seem a superior race, and this man is described as a worthy leader. His brothers Kasonso, Chitimbwa, Sombé, and their sister Mombo, are all notorious for their reverence for Tafuna. In their villages an abundance of colored home-spun cloth speaks for their industry; while from the numbers of dogs and elephant-spears no further testimony is needed to show that the character they bear as great hunters is well deserved.

The steep descent to the Lake now lay before them, and they came to Kasakalawé's. Here it was that the doctor had passed weary months of illness on his first approach to Tanganyika in previous years. The village contained but few of its old inhabitants, but those few received them hospitably enough, and mourned the loss of him who had been so well appreciated when alive. So they journeyed on day by day till the southern end of the Lake was rounded.

The previous experience of the difficult route along the heights bordering on Tanganyika made them determine to give the Lake a wide berth this time, and for this purpose they held well to the eastward, passing a number of small deserted villages, in one of which they camped nearly every night. It was necessary to go through the Fipa country, but they learned from one man and another that the chief, Kafoofi, was very anxious that the body should not be brought near to his town; indeed a guide was purposely thrown in their way who led them past it by a considerable détour. Kafoofi stands well with the coast Arabs. One, Ngombesassi by name, was at the time living with him, accompanied by his retinue of slaves. He had collected a very large quantity of ivory farther in the interior, but dared not approach nearer at present to Unyanyembé with it, to risk the chance of meeting one of Mirambo's hordes.

This road across the plains seems incomparably the best. No difficulty whatever was experienced, and one can not but lament the toil and weariness which Dr. Livingstone endured while holding a course close to Tanganyika; although one must bear in mind that by no other means at the time could he complete his survey of this great inland sea, or acquaint us with its harbors, its bays, and the rivers which find their way into it on the east. These are details which will prove of value when small vessels come to navigate it in the future.

The chief feature after leaving this point was a three days' march over Lambalamfipa, an abrupt mountain range, which

crosses the country east and west, and attains, it would seem, an altitude of some four thousand feet. Looking down on the plain from its highest passes a vast lake appears to stretch away in front toward the north, but on descending this resolves itself into a glittering plain, for the most part covered with saline incrustations. The path lay directly across this. The difficulties they anticipated had no real existence, for small villages were found, and water was not scarce, although brackish. The first demand for toll was made near here, but the head man allowed them to pass for fourteen strings of beads. Susi says that this plain literally swarms with herds of game of all kinds: giraffe and zebra were particularly abundant, and lions reveled in such good quarters. The settlements they came to belonged chiefly to elephant hunters. Farijala and Muanuaséré did well with the buffalo, and plenty of beef came into camp.

They gained some particulars concerning a salt-water lake on their right, at no very considerable distance. It was reported to them to be smaller than Tanganyika, and goes by the name Bahari ya Muarooli—the sea of Muarooli—for such is the name of the paramount chief who lives on its shore, and, if we mistake not, the very Meréré, or his successor, about whom Dr. Livingstone from time to time showed such interest. They now approached the Likwa River, which flows to this inland sea: they describe it as a stream running breast-high, with brackish water: little satisfaction was got by drinking from it.

Just as they came to the Likwa, a long string of men was seen on the opposite side filing down to the water, and being uncertain of their intentions, precautions were quickly taken to insure the safety of the baggage. Dividing themselves into three parties, the first detachment went across to meet the strangers, carrying the Arab flag in front. Chuma headed another band at a little distance in the rear of these, while Susi and a few more crouched in the jungle, with the body concealed in a roughly-made hut. Their fears, however, were needless: it turned out to be a caravan bound for Fipa to hunt elephants and buy ivory and slaves. The new arrivals told them that they had come straight through Unyanyembé from Bagamoio, on the coast, and that the doctor's death had already been reported there by natives of Fipa.

