

Lekone, runs westward, and falls into the Zambesi a little above the commencement of the rapids. We passed the remains of a very large town, which must have been inhabited for a long period; for the millstones of gneiss, trap, and quartz were worn down two and a half inches perpendicularly. The region around is pretty well covered with forest: but there is abundance of open pasturage, and as we are ascending in altitude we find the grass short, and altogether unlike the tangled herbage of the Barotse valley.

It is remarkable that we now meet with the same trees we saw in descending towards the west coast. A kind of *sterculia*, which is the most common tree at Loanda, and the baobab, flourish here; as well as the tree called moshuka, which we found near Tala Mungongo, yielding a fruit resembling small apples, but tasting like a pear. We found prodigious quantities of this fruit as we went along, and my men almost lived upon it for many days: the tree attains the height of 15 or 20 feet, and has hard, glossy leaves as large as a man's hand. We also obtained baskets of manéko, a curious fruit about the size of a walnut, with a horny rind, split into five pieces: it contains a fine glutinous matter, sweet as sugar. The seeds are covered with a yellow silky down, and are not eaten. We got also abundance of the *motsouri* and *mamosho*. We saw the *Batoka* eating the beans called *nju*, which are contained in a large square pod; also the pulp between the seeds of *nux vomica*, and the *motsintséla*. Other fruits become ripe at other seasons, as the *motsikiri*, which yields an oil—a magnificent tree, bearing masses of dark evergreen leaves. We saw trees allowed to stand in gardens, and some of the *Batoka* even plant them—a practice seen nowhere else among natives. A species of *leucodendron* abounds, the young leaves of which were observed to twist themselves round during the heat of the day, so as to expose only the edge to the rays of the sun. The acacias in the same circumstances, and also the mopane (*Bauhinia*), fold their leaves together, presenting the smallest possible surface to the sun, after the manner of the eucalypti of Australia. In the adjacent country palms abound, but none of the species which yield the oil; there are numbers of flowers and bulbs just shooting up from the soil, and, though

the country is parched, it has not that appearance, as many trees have put forth their fresh green leaves. Among the rest stands the mola, with its dark brownish-green colour and spreading oak-like form.

CHAPTER XXVII.

NATURAL HISTORY AND GEOLOGY.—THE MOZUMA.—THE BATOKA, AND THEIR CHIEF MONZE.

November 27th.—STILL at Marimba's. The surface of the country is rough and broken into gullies, and in the distance there are ranges of low hills, of which we may notice one on the north called Kanjele, and one on the east named Kaonka. We have made a considerable détour to the north, from the double wish of avoiding the tsetse and visiting the people. As I was walking down to the forest to-day I observed many regiments of black soldier-ants returning from a marauding expedition. I have often noticed these in different parts of the country; and as we had even at Kolobeng an opportunity of observing their habits, I may give a short account of them here. They are black, with a slight tinge of grey, about half an inch in length, and march three or four abreast; when disturbed, they utter a distinct hissing or chirping sound. They follow a few leaders who never carry anything, and they seem to be guided by a scent left on the path by these leaders; for happening once to throw some water on the ground, it lighted on the path by which a regiment had recently passed, and when they returned they were totally at fault, and, after hunting about for nearly half an hour, only rediscovered the path by one of them making a long circuit round the wetted spot. If a handful of earth is thrown on the path as a regiment is in the act of passing either on its way home or abroad, those behind will not cross it, though it be not a quarter of an inch high. They wheel round and regain their path again, but never think of retreating to the nest, or to the place where they have been stealing. After a quarter of an hour's confusion and hissing, one at length makes a

circuit round the earth, and then all follow in that roundabout way. When they approach the abode of the white ants, the latter may be observed rushing about in a state of the greatest perturbation. The black leaders, distinguished from the rest by their greater size, especially in the region of the sting, seize the white ants one by one, and inflict a sting which renders them insensible but not dead. As the leaders toss them on one side, the rank and file seize them and carry them off.

One morning I saw a party going forth on what has been supposed to be a slave-hunting expedition. They came to a stick, which, being enclosed in a white-ant gallery, contained numbers of this insect; but I was surprised to see the black soldiers passing without touching it. I lifted up the stick and laid it across the path in the middle of the black regiment, to the consternation of the white ants, who scampered about with great celerity, hiding themselves under the leaves. The black marauders at first paid little attention to them, until one of the leaders caught them, and, applying his sting, laid them in an instant on one side in a state of coma; the others then promptly carried them off. On first observing these marauding insects at Kolobeng, I had the idea, imbibed from a work of no less authority than Brougham's Paley, that they seized the white ants in order to make them slaves; but the result of my own observation is that these black ruffians are a grade lower than slave-masters, being actual cannibals. For, in the first place, I have watched black ants hard at work removing their eggs to a place of safety, and, though every ant in the colony, to the number of 1260, seemed to be employed in this laborious occupation, yet there was not a white slave-ant among them. And, in the second place, I have observed the cannibal propensities of the black ant; for, on one occasion, I met with a band of them returning each with his captive, minus a leg which had been already devoured. In addition to this, if any one examine the orifice by which the black ant enters his barracks, he will always find a little heap of hard heads and legs of the white ants. Were it not for the black ant, the white ants would soon overrun the country, so prolific are they. The fluid in the stings of this species has an intensely acid taste.

I had often before noticed the stupefaction produced by the injection of a fluid from the sting of certain insects. It is particularly observable in a hymenopterous insect called the "plasterer" (*Pelopæus Eckloni*), which in its habits resembles somewhat the mason-bee. It is about an inch and a quarter in length, jet-black in colour, and may be observed coming into houses, carrying in its fore-legs a pellet of soft plaster about the size of a pea. When it has fixed upon a convenient spot it forms a cell about the same length as its body, plastering the walls so as to be quite thin and smooth inside. When this is finished it brings seven or eight caterpillars or spiders, each of which is rendered insensible by the fluid from its sting. These it deposits in the cell, together with one of its own larvæ, which, as it grows, finds fresh food ready for its use. The insects are in a state of coma, but the presence of vitality prevents putridity, or desiccation. By the time the young insect is full grown and its wings completely developed, the food is done. It then pierces the wall of its cell at the place last filled up by its parent, and begins life for itself. The plasterer is a most useful insect, as it checks the inordinate increase of caterpillars and spiders. It may often be seen dragging along a caterpillar or even a cricket much larger than itself, but lying perfectly still after the injection of the poison. The fluid in each case is, I suppose, designed to cause insensibility and likewise act as an anti-septic, the death of the victims being without pain.

The white ants perform a most important part in the economy of nature, by burying decaying vegetable matter quickly beneath the soil, just as the ferocious red ant does dead animal substances. The white ant keeps generally out of sight, and works under galleries constructed by night, to screen them from the observation of birds. At some given signal, however, though I never could ascertain what, they rush out by hundreds, and the sound of their mandibles cutting grass into lengths may be heard like a gentle wind murmuring through the leaves of the trees. They drag these pieces to the doors of their abodes, and after some hours' toil leave off work, leaving many of the bits of grass collected around the orifice. They continue out of sight for perhaps a month, but are never idle. On one occasion a good bundle of

grass was laid down for my bed on a spot which was quite smooth and destitute of plants. The ants at once sounded the call to a good supply of grass. I heard them incessantly nibbling and carrying away all that night; and they continued all next day and night with unabated energy, and yet, after thirty-six hours of incessant toil, they seemed as fresh as ever. In some situations, if we remained a day, they devoured the grass beneath my mat, and would have eaten the mat too, had we not laid down more grass. At some of their operations they beat time in a curious manner. Hundreds of them are engaged in building a large tube, and at a signal they all give three or four energetic beats on the plaster in unison, in order to beat it smooth, producing a sound like the pattering of drops of rain off a bush when it is shaken. These insects are the chief agents employed in forming a fertile soil, and, were it not for their labours, the tropical forests, had as they now are with fallen trees, would be a thousand times worse. They would be impassable on account of the heaps of dead vegetation lying on the surface, and emitting worse effluvia than the comparatively small unburied collections now do. When one looks at the wonderful adaptations throughout creation, and the varied operations carried on with such wisdom and skill, the idea of second causes looks clumsy. We feel that we are viewing the direct handiwork of Him who is the one and only Power in the universe; wonderful in counsel; in whom we all live and move and have our being.

November 28th.—We proceeded to Kaonka's village, situated on the hill of the same name already referred to. According to Sekeletu's order, Kaonka gave us the tribute of maize-corn and ground-nuts, which would otherwise have gone to Linyanti. This had been done at every village, and we thereby saved the people the trouble of a journey to the capital. After leaving Kaonka we travelled over a gently undulating and beautiful district, forming the border territory between those who accept, and those who reject, the sway of the Makololo. There are no rivers, though water stands in pools in the hollows. The soil is dry, and suited both for cattle and corn; there are few trees, but fine large shady ones stand dotted here and there about the former sites of towns. One of the

fig family I found to be forty feet in circumference; the heart had been burned out, and some one had made a lodging in it. The sight of the open country, with the increased altitude we were attaining, was most refreshing to the spirits. The country is now uninhabited, and hence game abounded. We saw in the distance buffaloes, elands, hartebeest, gnus, and elephants, all very tame, because undisturbed. Lions, which always accompany other large animals, roared about us in the moonlight, and one began to roar at me, even while it was still light. The temperature was pleasant, as the rains, though not universal, had fallen in many places. The thermometer stood at 70° in the morning, at 90° at noon, and at 84° in the evening. The different rocks to the westward of Kaonka's, talcose gneiss, and white mica schist, generally dip towards the west, but at Kaonka's large rounded masses of granite, containing black mica, began to appear. The outer rind of it inclines to peel off, and large crystals project from the exposed surface.

After a good shower of rain the piercing notes of the cicadæ are perfectly deafening; a drab-coloured cricket joins the chorus with a sharp sound which seems to make the ground over it thrill, and which has as little modulation as the drone of a Scottish bagpipe. When cicadæ, crickets, and frogs unite, their music may be heard at the distance of a quarter of a mile. A tree attracted my attention as new, the leaves being like those of an acacia, but the ends of the branches from which they grew closely resembled oblong fir-cones. The corn poppy was abundant, and many of the trees, flowering bulbs, and plants, were identical with those in Pungo Andongo. A flower, as white as the snowdrop, named by the natives, from its shape, "Tlaku ea pitse" (hoof of zebra), spots the sward with its beautiful pure white. A fresh crop appears every morning, and if the day is cloudy they do not expand till the afternoon, and in an hour or so droop and die. I carried several of the somewhat bulbous roots of this pretty flower to the Mauritius.

On the 30th we crossed the river Kalomo, here about 50 yards broad, and the only stream that never dries up on this ridge. The current is rapid, and its course is towards the south, as it joins the Zambezi at some distance below the falls. The change in the direction of the streams, the Unguesi and

Lekone flowing westward, proved to us that we were now standing on the apex of the ridge, the height of which above the sea we found to be above 5000 feet. Here the granite crops out again in great rounded masses which change the dip of the gneiss and mica schist rocks from the westward to the eastward. Both eastern and western ridges are known to be comparatively salubrious, and in this respect, as well as in the general aspect of the country, they resemble that most healthy of climates, the interior of South Africa adjacent to the Desert. This ridge has neither fountain nor marsh upon it, and east of the Kalomo we look upon treeless undulating plains covered with short grass. It is continued in a S.E. direction across the Zambesi to a point about four days east of Matloktloko, the present residence of Mosilikatse, where it assumes the name of the Mashona tribe.

The ridge on which we were now standing, and which forms the eastern limit of the great central basin of Africa, is distant from the western one about 600 geographical miles. I cannot hear of a hill on either ridge, and there are scarcely any in the space enclosed by them. The Monakadze is the highest, but that is not more than a thousand feet above the flat valley. On account of this want of hills I have adopted the term *ridges* to describe the gradual elevations which I have been noticing. We shall yet see that the mountains which are met with outside these ridges are only a low fringe, many of which are not of much greater altitude than even the bottom of the great central valley. Leaving out of view the greater breadth of the central basin at other parts, we might say that its form in this region resembles a broad furrow in the middle, with an elevated ridge about 200 miles broad on either side, whence the land slopes on both sides to the sea. If I am right in believing the granite to be the cause of the elevation of this ridge, the direction in which the strike of the rocks trends to the N.N.E. may indicate that the same geological structure prevails farther north, and in this case the lakes which exist in that direction may be of exactly the same nature with lake Ngami, having been diminished to their present size by the same kind of agency as that which formed the falls of Victoria.

On the Kalomo we met an elephant which had no tusks, as

rare a sight in Africa as one with tusks is in Ceylon. Buffaloes abound, and we see large herds of them feeding in all directions by day. When much disturbed they retire into the densest parts of the forest, and come out to feed only by night. We secured a fine large bull by crawling close to a herd; when shot, he fell down, and the rest, not seeing their enemy, gazed about, wondering where the danger lay. Most wild animals gore a wounded companion and expel him from the herd; even zebras bite and kick a diseased one. It is intended by this instinct that none but the perfect and healthy ones should propagate the species. In this case they manifested their usual propensity to gore the wounded, but our appearance at that moment caused them to take flight. The goring gave my men the impression that they were helping away their wounded companion with brotherly affection. He was shot through both lungs; but though the ball was two ounces in weight, and had penetrated right through his body, he ran off some distance, and was secured only by the people driving him into a pool of water and there despatching him with their spears. The herd ran away in the direction of our camp, and then came bounding past us again. We took refuge on a large anthill; and as they rushed by us at full gallop I observed that the leader of the herd was an old cow, carrying on her withers about twenty buffalo-birds (*Teator erythrorhynchus*, Smith). This singular bird acts the part of guardian spirit to the buffalo: when the animal is quietly feeding, it may be seen hopping on the ground picking up food, or sitting on the buffalo's back ridding it of the insects with which its skin is sometimes infested. When danger approaches, the bird, having a much more acute sight than the buffalo, is soon alarmed, and flies off, upon which the buffalo instantly raises his head to discover the cause which has led to the sudden flight of his guardian. It sometimes accompanies the buffalo in its flight on the wing, and at other times sits as above described. Another African bird, called "kala" by the Bechuanas, the *Buphaga Africana* of the naturalists, attends the rhinoceros for a similar purpose. It cannot be said to depend entirely on the insects on that animal, for its hard hairless skin is a protection against all except a few spotted ticks; but it seems to be attached to it,

somewhat as the domestic dog is to man; and while the buffalo is alarmed by the sudden flying up of its sentinel, the rhinoceros, having an acute ear, is warned by the cry of its associate. The rhinoceros feeds by night, and its sentinel is frequently heard in the morning uttering its well-known call as it searches for its bulky companion. One species of this bird possesses a bill of a peculiar forceps form, as if intended to tear off insects from the skin, and has claws as sharp as needles, enabling it to hang on to an animal's ear while performing a useful service within it. Both the birds, however, that we have just described, partake of other food than the parasitical insects of the animals they are attached to, for we observed flocks of them roosting on reeds in spots where neither tame nor wild animals were to be found.

The "leader" is generally the most wary animal in a herd. On one occasion I happened to shoot a young zebra mare, the leader of a herd, and it turned out that it had been at some previous time bitten on the hind leg by a carnivorous animal, and thereby made unusually wary. If wild animals see either one of their own herd or any other animal taking to flight, they invariably flee, and hence the most timid naturally leads the rest. It is not any other peculiarity, but simply this provision, which is given them for the preservation of the race. The great increase of wariness which attends the season of parturition causes all the leaders at that time to be females; and perhaps the separation of sexes into distinct herds, which is annually observed in many antelopes, arises from the simple fact that the greater caution of the females is felt only by the young males, and that the old males get left behind in their frequent flights. I am inclined to believe this, because the antelopes, as the pallahs, &c., are never seen in the act of expelling the males. There may be some other reason in the case of elephants; but the males and females are never seen in one herd, the young males remaining with their dams only until they are full grown. So constantly is the separation maintained, that any one familiar with them, on seeing a picture with the sexes mixed, would immediately conclude that the artist had drawn it from imagination, and not from sight.

December 2, 1855.—We remained near a small hill, called

Maundo, where we were frequently invited by the honey-guide (*Cuculus indicator*). Wishing to ascertain the truth of the native assertion that this bird is a deceiver, and sometimes leads to a wild beast, I inquired of my men the result of their experience. Only one of the 114 could say that he had been led to an elephant instead of a hive, and I am quite convinced that the report was a libel on the bird, and that the majority of people who commit themselves to its guidance are led to honey alone.

On the 3rd we crossed the Mozuma, or river of Dila, having travelled through an undulating pastoral country. To the south, and a little east of this, stands the hill named Taba Cheu, or "White Mountain," from a mass of white rock, probably dolomite, on its top. When I heard the height of this mountain described at Linyanti, I thought the glistening substance might be snow; but I had quite forgotten that I was speaking with men who had been accustomed to plains, and knew nothing of high mountains. When I inquired what the white substance was, they at once replied it was a kind of rock. The distant views which we obtained from the high ground we were now traversing, and which ranged over some thirty miles, were especially refreshing to me after travelling for months together amid the confined views of the flat forest; nor was the change from the tangled rank herbage of the great valley to the short grass of this district less agreeable.

The Mozuma, or river of Dila, was the first watercourse which indicated that we were now on the slopes inclined towards the eastern coast. It contained no flowing water, but revealed in its banks, to my great satisfaction, pieces of lignite, possibly indicating the existence of coal, the want of which in the central country I had always deplored. Again and again we came to the ruins of large towns, containing the only indications of antiquity to be seen in this country, viz. worn millstones, with the round ball of quartz with which the grinding was effected. Great numbers of these balls were lying about, showing that the depopulation had been the result of war, for in time of peace they would have taken the balls with them. At the river of Dila we saw the spot where Sebituane lived, and Sekwebu pointed out the heaps of bones of cattle which the Makololo had been obliged to slaughter,

after performing a march with great herds captured from the Batoka, through a patch of the fatal tsetse. The country was at that time exceedingly rich in cattle, and, being well watered from its position on the eastern side of the range, it is adapted for the cultivation of native produce. Sekwebu had been instructed to point out to me the advantages of this position for a settlement; I admired it myself, and the enjoyment of good health in fine open scenery had an exhilarating effect on my spirits. The great want was population, the Batoka having all taken refuge in the hills.

As we were now in the vicinity of those whom the Makololo deem rebels, we felt some anxiety as to the style of our reception. On the 4th we reached their first village. Remaining at a distance of a quarter of a mile, we sent two men to inform them who we were, and that our purposes were peaceful. The head-man came and spoke civilly, but in the evening the people of another village behaved very differently. They began by trying to spear a young man who had gone for water. They then approached us, and one came forward howling at the top of his voice in the most hideous manner; his eyes protruding, his lips covered with foam, and every muscle of his frame quivering. He came close up to me, brandishing a small battle-axe in his hand, much to the alarm of my men; but they dared not disobey my orders by knocking him on the head. I also felt some alarm, but disguised it from the spectators, and kept a sharp look-out on the little battle-axe. It seemed to me a case of extacy or prophetic frenzy voluntarily produced. After my courage had been sufficiently tested I beckoned to the civil head-man to remove him, and he drew him aside. This man pretended not to know what he was doing. I should like to have felt his pulse, to ascertain whether the violent trembling were not feigned, but I had little inclination to approach the battle-axe again. There was however a flow of perspiration, and the excitement, after continuing fully half an hour, gradually subsided. This second batch of visitors took no pains to conceal their contempt for our small party, saying to each other in a tone of triumph, "They are quite a God-send!" "They are lost among the tribes!" "They have wandered in order to be destroyed, and what can they do without shields among so

many?" As Sekeletu had ordered my men not to take their shields, as in the case of my first company, we were regarded as unarmed, and consequently as an easy prey. We prepared against a night attack by discharging and reloading our guns which were exactly the same in number (five) as on the former occasion: we were not molested however. Some of the enemy tried to lead us towards the Bashukulompo, who are considered the fiercest race in this quarter; but as we knew our direction to the confluence of the Kafue and Zambesi, we declined their guidance. When we resumed our march the civil head-man accompanied us, and did good service by explaining to the crowds of natives that hovered round us our character and intentions; we thus escaped molestation. That night we slept by a little village under a low range of hills which are called Chizamena. The country here was more woody than on the high lands we had left, but the trees were in general of only moderate size. Great numbers of them have been broken off by elephants a foot or two from the ground, in order that they may feed on the tender shoots at the tops: the trees thus seem pollarded from that point. In spite of this practice, the elephant never seriously lessens the number of trees; indeed I have often been struck by the very little damage he does in a forest. His food consists for the most part of bulbs, tubers, roots, and branches: the natives in the interior believe that he never touches grass, and the only instance I saw of his having grazed was near Tete, when the grass was in seed, and when he might have been attracted by the farinaceous matter, which exists in such quantities in the seed that the natives collect it for their own food. The country abounded in ant-hills, which in the open parts are studded over the surface like haycocks, while in the woods they attain the size of haystacks, 40 or 50 feet in diameter at the base, and at least 20 feet high. These spots are more fertile than the rest of the land, and are the chief garden-ground for maize, pumpkins, and tobacco.

When we had passed the outskirting villages, which alone consider themselves in a state of war with the Makololo, we found the Batoka, or Batonga, as they call themselves, quite friendly. Great numbers of them came from all the surrounding villages with presents of maize and masuka, ex-

pressing great joy at the first appearance of a white man. The women clothe themselves better than the Balonda, but the men walk about *in puris naturalibus* without the smallest sense of shame. They have even lost the tradition of the "figleaf." The further we advanced, the more the country swarmed with inhabitants. Great numbers came to see the novel spectacle of a white man, and brought presents of maize and masuka. Their mode of salutation is singular; they throw themselves on their backs on the ground, and, rolling from side to side, slap their thighs, uttering the words, "Kina bomba." This was to me a very disagreeable sight, and I used to call out "Stop, stop! I don't want that;" but, imagining me to be dissatisfied, they only tumbled about more furiously and slapped their thighs with greater vigour.

A large amount of ground in this quarter was covered with masuka-trees, and my men kept constantly eating the pleasant fruit as we marched along. We saw a smaller kind of the same tree named Molondo, the fruit of which is about the size of marbles, having a tender skin, and a slight acidity mingled with its sweetness. Another tree which is said to yield good fruit is named Sombo, but it was not ripe at this season.

December 6th.—We passed the night near a series of villages. The villagers supplied us abundantly with ground-nuts, maize, and corn, and expressed great satisfaction on hearing me speak of Him whose word is "Peace on earth and good will to men." They called out, "We are tired of flight; give us rest and sleep." They did not of course understand the full import of the message, but they eagerly seized the idea of peace. And no wonder; for their country has been visited by successive scourges during the last half-century, and they are now "a nation scattered and peeled." When Sebituane came the cattle were innumerable, and yet these were only the remnants which had been left by a chief called Pingola, who came from the north-east, and, actuated by a simple love of conquest, swept across the whole territory, devouring oxen, cows, and calves, without retaining a single head. After Pingola came Sebituane, and after him the Matebele of Mosilikatse; and these successive inroads have reduced the Batoka to a state in which they naturally rejoice at the prospect of deliverance and peace.