As we notice with what rapidity the evil tidings spread (for the men found that it had preceded them in all directions), one of the great anxieties connected with African travel and exploration seems to be rather increased than diminished. It shows us

that it is never wise to turn an entirely deaf ear when the report of a disaster comes to hand, because in this instance the main facts were conveyed across country, striking the great arterial caravan route at Unyanyembé, and getting at once into a channel that would insure the intelligence reaching Zanzibar. On the other hand, false reports never lag on their journey: how often has Livingstone been killed in former years! Nor is one's perplexity lessened by past experience, for we find the oldest and most sagacious travelers, when consulted, are, as a rule, no more to be depended on than the merest tyro in guessing.

With no small satisfaction the men learned from the outward-bound caravan that the previous story was a true one, and they were assured that Dr. Livingstone's son, with two Englishmen and a quantity of goods, had already reached Unyanyembé.

The country here showed all the appearance of a salt-pan: indeed a quantity of very good salt was collected by one of the men, who thought he could turn an honest bunch of beads with it at Unyanyembé.

Petty tolls were levied on them. Kampama's deputy required four dotis, and an additional tax of six was paid to the chief of the Kanongo when his town was reached.

The Lungwa River bowls away here toward Tanganyika. It is a quick, tumbling stream, leaping among the rocks and boulders, and in its deeper pools it affords cool delight to schools of hippopotami. The men, who had hardly tasted good water since crossing Lambalamfipa, are loud in its praise. Muanuasere improved relations with the people at the next town by opportunely killing another buffalo, and all took a three days' rest. Yet another caravan met them, bound likewise for the interior, and adding further particulars about the Englishmen at Unyanyembé. This quickened the pace till they found at one stage they were melting two days of the previous outward journey into one.

Arriving at Baula, Jacob Wainwright, the scribe of the party, was commissioned to write an account of the distressing circumstances of the doctor's death, and Chuma, taking three men with him, pressed on to deliver it to the English party in person. The rest of the cortége followed them through the jungle to Chilunda's village. On the outskirts they came across a number of Wagogo hunting elephants with dogs and spears; but although they were well treated by them, and received presents of honey and food, they thought it better to keep these men in ignorance of the fact that they were in charge of the dead body of their master.

The Manyara River was crossed, on its way to Tanganyika, before they got to Chikooloo. Leaving this village behind them, they advanced to the Uganda district, now ruled by Kalimangombi, the son of Mbércké, the former chief, and so on to Kasekéra, which, it will be remembered, is not far from Unyanyembé.

We will here run on ahead with Chuma, on his way to communicate with the new arrivals. He reached the Arab settlement without let or hinderance. Lieutenant Cameron was quickly put in possession of the main facts of Dr. Livingstone's death by reading Jacob's letter, and Chuma was questioned concerning it in the presence of Dr. Dillon and Lieutenant Murphy. It was a disappointment to find that the reported arrival of Mr. Oswell Livingstone was entirely erroneous; but Lieutenant Cameron showed the wayworn men every kindness. Chuma rested one day before setting out to relieve his comrades, to whom he had arranged to make his way as soon as possible. Lieutenant Cameron expressed a fear that it would not be safe for him to carry the cloth he was willing to furnish them with, if he had not a stronger convoy, as he himself had suffered too sorely from terrified bearers on his way thither; but the young fellows were pretty well acquainted with native marauders by this time, and set off without apprehension.

And now the greater part of their task is over. The weather-beaten company wind their way into the old well-known settlement of Kwihara. A host of Arabs and their attendant slaves meet them, as they sorrowfully take their charge to the same tembé in which the "weary waiting" was endured before, and then they submit to the systematic questioning which the native traveler is so well able to sustain.

News in abundance was offered in return. The porters of the Livingstone East-Coast Aid Expedition had plenty to relate to the porters sent by Mr. Stanley. Mirambo's war dragged on its length, and matters had changed very little since they were there before, either for better or for worse. They found the English officers extremely short of goods; but Lieutenant Cameron, no doubt with the object of his expedition full in view, very properly felt it a first duty to relieve the wants of the party that had performed this herculean feat of bringing the body of the traveler he had been sent to relieve, together with every article belonging to him at the time of his death, as far as this main road to the coast.