We spent Sunday the 10th at Monze's village, who is considered the chief of all the Batoka we have seen. He lives near the hill Kisekise, whence we had a view of at least thirty miles of open undulating country, covered with short grass, and having but few trees. These open lawns would in any other land be turned to good account as pasture, but the people have now only a few goats and fowls. They are located all over the country in small villages, and are said to have adopted this wide-spread mode of habitation in order to give alarm should any enemy appear. In former times they lived in large towns. In the distance (S.E.) we see ranges of dark mountains along the banks of the Zambesi, and are told of the existence there of a rapid named Kansala, which is said to impede the navigation. The river is reported to be placid between that and the Victoria Falls up stream, and between that and Kebrabasa, twenty or thirty miles above Tete, down stream. On the north we have a distant range of mountains, said to be on the banks of the Kafue.

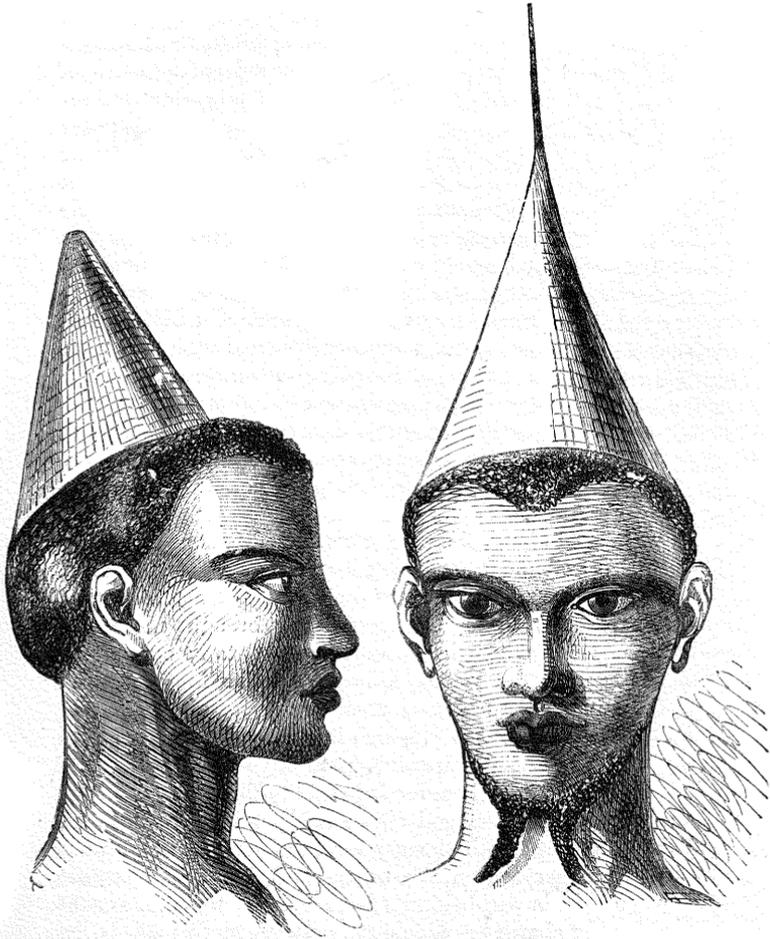
The chief Monze came to us on Sunday morning, wrapped in a large cloth, and rolled himself about in the dust, screaming "Kina bomba." One of his wives accompanied him, and was much excited at her first sight of a white man; she would have been comely if her teeth had been spared; she carried a little battle-axe in her hand, and helped her husband to scream. We rather liked Monze, for he soon became sociable, and kept up conversation during the greater part of the day. One head-man of a village after another arrived, each with a liberal supply of maize, ground-nuts, and corn. Monze gave us a goat and a fowl, and appeared highly satisfied with a present of some handkerchiefs of printed cotton; when I put a gaudy-coloured one as a shawl about his child, he said that he would send for all his people to make a dance about it. When I told them that my object was to open up a path, whereby they might avoid the guilt of selling their children, and asked Monze and his men if they would like a white man to live amongst them, they all expressed high satisfaction, and promised to protect both the white man and his property. It would be of great importance to have stations in this healthy region, to serve as part of a chain of communication between the interior and the coast. Monze had never been visited by

any white man, but had seen black native traders, who came for ivory, not for slaves. He had heard of white men passing far to the east of him to Cazembe, referring, no doubt, to Pereira, Lacerda, and others, who have visited that chief.

The streams in this part are not perennial; I did not observe one suitable for the purpose of irrigation. With the exception of large single trees, or small clumps of ever-greens, there is little wood; but the abundance of maize and ground-nuts shows that more rain falls here than in the Bechuana country, where they never attempt to raise maize except in damp hollows on the banks of rivers. My own men, who know the land thoroughly, declare that it is all adapted for garden-ground, and that the more tender grains, which require richer soil than the native corn, thrive here. The pasturage is also very fine both for cattle and sheep.

We were visited by a party of men who dressed their hair after the fashion of the Bashukulompo. A circle of hair at the top of the head, eight inches or more in diameter, is woven into a cone eight or ten inches high, bent in some cases a little forward, so as to bear the appearance of a helmet. In some cases the cone is only four or five inches in diameter at the base. The hair of animals is said to be added, and the sides of the cone are woven like basket-work. The head-man of the party, instead of having his brought to a point, had it prolonged into a wand, which extended a full yard from the crown of his head. The operation of weaving is painful, as the scalp is drawn tightly up; but they become used to it. Monze presented us on parting with a piece of a buffalo which had been killed the day before by lions. We crossed the rivulet Makoe, which runs westward into the Kafue, and went northwards in order to visit Semalembue, an influential chief there. We slept at the village of Monze's sister, who also passes by the same name. Both he and his sister have a feminine appearance, but are disfigured by the foolish custom of knocking out the upper front teeth.

December 12th.—The morning presented the appearance of a continuous rain from the north, the first time we had seen it set in from that quarter in such a southern latitude. It cleared up, however, about midday, and Monze's sister conducted us a mile or two upon the road. On parting she



Bashukulompo mode of wearing the hat

said that she had forwarded orders to a distant village to send food to the point where we should sleep. In expressing her joy at the prospect of living in peace, she remarked, "How pleasant it would be to sleep without dreaming of any one pursuing them with a spear!"

In our front we had ranges of hills called Chamai, covered with trees. We crossed the rivulet Nakachinta, flowing eastwards into the Zambesi, and then traversed some ridges of rocks of the same mica schist which we found so abundant in Golungo Alto. The dip, however, of these is not towards the centre of the continent as in Angola, but in an easterly direction. The hills which flank the Zambesi now appeared on our right as a high dark range, while those near the Kafue had the aspect of a low broken range. We crossed two perennial rivulets flowing into the Kafue. The country is very fertile, but vegetation is nowhere rank. We had now descended to a comparatively low elevation, and had left behind us the masuka-trees, and many others with which we had become familiar. We occasionally noticed a feature common in the forests of Angola and Benguela, namely the presence of orchilla-weed and lichens on the trees, with mosses on the ground; but we never, on any part of the eastern slope, saw the abundant crops of ferns which are so universal in Angola.

As we passed along, the people continued to supply us with food in great abundance. They had somehow learnt that I carried medicine, and, much to the disgust of my men, who wished to keep it all to themselves, they brought their sick children, some of whom had hooping-cough, to be cured. In passing through the woods I heard for the first time the cry of the bird called Mokwa reza, or "Son-in-law of God" (*Micropogon sulphuratus*?), which is supposed by the natives to say "Pula, pula" (rain, rain), predictive of heavy falls of rain. It may be a cuckoo, for it is said to throw out the eggs of the white-backed Senegal crow, and lay its own instead, and this, combined with the cry for rain, renders the bird a favourite. The crow, on the other hand, has a bad repute, and, when rain is withheld, its nests are destroyed, in order to dissolve the charm by which it is supposed to seal up the windows of heaven.

CHAPTER XXVIII.

NOTICES OF THE ELEPHANT.—THE CHIEF SEMALEMBUE.—THE KAFUE.
—ALBINOS.—THE CHIEF MBURUMA.

13th.—THE country is becoming very beautiful, and furrowed by deep valleys; the underlying rocks, being igneous, yield a fertile soil. There is abundance of large game; the buffaloes select open spots, and often eminences, as their haunts throughout the day. We crossed the Mbai, and found in its bed, as well as on the adjacent hills, rocks of fine marble. Violent showers occur frequently on the hills, and cause such sudden floods in the rivulets, that five of our men who had crossed some for firewood were obliged to swim back. The temperature of the air is considerably lowered by the daily rains, the thermometer having been as low as 68° at sunrise, and 74° at sunset. Generally, however, it stood at from 72° to 74° at sunrise, 90° to 96° at midday, and 80° to 84° at sunset.

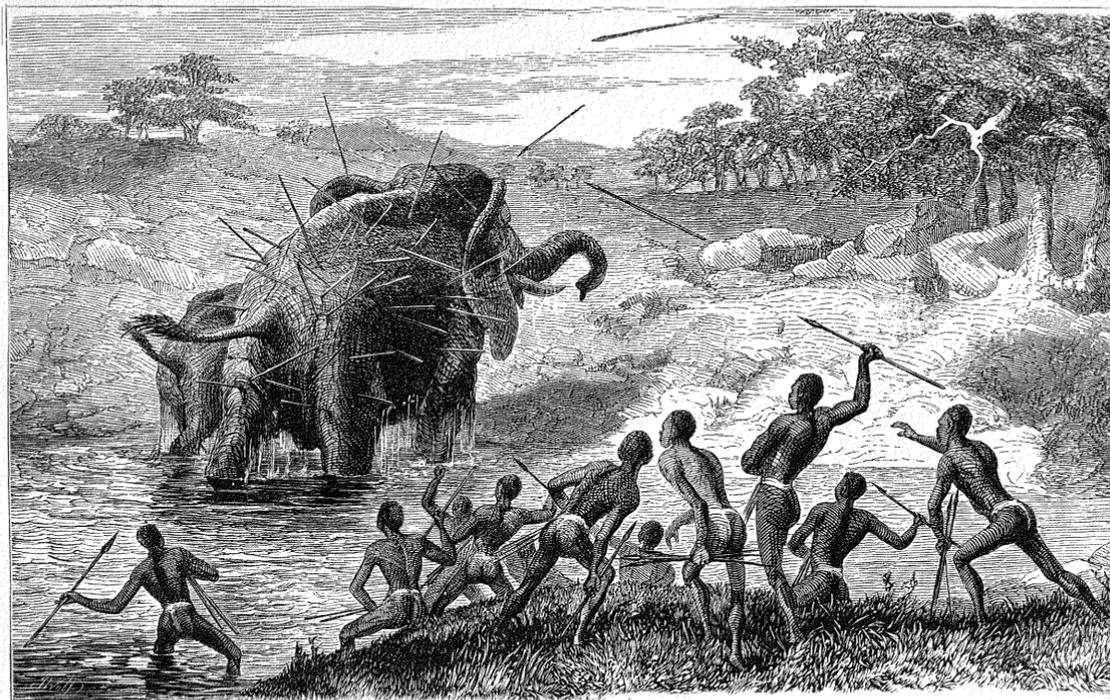
14th.—We entered a most beautiful valley, abounding in large game. I went to secure a buffalo which I saw lying down. Three balls failed to kill him, and, as he turned round as if for a charge, we sought the shelter of some rocks, but, before gaining them, three elephants, probably attracted by the strange noise, threatened to cut off our retreat: they, however, turned short off, and allowed us to gain the rocks. We then saw that the buffalo was moving off quite briskly, and in despair I tried a long shot at the last of the elephants, and broke his foreleg. The young men soon brought him to a stand, and one shot in the brain despatched him. I was right glad to see the joy manifested at such an abundant supply of meat.

On the following day, while my men were cutting up the elephant, great numbers of the villagers came to enjoy the feast. We were on the side of a fine green valley, studded here and there with trees, and furrowed with numerous rivulets. Having retired from the noise to take an observation, I beheld an elephant and her calf at the end of the valley, about two miles distant. The calf was rolling in the

mud, and the dam was standing fanning herself with her great ears. As I watched them through my glass I saw a long string of my men circumventing them, who, according to Sekwebu, had gone off, saying, "Our father will see to-day what sort of men he has got." I then went higher up the side of the valley, in order to have a distinct view of their mode of hunting. The goodly beast, totally unconscious of the approach of an enemy, stood for some time suckling her young one, which seemed about two years old; they then went into a pond of mud, and smeared themselves all over with it, the little one frisking about his dam in elephantine fashion, while she kept flapping her ears and wagging her tail, as if in the height of enjoyment. Then began the piping of her enemies, which was performed by blowing into a tube, or between the closed hands. They call out to attract the animal's attention—

"O chief! chief! we have come to kill you.
O chief! chief! many more will die beside you, &c.
The gods have said it," &c. &c.

Both animals expanded their ears and listened, then left their bath as the crowd rushed towards them. The little one ran forward towards the end of the valley, but, seeing the men there, returned to his dam, who then placed herself on the danger side of her calf, and passed her proboscis over it again and again, as if to assure it of safety. The men, still shouting, singing, and piping, kept about a hundred yards in her rear and on her flanks, until she was obliged to cross a rivulet. The time spent in descending and getting up the opposite bank allowed of their coming up to the edge, and discharging their spears at about twenty yards' distance. After the first discharge she appeared with her sides red with blood, and, beginning to flee for her own life, seemed to think no more of her calf, which soon took refuge in the water, and was killed. The pace of the dam gradually became slower, and at length, turning with a shriek of rage, she made a furious charge back among the men. They vanished sideways, while she ran straight on through the whole party, without coming near any one except a man who wore a piece of cloth on his shoulders. She charged three or four times, and, except in



FEMALE ELEPHANT PURSUED WITH JAVELINS, PROTECTING HER YOUNG.

the first instance, never went farther than 100 yards. She often stood after she had crossed a rivulet, and faced the men, though she received fresh spears. It was by this process of spearing and loss of blood that she was killed, for at last, making a short charge, she reeled and sank down dead in a kneeling posture. I did not see the whole hunt, having been tempted away by both sun and moon appearing unclouded. I turned from the spectacle of the destruction of these noble animals, which might be made so useful in Africa, with a feeling of sickness, unrelieved by the recollection that the ivory was mine.

The furious charges of this elephant remind me of an adventure of one who has had more narrow escapes than any man living, but whose modesty has always prevented him from publishing anything about himself. When we were on the banks of the Zouga in 1850 Mr. Oswell pursued one of these animals into the dense thorny bushes on the margin of the river; as he followed through a narrow pathway, he saw the elephant, whose tail he had but got glimpses of before, now rushing towards him. There was then no time to effect a passage; the hunter therefore tried to dismount, but in doing this he was thrown on the ground with his face upwards to the elephant, which, being in full chase, still went on. Mr. Oswell, seeing the huge fore foot of the animal about to descend on his legs, parted them, and drew in his breath as if to resist the pressure of the other foot, which he expected would next descend on his body. He saw the whole length of the enormous brute pass over him, and escaped unhurt.

The first elephant killed by my men was a male, not full grown; his height at the withers was 8 feet 4 inches, and the circumference of his fore foot 44 inches. The female, which was full grown, measured in height 8 feet 8 inches, the circumference of the fore foot being 48 inches. These details are given with the view of showing that the general rule, that twice the circumference of the fore foot equals the height of the animal, is not of universal application; for, in the first instance, double the circumference falls short of the height by twelve inches, and in the second instance by eight inches. Subsequent observations, however, proved the general correct-

ness of the rule with regard to full-grown animals. The greater size of the African elephant in the south would at once distinguish it from the Indian one; but here they approach more nearly to each other in bulk, a female being about as large as a common Indian male. But the ear of the African is an external mark which no one will mistake even in a picture. That of the female now killed was 4 feet 5 inches in depth, and 4 feet in horizontal breadth, and I have seen a native creep under one so as to be quite covered by it. The ear of the Indian variety is not more than a third of this size. The representation of elephants on ancient coins shows that this important characteristic was distinctly recognised; indeed, Cuvier remarked that it was more familiar to Aristotle than to Buffon.

Having been anxious to learn whether the African elephant had ever been tamed, I am enabled to give the reader conclusive evidence on this point. For in two medals represented in Admiral Smyth's 'Descriptive Catalogue of his Cabinet of Roman and Imperial large Brass Medals,' tame elephants are



introduced, the ears of which mark them out as belonging to the true African variety. One of the coins is of Faustina senior, the other of Septimius Severus, struck A.D. 197. The attempt to tame this most useful animal has never been made at the Cape, nor has a specimen ever been exhibited in England.

The abundance of food in this country, as compared with the south, would lead one to suppose that animals here must attain a much greater size; but actual measurement now confirms the impression made on my mind by the mere sight

of the animals, that those in the districts north of 20° are smaller than the same races existing southward of that latitude. The full-grown male elephants on the river Zouga seemed no larger than the females on the Limpopo, while here they are even smaller than on the Zouga. There is, however, an increase in the size of the tusks as we approach the equator. The koodoos again were so much smaller than those we had been accustomed to in the south, that we doubted whether they were not a new kind of antelope; and the leche is succeeded to the north of 20° by the poku, a smaller species of the same antelope. A similar difference in size prevails also among domestic animals; but the influence of locality on them is not so well marked. The cattle of the Batoka, for instance, are much smaller than the aboriginal cattle in the south; but it must be added that those of the Barotse valley, in the same latitude as the Batoka, are large. The breed may have come from the west, as the cattle within the influence of the sea air, and along that coast, are very large. Those found at lake Ngami, with large horns and standing 6 feet high, probably come from the same quarter. The goats are also small, and domestic fowls very small, and so also are the native dogs, with the exception of the Barotse breed, which are large savage-looking animals. It is a little remarkable that a decrease in size should occur where food is the most abundant; but tropical climates seem unfavourable for the full development of either animals or man. In estimating the amount of food necessary for large animals, sufficient attention has not been paid to the kinds chosen. The elephant, for instance, is a most dainty feeder, and particularly fond of certain sweet-tasted trees and fruits, such as the mohonono, the mimosa, and other trees which contain much saccharine matter, mucilage, and gum. He may be seen putting his head to a lofty palmyra, and swaying it to and fro to shake off the seeds; he then picks them up singly and eats them. Or he may be seen standing by the masuka and other fruit trees, patiently picking off the sweet fruits one by one. The selection of these kinds of food accounts for the fact that herds of elephants produce but small effect upon the vegetation of a country—quality being more requisite to them than quantity.

After leaving the elephant valley we passed through a very beautiful but thinly inhabited country. The underlying rock is trap, which is often seen tilted on its edge, or dipping a little either to the north or south. The strike is generally to the N.E., the direction we are going. About Losito we found the trap had given place to hornblende schist, mica schist, and various schorly rocks. We had now come into the region in which the appearance of the rocks conveys the impression of great force having acted along the bed of the Zambesi. Indeed, from the manner in which the rocks have been thrust away on both sides from its bed, I was led to the belief that the power which formed the crack of the falls had opened a bed for the river all the way from the falls to beyond the gorge of Lupata.

Passing the rivulet Losito, we reached, on the 18th, the residence of Semalembue, situated at the bottom of the ranges through which the Kafue finds a passage, and close to the bank of that river. The Kafue is here upwards of 200 yards wide, and full of hippopotami, the young of which may be seen perched on the necks of their dams. At this point we had reached about the same level as Linyanti.

Semalembue paid us a visit soon after our arrival, and said that he had often heard of me, and now that he had the pleasure of seeing me he feared that I should sleep the first night at his village hungry. This was considered the handsome way of introducing a present, for he then handed five or six baskets of meal and maize, and an enormous one of ground-nuts. Next morning he gave about twenty baskets more of meal. I could make but a poor return for his kindness, but he accepted my apologies politely, saying that he knew there were no goods in the country from which I had come. I heard that Semalembue got a good deal of ivory from the surrounding tribes, which he transmitted to other chiefs on the Zambesi, receiving in return English cotton goods which came from Mozambique by Babisa traders. My men here began to sell their beads and other ornaments for cotton cloth. Semalembue was accompanied by about forty people, all large men, with a fine crop of wool on their heads, which is either drawn all together up to the crown, and tied there in a large tapering bunch, or else is twisted into little strings on one side, the

hair on the other side being allowed to hang above the ear, thus giving the appearance of a cap cocked jauntily on the side of the head.

Their mode of salutation is by clapping the hands. Various parties of women came from the surrounding villages to see the white man, but all seemed much afraid, and, when addressed, clapped their hands with increasing vigour. Sekwebu was the only one of the Makololo who knew this part of the country; and he pronounced it to be admirably adapted for the residence of a tribe. The natives generally have a good idea of the nature of the soil and pasturage, and there is certainly abundance of room at present in the country for thousands and thousands more of population. There is a large flat district of country to the north, said to be peopled by the Bashukulompo and other tribes, who raise vast quantities of grain, ground-nuts, sweet potatoes, &c., and also grow sugarcane. If they were certain of a market, I believe they would gladly cultivate cotton. They are all fond of trade, but hitherto have had no opportunities of prosecuting it in any articles beyond ivory and slaves.

The Kafue enters a narrow gorge close by the village of Semalembue; as the hill on the north is called Bolengwe, I apply that name to the gorge (lat. $15^{\circ} 48' 19''$ S., long. $28^{\circ} 22'$ E.). Semalembue accompanied us to a pass about a mile south of his village, and on parting I put on him a shirt, with which he went away apparently much delighted. When we entered among the hills, we found the ford of the Kafue, which was at least 250 yards broad, but rocky and shallow. After crossing it in a canoe we went along the left bank, and were completely shut in by high hills. Every available spot between the river and the hills is under cultivation; the locality having been selected as a residence simply from its capabilities of defence, and not on general grounds of eligibility. Hippopotami abound, and the inhabitants are obliged to make pitfalls to protect the grain against them. As these animals had not been disturbed by guns, they were remarkably tame, and took no notice of us. We saw numbers of young ones, not much larger than terrier dogs, sitting on the necks of their dams, the little saucy-looking heads cocking up between the old one's ears; as they become a little older they sit on

the withers. As we were in want of meat, we shot a full-grown cow, and found the flesh very much like pork. While detained cutting up the hippopotamus I ascended one of the highest hills, called Mabue asula (stones smell badly), which I found to be about 900 feet above the river. These hills seemed of prodigious altitude to my men, who had been accustomed only to ant-hills. The mention of mountains that pierced the clouds made them draw in their breath and hold their hands to their mouths. The mountains certainly look high, from having abrupt sides. But I ascertained by experiment that they are of a considerably lower altitude than the top of the ridge we had left. They constitute in fact a sort of low fringe on the outside of the eastern ridge, exactly as the apparently high mountains of Golungo Alto form an outer fringe to the western ridge.