In talking to the men about their intentions, Lieutenant Cameron had serious doubts whether the risk of taking the body of

Dr. Livingstone through the Ugogo country ought to be run. It very naturally occurred to him that Dr. Livingstone might have felt a wish during life to be buried in the same land in which the remains of his wife lay, for it will be remembered that the grave of Mrs. Livingstone is at Shupanga, on the Zambesi. All this was put before the men; but they steadily adhered to their first conviction, that it was right at all risks to attempt to bear their master home, and therefore they were no longer urged to bury him at Kwihara.

To the new-comers it was of great interest to examine the boxes which the men had conveyed from Bangweolo. As we have seen, they had carefully packed up every thing at Chitambo's—books, instruments, clothes, and all which would bear special interest in time to come, from having been associated with Livingstone in his last hours.

It can not be conceded for a moment that these poor fellows would have been right in forbidding this examination, when we consider the relative position in which natives and English officers must always stand to each other; but it is a source of regret to relate that the chief part of Livingstone's instruments were taken out of the packages and appropriated for future purposes. The instruments with which all his observations had been made throughout a series of discoveries extending over seven years—aneroid barometers, compasses, thermometers, the sextant, and other things—have gone on a new series of travels, to incur innumerable risks of loss, while one only of his thermometers comes to hand.

We could well have wished these instruments safe in England with the small remnant of Livingstone's personal property, which was allowed to be shipped from Zanzibar.

The doctor had deposited four bales of cloth as a reserve stock with the Arabs, and these were immediately forthcoming for the march down.

The termination here of the ill-fated expedition need not be commented upon. One can only trust that Lieutenant Cameron may be at liberty to pursue his separate investigations in the interior under more favorable auspices. The men seemed to anticipate his success, for he is generous and brave in the presence of the natives, and likely to win his way where others undoubtedly would have failed.

Ill health had stuck persistently to the party, and all the officers were suffering from the various forms of fever. Lieutenant Cameron gave the men to understand that it was agreed Lieuten-

ant Murphy should return to Zanzibar, and asked if they could attach his party to their march; if so, the men who acted as carriers should receive six dollars a man for their services. This was agreed to. Susi had arranged that they should avoid the main path of the Wagogo; inasmuch as, if difficulty was to be encountered anywhere, it would arise among these lawless, pugnacious people.

By making a ten days' *détour* at "Jua Singa," and traveling by a path well known to one of their party, through the jungle of Poli ya vengi, they hoped to keep out of harm's way, and to be able to make the cloth hold out with which they were supplied. At length the start was effected, and Dr. Dillon likewise quitted the expedition, to return to the coast. It was necessary to stop, after the first days' march, for a long halt; for one of the women was unable to travel, they found, and progress was delayed till she, the wife of Chowpéréh, could resume the journey. There seem to have been some serious misunderstandings between the leaders of Dr. Livingstone's party and Lieutenant Murphy soon after setting out, which turned mainly on the subject of beginning the day's march. The former, trained in the old discipline of their master, laid stress on the necessity of very early rising, to avoid the heat of the day, and perhaps pointed out more bluntly than pleasantly, that if the Englishmen wanted to improve their health, they had better do so too. However, to a certain extent, this was avoided by the two companies pleasing themselves.