Semalebue intended that we should go a little to the north-east, and pass through the people called Bapimpe, some of whom had invited us to come that way on account of its being smoother; but feeling anxious to get back to the Zambesi again, we decided to cross the hills towards its confluence with the Kafue. The distance, which in a straight line is but small, occupied three days, in consequence of the precipitous character of the hills. When we came to the top of the outer range of the hills we had a glorious view. At a short distance below us we saw the Kafue, wending its way over a forest-clad plain to the confluence, while in the background, on the other side of the Zambesi, lay a long range of dark hills, with a line of fleecy clouds overhanging the course of the river at their base. The plain below us, at the left of the Kafue, had more large game on it than anywhere else I had seen in Africa. Hundreds of buffaloes and zebras grazed on the open spaces, and beneath the trees stood lordly elephants feeding majestically. The number of animals was quite astonishing, and made me think that I could here realize an image of that time when *Megatheria* fed undisturbed in the primeval forests. I wished that I could have photographed a scene so seldom beheld, and which is destined, as guns increase, to pass away from earth. When we descended we found all the animals remarkably tame, being seldom disturbed by the natives, who live in the hills and have no guns.

The elephants stood fanning themselves with their large ears, as if they did not see us, at 200 or 300 yards distance. Great numbers of red-coloured pigs (*Potamochoerus*), gazed at us in wonder.

Continuous rains kept us for some time on the banks of the Chiponga, where we were unfortunate enough to fall among the tsetse. We tried to leave one morning, but the rain came on afresh, and after waiting an hour wet to the skin we were fain to retrace our steps to our sheds. These rains were from the east, and the clouds might be seen on the hills like the "Table-cloth" on Table Mountain. This was the first wetting we had got since we left Sesheke, for I had gained some experience in travelling. In Londa I braved the rain, and was pretty constantly drenched; but now, when a storm came, we invariably halted and lighted fires. The effect of this care was that we had much less sickness than on the journey to Loanda. I also learnt from experience to avoid an entire change of diet. In going to Loanda I took little or no European food, but trusted entirely to what might be got by the gun, or by the liberality of the Balonda; but on this journey I took flour and always baked my own bread in an oven extemporized out of an inverted pot. With these precautions, aided, no doubt, by the greater healthiness of the district over which we passed, I enjoyed perfect health.

When we left the Chiponga, on the 30th, we skirted a range of hills, composed of mica and clay-slate, on our left. At the bottom we found a forest of large petrified trees of the araucarian type, all lying as if the elevation of the range had made them fall away from it in the direction of the river. An ordinary-sized tree, standing on end, measured 22 inches in diameter, and contained 12 laminæ to the inch.

As we approached nearer the Zambesi the country became covered with broad-leaved bushes, pretty thickly planted, and we had several times to shout to elephants to get out of our way. At an open space a herd of buffaloes came trotting up to look at our oxen, and it was only by shooting one that I made them retreat. The only danger we encountered was from a female elephant, with three young ones of different sizes, who charged through the centre of our extended line, and caused the men to throw down their burdens in a great

hurry. I never saw an elephant with more than one calf before. We knew that we were approaching the Zambesi by the numbers of water-fowl we met. I killed four geese at two shots, and, had I followed the wishes of my men, could have secured a meal of water-fowl for the whole party. I never saw a river with so much animal life around and in it, and, as the Barotse say, "Its fish and fowl are always fat." When our eyes were gladdened by a view of its goodly waters, we found it very much larger than above the falls. Its flow was more rapid than near Sesheke, being often four and a half miles an hour, and the water was of a deep brownish red. In the great valley, where the adjacent country is all level, and the soil, being generally covered with dense herbage, is not abraded, the river never becomes of this colour; but on the eastern ridge, where the grass is short, and the soil is washed down by the streams, the discoloration which we now view ensues. The same thing occurs on the western ridge: no discoloration was observed till we reached the Quango; and this obtains its matter from the western slope of the western ridge, just as the Zambesi here receives its soil from the eastern slope of the eastern ridge. We struck upon the river about eight miles east of the confluence with the Kafue, and, pursuing our course down the left bank, came opposite to an island, Menye makaba, about a mile and a half long, and upwards of a quarter of a mile broad. This island sustains, in addition to its inhabitants, a herd of about sixty buffaloes, who are always prepared to show fight whenever an attempt is made to punish them for depredations committed on the gardens. The only time at which they can be attacked with success is when the island is partly flooded and the pursuers can assail them out of canoes. The comparatively small space to which they are confined shows the luxuriance of the vegetation; for were they in want of more pasture, they could easily swim across to the northern bank, which is not much more than 200 yards distant.

Ranges of hills now run parallel with the Zambesi, at a distance from each other of about fifteen miles, those on the north approaching nearest to the river. The inhabitants on that side are the Batonga, those on the south bank are the Banyai. The hills abound in buffaloes and elephants, and

many of the latter are killed by the people in the following manner. They erect stages on high trees overhanging the paths by which the elephants come, and then strike the animal, as it passes beneath, with a large spear, four or five feet long, with a handle nearly as thick as a man's wrist, and a blade at least twenty inches long by two broad, which, sinking deeply into the animal's back, and being worked backwards and forwards by knocking against the trees, makes frightful gashes within, and soon causes death. They kill them also by means of a spear inserted in a beam of wood, which is suspended by a cord passing over the branch of a tree and attached at its other extremity to a latch fastened in the path; the latch being struck by the animal's foot in passing leads to the fall of the beam, and the spear, being poisoned, causes death in a few hours.

We were detained at this island by continuous rains for several days. We were struck by the fact that the rains felt warm, the thermometer at sunrise standing at from 82° to 86° ; at midday, in the coolest shade, at 96° to 98° ; and at sunset at 86° . This is different from anything we experienced in the interior, for there rain always brings down the mercury to 72° or even 68° . Considerable cloudiness prevailed, but the sun often burst through with scorching intensity. All exclaimed against it, "O the sun! that is as bad as the rain." It was worth noticing that my companions never complained of the heat while on the highlands, but here, and also when we descended into the lowlands of Angola, they began to fret on account of it. I myself felt an oppressive steaminess in the atmosphere, which I had not experienced on the higher lands.

As soon as we could move, Tomba Nyama, the head-man of the island, volunteered the loan of a canoe to cross a small river called the Chongwe, which we found to be about fifty or sixty yards broad and flooded. Not many years since the inhabitants of this district possessed abundance of cattle, and there were no tsetse. The existence of the insect now shows that it may return in company with the larger game. The vegetation along the bank was exceedingly rank, and the bushes so tangled that it was difficult to get on. We usually followed the footpaths of the wild animals, for the river is

here the highway of the people. Buffaloes, zebras, pallahs, and waterbucks abounded, and there was also a great abundance of wild pigs, koodoos, and the black antelope.

January 6th, 1856.—Each village that we passed furnished us with a couple of men to conduct us to the next, through the parts least covered with jungle. Near the villages we saw men, women, and children employed in weeding their gardens. Their colour is the same admixture, from very dark to light olive, that we saw in Londa. Though all have thick lips and flat noses, only the more degraded possess the ugly negro physiognomy. They mark themselves by a line of little raised cicatrices, extending from the tip of the nose to the root of the hair on the forehead. The women are in the habit of piercing the upper lip, and gradually enlarging the orifice until they can insert a shell. The lip then appears drawn out beyond the perpendicular of the nose, and gives them a most ungainly aspect. The same custom prevails throughout the country of the Maravi, and no one could see it without confessing that fashion had never led women to a madder freak.

As the game was abundant and my party very large, I had still to supply their wants with my gun. We slaughtered the oxen only when unsuccessful in hunting. We always entered into friendly relations with the head-men of the different villages, who presented grain and other food freely. The last of these friendly head-men was named Mobala: having passed him in peace, we reached, after a few hours, the village of Selole, and found that he not only considered us as enemies, but had actually sent an express to raise the tribe of Mburúma against us. All the women had fled, and the few people we met exhibited symptoms of terror. An armed party had come from Mburuma in obedience to the call, but the head-man of the company, suspecting that it was a hoax, came to our encampment, and, when we explained our objects, told us that Mburuma would, without doubt, receive us well. The reason why Selole acted in this foolish manner we afterwards found to be this: an Italian, named Simoens, who had married the daughter of a chief called Sekokole, living north of Tete, had ascended the river in canoes, with an armed party of fifty slaves, and had attacked several

inhabited islands beyond Meya makaba, securing a large number of prisoners and much ivory. On his return the different chiefs united in an attack upon the party and killed Simoens while trying to escape on foot. Selole imagined that I was another Italian, or, as he expressed it, "Siriatoomba risen from the dead."

Before we reached Mburuma my men, being much in need of meat, went to attack a troop of elephants, one of which fell into a hole, and before he could extricate himself an opportunity was afforded for the men, seventy or eighty in number, to discharge their spears at him. When he rose he was like a huge porcupine; and as they had no more spears, they sent for me to finish him. I went within twenty yards of him, and, resting my gun upon an anthill, so as to take a steady aim, fired twelve 2-ounce bullets into different parts of his body without killing him. As it was becoming dark, I advised my men to let him stand, being sure of finding him dead in the morning; but though we searched all the next day, we never saw him again. As I had now expended all my bullets, I received a hint from some of my men that I had better melt down my plate. I had two pewter plates and a piece of zinc, which I accordingly turned into bullets. I also spent the remainder of my handkerchiefs in buying spears for them. My men frequently surrounded herds of buffaloes and killed numbers of the calves. I, too, exerted myself greatly; but as I was now obliged to shoot with the left arm, I was very unsuccessful.

On reaching Mburuma's village his brother came to meet us, and said, in reference to our ill success in hunting the day before, "The man at whose village you remained was in fault in allowing you to want meat, for had he only run across to Mburuma he would have given him a little meal, and, having sprinkled that on the ground as an offering to the gods, you would have found your elephant." The chiefs in these parts take upon themselves an office somewhat like the priesthood, and the people imagine that they can propitiate the Deity through them. In illustration of their ideas it may be mentioned that, when we were among the tribes west of Semalembue, several of the people introduced themselves—one as a hunter of elephants, another as a hunter of hippo-

tami, a third as a digger of pitfalls—apparently wishing me to give them medicine for success in their avocations. I thought they attributed supernatural power to my drugs; but I took pains to let them know that they must trust to a higher power than mine for aid. We never saw Mburuma himself, though he gave us presents of meal, maize, and native corn. The conduct of his people indicated very strong suspicions, for they never came near us except in large bodies and fully armed. We had to order them to place their bows, arrows, and spears at a distance before entering our encampment. We did not, however, care much for a little trouble, in the hope that, if we passed this time, we might be able to return without meeting sour, suspicious looks.

The soil, glancing everywhere with mica, is very fertile, and all the valleys are cultivated, the maize being now in ear and eatable. The ranges of hills, which run parallel to the banks of the river above this, here come close up to it, and form a narrow gorge, which, like all others of the same nature, is called Mpata. There is a narrow pathway by the side of the river; but we preferred a more open one in a pass among the hills to the east, which rise to a height of 800 or 1000 feet, and are covered with trees. The rocks were of various coloured mica schist; and parallel with the Zambesi lay a broad band of gneiss with garnets in it.

The proceedings of Mburuma and his people were decidedly suspicious. They first of all tried to separate our party by volunteering the loan of a canoe to convey Sekwebu and me, together with our luggage, by way of the river. They next attempted to detain us in the pass, the guides first alleging the chief's orders to make a halt there, and, this *ruse* having failed, next stating that we were to wait for food; we civilly declined, however, to place ourselves in their power in an unfavourable position. We afterwards heard that a party of Babisa traders, who came from the north-east, bringing English goods from Mozambique, had been plundered by this same people. Elephants were still abundant, but very shy. The country between Mburuma's and his mother's village, being hilly and difficult, prevented us from travelling more than ten miles a day. At the village of Ma Mburuma (mother of Mburuma) the guides who had conducted us gave a

favourable report, and the women and children did not flee. Here we found that traders, called Bazunga, whom I supposed to be half-caste Portuguese, had been in the habit of coming in canoes, and that I was supposed to belong to them. That we were looked upon with suspicion was evident from our guides, remarking to men in the gardens through which we passed, "They have words of peace—all very fine; but lies only, as the Bazunga are great liars." They thought we did not understand them, but Sekwebu knew every word perfectly, and, without paying any ostensible attention to these complimentary remarks, we ever afterwards took care to explain that we were not Bazunga, but Makōa (English). Ma Mburuma promised us canoes to cross the Loangwa in our front. It was pleasant to see great numbers of men, women, and boys come to look at the books, watch, looking-glass, revolver, &c. They are a strong, muscular race, and both men and women cultivate the ground. The deformed lips of the women make them look very ugly; I never saw one smile. They generally eat their corn only after it has begun to sprout from steeping it in water. The village of Mburuma's mother was picturesquely situated among high, steep hills; and the valleys were occupied by gardens of native corn and maize, growing luxuriantly. We were obliged to hurry along on account of the tsetse, which had returned to this district after the destruction of the cattle by marauders.

CHAPTER XXIX.

CROSSING THE LOANGWA.—ZUMBO.—DIFFICULTIES WITH MPENDE.—
CROSSING THE ZAMBESI.—GAME-LAWS.—DISTRICT OF CHICOVA.

14th.—We reached the confluence of the Loangwa and the Zambesi, most thankful to God for His great mercies in helping us thus far. Mburuma's people had behaved so suspiciously that we were by no means sure that we should not be attacked in crossing the Loangwa. We saw them collecting in large numbers, and, though professing friendship, they kept at a distance from our camp. They have no intercourse

with Europeans, except through the Babisa. They told us that this was formerly the residence of the Bazunga, who had fled from it on the approach of a marauding tribe. As I walked about I discovered the remains of a stone church, and a broken bell with the letters I. H. S. and a cross, but no date.

15th.—In the morning we proceeded to cross the river in the presence of a large concourse of armed natives. Only one canoe was lent to us, though we saw two others tied to the bank. The part we crossed was about a mile from the confluence, and, as it was now flooded, it seemed upwards of half a mile in breadth. We first passed all our goods on to an island in the middle, then the cattle and men. While this was proceeding I amused the natives by showing them my watch, lens, and other things, and so kept them engaged until those only remained who were to enter the canoe with me; I then thanked them for their kindness, and wished them peace. After all, they may have been influenced only by the intention to be ready, in case I should play them some false trick. The guides came over to bid us adieu, and we sat under a mango-tree fifteen feet in circumference, and had a friendly conversation. I gave them some little presents for themselves, a handkerchief and a few beads, and a cloth of red baize for Mburuma, with which they were highly pleased. We were thankful to part good friends.

Next morning we passed along the bottom of the range called Mazanzwe, and found the ruins of eight or ten houses rudely built of soft sandstone cemented together with mud. They all faced the river, and were high enough up the flanks of the hill Mazanzwe to command a pleasant view of the broad Zambesi. These establishments had all been built on one plan—the house being placed on one side of a large court, surrounded by a wall. Some of the rafters and beams had fallen in, but were entire, and there were some trees in the middle of the houses as large as a man's body. On a height on the opposite or south bank of the Zambesi we saw the remains of a wall belonging probably to a fort, and the church stood at a central point, formed by the right bank of the Loangwa and the left of the Zambesi. The situation of Zumbo, as the place was called by the Bazunga, was admir

ably chosen as the site of a commercial settlement. The merchants, as they sat beneath the verandahs in front of their houses, had a magnificent view of the two rivers at their confluence, the church at the angle, and the gardens which they had on both sides of the rivers. Towards the north and west the view is bounded by lofty and picturesque mountains, while towards the south-east the eye ranges over an open country. Water communication exists in three directions beyond—namely, by the Loangwa to the N.W., by the Kafue to the W., and by the Zambesi to the S.W. The attention of the merchants, however, was chiefly attracted to the N. or Londa; and the principal articles of trade were ivory and slaves. Private enterprise was always restrained, for the colonies of the Portuguese being strictly military, and the pay of the commandants very small, the officers have always been obliged to engage in trade; and had they not kept the private traders under their control, they would have had no trade themselves, as they were obliged always to remain at their posts.

Several expeditions went northwards as far as Cazembe; Dr. Lacerda himself, Commandant of Tete, was unfortunately cut off while there, and his papers were lost to the world. He had a strong desire to open up communication with Angola, which would have been of importance then, as affording a speedier mode of communication with Portugal than by the way of the Cape; but since the opening of the overland passage to India a quicker transit is effected from Eastern Africa to Lisbon by way of the Red Sea. Peirara, who subsequently visited Cazembe, gave a glowing account of that chief's power, which none of my inquiries have confirmed. The people of Matiamvo stated to me that Cazembe was a vassal of their chief; and, from all the native visitors whom I have seen, he appears to be exactly like Shinte and Katema, only a little more powerful. The term "Emperor," which has been applied to him, seems totally inappropriate. The statement of Peirara that twenty negroes were slaughtered in a day was not confirmed by any one else, though numbers may have been killed on some particular occasion during the time of his visit, for we find throughout all the country north of 20° the custom of slaughtering victims to accompany the departed

soul of a chief, and for other superstitious purposes. The last expedition to Cazembe was somewhat of the same nature as the others, but it failed in establishing a commerce, because the people of Cazembe, who had come to Tete to invite the Portuguese to visit them, had not been allowed to trade freely with whom they liked. Cazembe reciprocated this policy, and prohibited his people from furnishing the party with food except at his own price; and the expedition, being half-starved in consequence, returned in a state of high dudgeon.

When we left the Loangwa we thought we had got rid of the hills; but there are some behind Mazanzwe, though five or six miles off from the river. Tsetse and the hills had destroyed two riding oxen, and when the little one that I now rode knocked up I was forced to march on foot. The bush being very dense and high, we were going along among the trees, when three buffaloes suddenly dashed through our line. My ox set off at a gallop, and when I glanced back I saw one of the men up in the air about five feet above a buffalo which was tearing along with a stream of blood running down his flank. When I got back to the poor fellow I found that he had lighted on his face, and, though he had been carried on the horns of the buffalo about twenty yards before getting the final toss, the skin was not pierced nor was a bone broken. When the beasts appeared he had thrown down his load and stabbed one in the side. It turned suddenly upon him, and, before he could use a tree for defence, carried him off. We shampeed him well, and in about a week he was able to engage in the hunt again.

At Zumbo we had entered upon old grey sandstone, with shingle in it, dipping generally towards the south, and forming the bed of the river. The Zambesi is very broad here, and contains many inhabited islands. We slept opposite one on the 16th, called Shibanga. The nights are warm, the temperature never falling below 80°; it was 91° even at sunset. On the morning of the 17th we were pleased to see a person coming from the island of Shibanga, with jacket and hat on, but quite black. He had come from the Portuguese settlement at Tete, and he informed us that that town was situated on the other bank of the river, and that the Portuguese had been fighting with the natives for the last two years. He



THE TRAVELLING PROCESSION INTERRUPTED.

advised us to cross the river at once, as Mpende lived on this side. Wishing to follow his advice, we proposed to borrow his canoes; but being afraid to offend the lords of the river, he declined, and we were consequently obliged to remain on the enemy's side. The next island belonged to a man named Zungo, a fine frank fellow, who brought us at once a present of corn, bound in a peculiar way in grass. He freely accepted our apology for having no present to give in return, and sent forward a recommendation to his brother-in-law Pangola. The country adjacent to the river is covered with dense bush, thorny and tangled, and there is much rank grass, though not so high or rank as that of Angola. The maize, however, which is grown here is equal in size to that which the Americans sell for seed at the Cape. There is usually a low beach adjacent to the river, studded with villages and gardens, and elsewhere covered with rank and reedy grass. A second terrace follows, on which trees and bushes abound; I also thought I could detect a third and higher steppe; but I never could discover terraces on the adjacent country, such as in other countries show ancient sea-beaches. The path runs sometimes on the one and sometimes on the other of these river terraces. Canoes are essential; but I find that they here cost too much for my means, and higher up, where my hoes might have secured one, I was unwilling to be parted from my men while there was danger of their being attacked.

18th.—Yesterday we rested under a broad-spreading fig-tree. Large numbers of buffaloes and water-antelopes were feeding quietly in the meadows, a sure indication that the people have either no guns or no ammunition. Pangola visited us, and presented us with food. My men got pretty well supplied individually, for they went into the villages and commenced dancing. The young women were especially pleased with the steps they exhibited, though I suspect many of them were invented for the occasion, and would say, "Dance for me, and I will grind corn for you." At every fresh instance of liberality Sekwebu said, "Did not I tell you that these people had hearts?" All agreed that the character he had given was true, and some remarked, "Look! although we have been so long away from home, not one of us has become lean." It was a fact that we had been all well sup-

plied either with meat by my gun and their own spears, or with other food from the generosity of the inhabitants. Pangola promised to ferry us across the Zambesi, but failed to fulfil his promise, probably from a fear of offending his neighbour Mpende by aiding our escape. Although we were in doubt as to our reception by Mpende, I could not help admiring the beautiful country as we passed along. There is, indeed, only a small part under cultivation in this fertile valley, but my mind naturally turned to the comparison of it with Kolobeng, where we waited anxiously during months for rain, and then only got a mere thunder-shower. I shall never forget the dry, hot east winds of that region; the yellowish, sultry, cloudless sky; the grass and all the plants drooping from drought, the cattle lean, the people dispirited, and our own hearts sick from hope deferred. There we often heard in the dead of the night the shrill whistle of the rain-doctor calling for rain that would not come, while here we listened to the rolling thunder by night and beheld the swelling valleys adorned with plenty by day. Rain falls almost daily, and everything is beautifully fresh and green. I felt somewhat as people do on coming ashore after a long voyage—inclined to look upon the landscape in the most favourable light. The hills are covered with forests, and often a long line of fleecy cloud floats about midway up their sides. Finding no one willing to aid us in crossing the river, we proceeded to the village of the chief Mpende. A fine conical, or rather double conical hill now appeared to the N.E.; and on the same side, but more to the E., another, which, from its similarity in shape to an axe, is called Motemwa. Beyond it, eastward, lies the country of Kaimbwa, a chief who has been engaged in actual, and, according to the version of things here, successful conflict with the Bazunga. When we came to Mpende's village he immediately sent to inquire who we were, and then, without sending us any message, ordered the guides who had come with us from the last village to go back for their masters. We had travelled very slowly up to this point, the tsetse-stricken oxen being now unable to go two miles an hour. We were also delayed by being obliged to stop at every village; for if we had passed without taking any notice of them, they would have considered it rude, and we should have appeared more

as enemies than friends. I consoled myself for the loss of time by the thought that these conversations tended to the opening of our future path.