Making an early start, the body was carried to Kasekéra by Susi's party, where, from an evident disinclination to receive it into the village, an encampment was made outside. A consultation now became necessary. There was no disguising the fact that if they kept along the main road intelligence would precede them concerning that, in which they were engaged, stirring up certain hostility, and jeopardizing the most precious charge they had. A plan was quickly hit upon. Unobserved, the men removed the corpse of the deceased explorer from the package in which it had hitherto been conveyed, and buried the bark case in the hut in the thicket around the village in which they had placed it. The object now was to throw the villagers off their guard, by making believe that they had relinquished the attempt to carry the body to Zanzibar. They feigned that they had abandoned their task, having changed their minds, and that it must be sent back to Unyanyembé, to be buried there. In the mean time the corpse of necessity had to be concealed in the smallest

space possible, if they were actually to convey it secretly for the future: this was quickly managed.

Susi and Chuma went into the wood and stripped off a fresh length of bark from an n'gombe-tree; in this the remains, conveniently prepared as to length, were placed, the whole being surrounded with calico in such a manner as to appear like an ordinary traveling bale, which was then deposited with the rest of the goods. They next proceeded to gather a fagot of mapira-stalks, cutting them in lengths of six feet or so, and swathing them round with cloth, to imitate a dead body about to be buried. This done, a paper, folded so as to represent a letter, was duly placed in a cleft stick, according to the native letter-carrier's custom, and six trustworthy men were told off ostensibly to go with the corpse to Unyanyembé. With due solemnity the men set out. The villagers were only too thankful to see it, and no one suspected the ruse. It was near sundown. The bearers of the package held on their way till fairly beyond all chance of detection, and then began to dispose of their load. The mapira-sticks were thrown, one by one, far away into the jungle, and when all were disposed of, the wrappings were cunningly got rid of in the same way. Going farther on, first one man, and then another sprung clear from the path into the long grass, to leave no trace of footsteps, and the whole party returned by different ways to their companions, who had been anxiously awaiting them during the night. No one could detect the real nature of the ordinary-looking bale, which henceforth was guarded with no relaxed vigilance, and eventually disclosed the bark coffin and wrappings containing Dr. Livingstone's body, on the arrival at Bagamoio. And now, devoid of fear, the people of Kasekéra asked them all to come and take up their quarters in the town—a privilege which was denied them so long as it was known that they had the remains of the dead with them.

But a dreadful event was about to recall to their minds how many fall victims to African disease.

Dr. Dillon now came on to Kasekéra, suffering much from dysentery: a few hours more, and he shot himself in his tent by means of a loaded rifle.

Those who knew the brave and generous spirit in which this hard-working volunteer set out with Lieutenant Cameron, fully hoping to relieve Dr. Livingstone, will feel that he ended his life by an act alien indeed to his whole nature. The malaria imbibed during their stay at Unyanyembé laid upon him the severest form of fever, accompanied by delirium, under which he at length suc-

cumbed in one of its violent paroxysms. His remains are interred at Kasakéra.

We must follow Susi's troop through a not altogether eventless journey to the sea. Some days afterward, as they wended their way through a rocky place, a little girl in their train, named Losi, met her death in a shocking way. It appears that the poor child was carrying a water-jar on her head in the file of people, when an enormous snake dashed across the path, deliberately struck her in the thigh, and made for a hole in the jungle close at hand. This work of a moment was sufficient, for the poor girl fell mortally wounded. She was carried forward, and all means at hand were applied, but in less than ten minutes the last symptom (foaming at the mouth) set in, and she ceased to breathe.

Here is a well-authenticated instance which goes far to prove the truth of an assertion made to travelers in many parts of Africa. The natives protest that one species of snake will deliberately chase and overtake his victim with lightning speed, and so dreadfully dangerous is it, both from the activity of its poison and its vicious propensities, that it is perilous to approach its quarters. Most singular to relate, an Arab came to some of the men after their arrival at Zanzibar and told them that he had just come by the Unyanyembé road, and that, while passing the identical spot where this disaster occurred, one of the men was attacked by the same snake, with precisely the same results; in fact, when looking for a place in which to bury him they saw the grave of Losi, and the two lie side by side.