23rd.—This morning at sunrise a party of Mpende's people came close to our encampment, uttering strange cries and waving some bright red substance towards us. They then lighted a fire with charms in it, and departed, uttering the same hideous screams as before. This was intended to render us powerless, and probably also to frighten us. Ever since dawn parties of armed men had been seen collecting from all quarters, and numbers passed us while it was yet dark. They evidently intended to attack us, for no friendly message was sent; I therefore ordered an ox to be slaughtered, as a means of inspiring courage. I have no doubt that we should have been victorious; indeed, my men were rejoicing in the prospect of securing captives to carry the tusks for them, and broadly hinted to me that I ought to allow them to keep Mpende's wives. The roasting of meat went on fast and furious, and some of the young men said to me, "You have seen us with elephants, but you don't know yet what we can do with men." Mpende's whole tribe was assembled at about the distance of half a mile. As the country is covered with trees, we did not see them; but every now and then a few came about us as spies. Handing a leg of the ox to two of these, I desired them to take it to Mpende, who in due course of time sent two old men to inquire who I was. I replied, "I am a Lekoa" (an Englishman). They said, "We don't know that tribe. We suppose you are a Mozunga, the tribe with which we have been fighting." As I was not yet aware that the term Mozunga was applied to a Portuguese, and thought they meant half-castes, I showed them my hair and the skin of my bosom, and asked if the Bazunga had hair and skin like mine. As the Portuguese have the custom of cutting the hair close, and are also somewhat darker than we are, they answered, "No; we never saw skin so white as that;" and added, "Ah! you must be one of that tribe that loves the black men." I, of course, gladly responded in the affirmative. They returned to the village, and we afterwards heard that there had been a long discussion between Mpende and his councillors, in which one of the men, named Sindese Oaléa,

with whom we had conversed the day before, acted as our advocate, and persuaded Mpende to allow us a passage. When we knew the favourable decision of the council I sent Sekwebu to purchase a canoe for the use of one of my men who had become very ill, upon which Mpende remarked, "That white man is truly one of our friends. See, how he lets me know his afflictions!" Sekwebu adroitly took advantage of this turn in the conversation, and said, "Ah! if you only knew him as well as we do, you would understand that he highly values your friendship and that of Mburuma, and that he trusts in you to direct him." He replied, "Well, he ought to cross to the other side of the river, for this bank is hilly and rough, and the way to Tete is longer on this than on the opposite bank." He did everything he could afterwards to aid us on our course, and our departure was widely different from our approach to his village. It gratified me to find the English name respected so far from the coast, and most thankful was I that no collision occurred to damage its influence.

24th.—Mpende sent two of his principal men to order the people of a large island below to ferry us across. The river is 1200 yards from bank to bank, and contains between 700 and 800 of deep water, flowing at the rate of $3\frac{1}{2}$ miles per hour. Though my men were well acquainted with the management of canoes, we could not get over before dark; we therefore first landed on an island, and next morning reached the opposite bank in safety. We observed as we came along the Zambesi that it had fallen two feet, and that the water, though still muddy, was not nearly so red as it had been higher up. It was therefore not yet the period of the central Zambesi inundation, and the present height of the water was due to rains outside the eastern ridge. The people here seem abundantly supplied with English cotton goods. The Babisa are the medium of trade, for we were informed that the Bazunga, who formerly visited these parts, had been kept away by the war for the last two years. The region to the north of the ranges of hills on our left is called Senga, from being the country of the Basenga, who are said to be great workers in iron, and to possess abundance of fine iron-ore. Beyond Senga lies a range of mountains called Mashinga, to which the Portuguese in

former times went to wash for gold, and beyond that are great numbers of tribes which pass under the general name of Maravi. To the N.E. there are extensive plains destitute of trees, but covered with grass, and in some places with marshes. The whole of the country to the north of the Zambesi is asserted to surpass in fertility that to the south. The Maravi, for instance, raise sweet potatoes of immense size, but on the southern bank these plants soon degenerate. Unfortunately, all the tribes on the north side of the country are at enmity with the Portuguese, and their practice of making night attacks renders travelling dangerous among them.

29th.—I was most sincerely thankful to find myself on the south bank of the Zambesi, and, having nothing else, I sent back one of my two spoons and a shirt as a thank-offering to Mpende. The different head-men along this river act very much in concert, and if one refuses passage they all do, uttering the sage remark, "If so-and-so did not lend his canoes, he must have had some good reason." At the next island, which belonged to a man named Mozinkwa, we were detained so long that my tent again became quite rotten. One of the Batoka died here after a long sickness, the nature of which I did not understand; when he became unable to walk I had some difficulty in making his companions carry him; and when his case became hopeless they wished to leave him to die. We met with persons who had visited Tete, which was reported to be ten days distant hence. One of these, a Mashona man, who had some knowledge of the English, and of their hatred to the slave-trade, told Sekwebu that the "English were *men*," and I found that from these and similar encomiums I rose higher every day in the estimation of my people. Even the slaves gave a high character to the English; and when I was first reported at Tete, the servants of my friend the Commandant said to him in joke, "Ah! this is our brother who is coming; we shall all leave you and go with him."

The women here have only a small puncture in the upper lip, in which they insert a little button of tin. The perforation is made by degrees, a ring with an opening in it being attached to the lip, and the ends squeezed gradually together. Children may be seen with the ring on the lip, but not yet

punctured. The tin is purchased from the Portuguese; and although silver is reported to have been formerly found in this district, no one could distinguish it from tin. Gold however was known, and I heard for the first time the word "dalama" (gold) in the native language. In conversing with different people I found the idea prevalent that those who had purchased slaves from them had done them an injury. "All the slaves of Tete," said one, "are our children; the Bazunga have made a town at our expense." When I asked if they had not taken the prices offered them they at once admitted it, but still thought that they had been injured by being so far tempted.

February 1st.—We met some native traders, of whom I bought some American calico marked "Lawrence Mills, Lowell," and distributed it amongst the most needy of my men, many of whom were now utterly destitute of clothes. After leaving Mozinkwa's we came to the Zingesi, a sand-rivulet in flood (lat. $15^{\circ} 38' 34''$ S., long. $31^{\circ} 1'$ E.), which was now sixty or seventy yards wide, and waist-deep. Like all these sand-rivers it is for the most part dry; but by digging down a few feet, water is found flowing along a bed formed by a stratum of clay, a phenomenon which is dignified by the name of "a river flowing underground." In attempting to ford this, the water, which percolates through the sand at a very rapid pace, dug out the sand beneath our feet in a second or two, and we soon sank so deep that we were glad to relinquish the attempt before we got halfway over; the man who preceded me was only thigh-deep, but the disturbance caused by his feet made it breast-deep for me. These sand-rivers remove vast masses of disintegrated rock before it is fine enough to form soil. The particles which struck against my legs as I was fording impressed me with an idea of the amount of matter removed by every freset. In rivers where much attrition is going on, as for instance in the Vaal river when that is slightly in flood, a person diving to the bottom may hear thousands of stones knocking against each other. This process, being carried on for hundreds of miles in different rivers, must have an effect greater than if all the pestles and mortars and mills of the world were grinding and wearing away the rocks.

While opposite the village of a head-man called Mosusa two male elephants, and a third not full-grown, took refuge on an island in the river. This was the first instance I had ever seen of a comparatively young one with the males, for they usually remain with the female herd till they are as large as their dams. The inhabitants were anxious that my men should attack them, as they do much damage in the gardens on the islands. The men went, but the elephants ran to the opposite end of the island, and escaped to the mainland by swimming with their probosces erect in the air. I was not very desirous to have one of these animals killed, for we understood that, when we passed Mpende, we came into a country where the game-laws are strictly enforced. The lands of each chief are well defined, generally by rivulets, and, if an elephant is wounded on one man's land and dies on that of another, the under half of the carcase is claimed by the lord of the soil; and so stringent is the law, that the hunter may not cut up his own elephant without sending notice to the lord of the soil, and waiting until that personage sends his representative to see a fair partition made. The hind leg of a buffalo must also be given to the man on whose land the animal was grazing, and a still larger quantity of the eland, which here and everywhere else in the country is esteemed right royal food. The only game-laws in the interior are, that the man who first wounds an animal, though he has inflicted but a mere scratch, is considered the killer of it, while the second is entitled to a hind-quarter, the third to a fore-leg, and the chief to a royalty, consisting in some parts of the breast, in other parts of the ribs and one fore-leg. The knowledge that he who succeeds in reaching the wounded beast first is entitled to a share stimulates the whole party to greater exertions in despatching it.

When near Mosusa's village we passed a rivulet called Chowé, now running with rain-water. The inhabitants extract a little salt from the sand when it is dry, and all the people of the adjacent country come to purchase it from them. This was the first salt we had seen since leaving Angola, none being found in the countries of the Balonda or Barotse. We heard of salt-pans about a fortnight west of Naliele, and I got a small supply at that town, but this had long since been

finished, and I had now lived two months without suffering any inconvenience from the want of it except an occasional longing for animal food or milk.

In marching along, the rich reddish-brown soil was so clammy that it was difficult to walk. It is however extremely fertile, and yields amazing quantities of corn, maize, millet, ground-nuts, pumpkins, and cucumbers. The people build their huts on high stages as a protection against the spotted hyæna, and also against lions and elephants. The hyæna, though a very cowardly animal, frequently approaches persons lying asleep, and makes an ugly gash on the face. Mozinkwa had lost his upper lip in this way, and I have heard of men being killed, and children being carried off by them; for though the sound of the human voice will scare him, yet, when his teeth are once in the flesh, he holds on. This animal shows an amazing power of jaw: he crunches up with the greatest ease the leg-bones of oxen, from which the natives have extracted everything eatable.

February 4th.—We were much detained by rains, which prevented us from advancing above a few miles each day. The wind up to this point had been always from the east, but now both rain and wind came so generally from the west, that we were obliged to make our encampment face the east in order to have them in our backs. The country adjacent to the river abounds in large trees; but the population is so numerous that it is difficult to get dry firewood. There are numbers of tamarind-trees, and of another very similar tree, called Motondo, yielding a fruit as large as a small walnut, of which the elephants are very fond; its timber is excellent for building boats, as it does not soon rot. On the 6th we came to the village of Boroma, which is situated among a number of others, each surrounded by an extensive patch of cultivated ground. On the opposite side of the river rises a cluster of conical hills called Chorichori. Boroma did not make his appearance, but sent a substitute who acted civilly. In the morning we announced our intention of moving on; Boroma again did not present himself, and his mother stated by way of apology that he had been seized that morning by the Barimo, which probably meant that his lordship was drunk; at the same time she sent a present of some corn and a fowl.

We marched along the river to a point opposite the hill Pinkwe (lat. $15^{\circ} 39' 11''$ S., long $31^{\circ} 48'$ E.). The late abundant rains had again flooded the Zambesi, and great quantities of wreck appeared upon the stream. It is probable that the frequent freshets caused by the rains on the eastern side of the ridge have prevented the Portuguese from recognising the one peculiar flood of inundation observed in the interior. The Nile, not receiving these subsidiary waters, has its inundation clearly defined throughout its whole course. If the Zambesi were diverted in its mid course southwards into the Cape Colony, its flood would be identical with that of the Nile; for it would be uninfluenced by any streams in the Kalahari.