Natal colonists will probably recognize the mamba in this snake: it is much to be desired that specimens should be procured for purposes of comparison. In Southern Africa so great is the dread it inspires that the Kaffirs will break up a kraal and forsake the place, if a mamba takes up his quarters in the vicinity, and, from what we have seen above, with no undue caution.

Susi, to whom this snake is known in the Shupanga tongue as "bubu," describes it as about twelve feet long, dark in color, of a dirty blue under the belly, with red markings, like the wattles of a cock, on the head. The Arabs go so far as to say that it is known to oppose the passage of a caravan at times. Twisting its tail round a branch, it will strike one man after another in the head with fatal certainty. Their remedy is to fill a pot with boiling water, which is put on the head and carried under the tree. The snake dashes his head into this, and is killed: the story is given for what it is worth.

It would seem that at Ujiji the natives, as in other places, can

not bear to have snakes killed. The "chatu," a species of python, is common, and, from being highly favored, becomes so tame as to enter houses at night. A little meal is placed on the stool, which the uncanny visitor laps up, and then takes its departure: the men significantly say they never saw it with their own eyes. Another species utters a cry, much like the crowing of a young cock; this is well authenticated. Yet another black variety has a spine like a black-thorn at the end of the tail, and its bite is extremely deadly.

At the same time it must be added that, considering the enormous number of reptiles in Africa, it rarely occurs that any one is bitten, and a few months' residence suffices to dispel the dread which most travelers feel at the outset.

No further incident occurred worthy of special notice. At last the coast-town of Bagamoio came in sight, and before many hours were over, one of her majesty's cruisers conveyed the acting consul, Captain Prideaux, from Zanzibar to the spot which the cortége had reached. Arrangements were quickly made for transporting the remains of Dr. Livingstone to the island, some thirty miles distant, and then it became perhaps rather too painfully plain to the men that their task was finished.

One word on a subject which will commend itself to most before we close this long, eventful history.

We saw what a train of Indian sepoy, Johanna men, Nassick boys, and Shupanga canoe-men accompanied Dr. Livingstone when he started from Zanzibar in 1866 to enter upon his last discoveries: of all these, five only could answer to the roll-call as they handed over the dead body of their leader to his countrymen on the shore whither they had returned, and this after eight years' desperate service.

Once more we repeat the names of these men. Susi and James Chuma have been sufficiently prominent throughout—hardly so, perhaps, as Amoda, their comrade ever since the Zambesi days of 1864: then we have Abram and Mabruki, each with service to show from the time he left the Nassick College with the doctor in 1865. Nor must we forget Ntoačka and Halima, the two native girls of whom we have heard such a good character: they cast in their lot with the wanderers in Manyuema. It does seem strange to hear the men say that no sooner did they arrive at their journey's end than they were so far frowned out of notice, that not so much as a passage to the island was offered them when their burden was borne away. We must hope that it is not too late—even for the sake of consistency—to put it on rec-

ord that *whoever* assisted Livingstone, whether white or black, has not been overlooked in England. Surely those with whom he spent his last years must not pass away into Africa again unrewarded, and lost to sight.

Yes, a very great deal is owing to these five men, and we say it emphatically. If the nation has gratified a reasonable wish in learning all that concerns the last days on earth of a truly noble countryman and his wonderful enterprise, the means of doing so could never have been placed at our disposal but for the ready willingness which made Susi and Chuma determine, if possible, to render an account to some of those whom they had known as their master's old companions. If the geographer finds before him new facts, new discoveries, new theories, as Livingstone alone could record them, it is right and proper that he should feel the part these men have played in furnishing him with such valuable matter. For we repeat that nothing but such leadership and staunchness as that which organized the march home from Ilala, and distinguished it throughout, could have brought Livingstone's bones to our land, or his last notes and maps to the outer world. To none does the feat seem so marvelous as to those who know Africa, and the difficulties which must have beset both the first and the last in the enterprise. Thus in his death, not less than in his life, David Livingstone bore testimony to that good-will and kindness which exists in the heart of the African.

THE END.



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