This flood having filled the river, we found the numerous rivulets which flow into it filled also, and we lost so much time in the search for fords that I resolved to leave the river altogether and strike away to the S.E. We did so when opposite the hill Pinkwe, and came into a hard Mopane country. In a hole of one of the mopane-trees I noticed that a squirrel (*Sciurus cepapi*) had covered its store of seed under a heap of fresh leaves. It is not against the cold of winter that they thus lay up food, but as a provision against the hot season, when the trees have generally no seed. A great many fossil trees occur in this part of the country, some of them broken off horizontally and standing upright, others lying prone and shattered into a number of pieces. These trees lie upon soft grey sandstone containing banks of shingle, which forms the underlying rock of the country all the way from Zumbo to near Lupata.

As we were now in the district of Chicova, I examined the geological structure of the country with interest, because it has been stated that silver-mines once existed here. The general rock is the grey soft sandstone I have mentioned, but at the rivulet Bangué occurs a dyke of basalt six yards wide, running north and south, and beyond this several others, some of which run more to the eastward. The sandstone is then found to have been disturbed, and at the rivulet called Nake we found it tilted up and exhibiting a section which was coarse sandstone above, sandstone-flag, shale, and lastly a thin seam of coal. I was much pleased in discovering this small specimen of such a precious mineral as coal. I saw no

indication of silver, and, if it ever was worked by the natives, they have entirely lost the knowledge of it, and cannot distinguish between silver and tin.

In leaving the river I was partly influenced by a wish to avoid several chiefs, who levy a heavy tribute on all passengers. Our path lay along the bed of the *Nake* for some distance, the banks of which were covered with impenetrable thickets, and the surrounding country was hilly. The villages were not numerous, but we were treated kindly by the people, who here call themselves *Bambiri*, though the general name of the nation is *Banyáí*. They have reclaimed their gardens from the forest, and the soil is extremely fertile. The *Nake* is 50 or 60 yards wide, but during most of the year is dry, affording water only by digging in the sand. It was now ankle-deep, and its water more than lukewarm from the heat of the sun. We found in its bed masses of volcanic rock, identical with those which I subsequently saw at *Aden*.

13th.—I sent my last fragment of cloth as a present to *Nyampungo*, the head-man of these parts, with a request that we should be furnished with a guide to the next chief. After a long conference with his council the cloth was returned with a promise of compliance, and a request for some beads only. This man is supposed to possess the charm for rain, and other tribes send to him to beg it, whence we may infer that less rain falls in this country than in *Londa*. *Nyampungo* behaved in quite a gentlemanly manner, presenting me with some rice, and telling my people to go amongst the villages and beg for themselves. An old man, father-in-law of the chief, told me that he had seen books before, but never knew what they meant. They pray to departed chiefs and relatives, but the idea of praying to God seemed new, and they heard it with reverence. *Nyampungo* is afflicted with a kind of disease called *Sesenda*, which I imagine to be a species of leprosy common in this quarter, though they are a cleanly people. He never had any cattle; and when I asked him why he did not possess these useful animals, he said, "Who would give us the medicine to enable us to keep them?" I afterwards found out the reason to be the prevalence of *tsetse*, but of this he was ignorant, having supposed that he could not keep cattle because he had no medicine.

CHAPTER XXX.

ANIMALS.—THE UE.—THE BANYAI.—ORDEAL MUAVI.—ARRIVAL AT TETE.

14th.—We left Nyampungo this morning by a path which wound up the Moline, another sand-river which flows into the Nake. When we got clear of the tangled jungle which covered the banks of this rivulet we entered the Mopane country, where we could walk with comfort. When we had gone on a few hours my men espied an elephant, and, as they were in want of meat, having tasted nothing but grain for several days, they soon killed him. The people of Nyampungo had never seen such desperadoes before. One rushed up, and with an axe hamstrung the beast while still standing. Some Banyai elephant-hunters happened to be present when my men were fighting with him. One of them took out his snuff-box, and poured out all its contents at the root of a tree, as an offering to the Barimo for success. As soon as the animal fell the whole of my party engaged in a savage dance round the body, which quite frightened the Banyai, and he who made the offering said to me, "I see you are travelling with people who don't know how to pray: I therefore offered the only thing I had in their behalf, and the elephant soon fell." Another man ran a little forward, when an opening in the trees gave us a view of the chase, and uttered loud prayers for success in the combat. I admired the devout belief they all possessed in the existence of unseen beings, and prayed that they might yet know that benignant One who views us all as His own. My own people, who are rather a degraded lot, remarked to me as I came up, "God gave it to us. He said to the old beast, 'Go up there; men are come who will kill and eat you.'" These remarks are quoted to give the reader an idea of the native mode of expression.

In accordance with the custom of the country we sent back to Nyampungo to give information of the slaughter of the beast to the agent of the lord of the soil, who was himself

living near the Zambesi. The side upon which the elephant fell had a short broken tusk; the upper one, which was ours, was large and thick. The messengers returned with a basket of corn, a fowl, and a few strings of handsome beads, as a sort of thank-offering, and said that they had thanked the Barimo for our success, concluding with the permission, "There it is; eat it and be glad." Had we begun to cut it up before we got this permission, we should have lost the whole. They had brought a large party to eat their half, which they divided with us in a friendly way. My men were delighted with the feast, though the carcase was pretty far gone in consequence of the delay. An astonishing number of hyænas collected round, and kept up a loud laughter for two whole nights. I asked my men what they were laughing at; they replied that it was because we could not take the whole, and there would be plenty left for them.

On coming to the part where the elephant was slain we passed through grass so tall that it reminded me of that in the valley of Cassange. Insects are very numerous after the rains commence; while waiting by the elephant I observed a great number of them like grains of fine sand moving on my boxes. On examining them with a glass four species were apparent; one of green and gold preening its wings, which glanced in the sun with metallic lustre, another clear as crystal, a third of a vermilion colour, and a fourth black. These insects consume the seeds of probably every plant that grows, each plant having its own peculiar insect. The rankest poisons, as the Kongwhane and Euphorbia, are soon devoured—the former by a scarlet insect; even the fiery bird's-eye pepper is devoured by a maggot. I observed here great numbers of centipedes with light-reddish bodies and blue legs; great myriapodes are seen crawling everywhere, and excite a feeling of loathing. In the quietest parts of the forest there is heard a faint but distinct hum, which tells of insect joy. One may see many whisking about in the clear sunshine among the green glancing leaves; but there are invisible myriads, all brimful of enjoyment, working with never-tiring mandibles on leaves, and stalks, and beneath the soil. Indeed the universality of organic life seems like a mantle of happy existence encircling the world, and betokening the presence

of our benignant Father's smile on all the works of His hands.

The birds of the tropics have been described as generally wanting in power of song; but this was certainly not applicable to many parts in Londa, though there birds are remarkably scarce, while here the chorus, or body of song, though not so harmonious, was not much smaller in volume than it is in England. Some of the notes resemble those of the lark, and indeed there are several of that family; two others are not unlike those of the thrush. One brought the chaffinch to my mind, and another the robin; but their songs are intermixed with several curious abrupt notes unlike anything English. One utters deliberately "peek, pak, pok;" another has a single note like a stroke on a violin-string. The mokwara gives forth a screaming set of notes like our blackbird when disturbed, then concludes with what the natives say is "pula, pula" (rain, rain), but more like "weep, weep, weep." Then there is the loud cry of francolins, the "pumpuru, pumpuru" of turtle-doves, and the "chiken, chiken, chik, churr, churr" of the honey-guide. Occasionally near villages we hear a kind of mocking-bird imitating the calls of domestic fowls. These African birds have not been wanting in song so much as in poets to sing their praises. In hot dry weather, or at midday when the sun is fierce, all are still: but with the first good shower all burst forth at once into merry lays and loving courtship. The early mornings and the cool evenings are their favourite times for singing. The majority have decidedly a sober plumage, though collectors, having generally selected the gaudiest as the most valuable, have conveyed the idea that the birds of the tropics for the most part possess gorgeous plumage.

15th.—Several of my men have been bitten by spiders and other insects without any worse result than pain. I particularly noticed a large caterpillar, called *lezuntabuea*, having a dark body covered with long grey hairs, resembling a porcupine in miniature. If it is touched the hairs run into the pores of the skin, inflicting sharp pricks. Some others have a similar means of defence; and when the hand comes in contact with them, as in passing a bush on which they happen to be, the effect resembles the stinging of nettles. From the

great number of caterpillars a considerable variety of butterflies is produced, none of them, however, being remarkable for the gaudiness of their colours.

In passing along we crossed the hill Vungue or Mvungwe, which forms the watershed between those sand-rivulets which run to the N.E. and others which flow southward, as the Kapopo, Ue, and Due, which run into the Luia. We found that many elephants had been feeding on a black-coloured plum called Mokorong, having purple juice and a delicious flavour. It grows most abundantly throughout this part of the country, and the natives eagerly devour it, as it is said to be perfectly wholesome, or, as they express it, "pure fat." Though hardly larger than a cherry, we found that the elephants had stood picking them off patiently by the hour. We observed the foot-prints of a black rhinoceros (*Rhinoceros bicornis*, Linn.) and her calf, an animal which is remarkably scarce in all the country north of the Zambesi. The white rhinoceros (*Rhinoceros simus* of Burchell), or Mohóhu of the Bechuanas, is quite extinct here, and will soon become unknown in the country to the south. It feeds almost entirely on grasses, and, being of a timid unsuspecting disposition, falls an easy prey on the introduction of fire-arms. The black possesses a more savage nature, and from its greater wariness keeps its ground better than its more timid neighbour. Four varieties of the rhinoceros are enumerated by naturalists, but my observation led me to conclude that there are but two; and that the other supposed species consist simply of differences in size, age, and the direction of the horns, just as if we were to reckon the short-horned cattle a different species from the Alderneys or the Highland breed. I find, however, that Dr. Smith, the best judge in these matters, is quite decided as to the propriety of the subdivision into three or four species. The absence of both these rhinoceroses among the reticulated rivers in the central valley may be accounted for by the circumstance that they would be such an easy prey to the natives in their canoes at the periods of inundation; but we cannot so readily explain the absence of the giraffe and the ostrich on the high open lands of the Batoka, north of the Zambesi, unless we give credence to the native report that another network of waters exists still further north near

Lake Shuia, which has prevented their progress southwards. The Batoka have no name for the giraffe or the ostrich in their language; yet, as the former exists in considerable numbers in the angle formed by the Zambesi and Chobe, they may have come from the north along the western ridge. The Chobe would seem to have been too narrow to act as an obstacle to the giraffe, supposing it to have come into that district from the south; but the broad river into which that stream flows seems always to have presented an impassable barrier to both the giraffe and the ostrich, though they abound on its southern border, both in the Kalahari Desert and the country of Mashona.

We passed through large tracts of Mopane country, and my men caught a great many of the birds called Korwé (*Tockus erythrorhynchus*) in their breeding-places in holes in the mopane-trees. On the 19th we passed the nest of a korwe, just ready for the female to enter: the orifice was plastered on both sides, but a space was left exactly the size of the bird's body. The hole in the tree was in every case found to be prolonged some distance upwards above the opening, and thither the korwe always fled to escape being caught. The first time that I saw this bird was at Kolobeng; as I was standing by a tree, a native exclaimed, "There is the nest of a korwe." I saw only a slit, about half an inch wide and three or four inches long, in a slight hollow of the tree. Thinking the word korwe denoted some small animal, I waited with interest to see what he would extract; he broke the clay which surrounded the slit, put his arm into the hole, and brought out a *Tockus*, or *red-beaked hornbill*, which he killed. He informed me that when the female enters her nest the male plasters up the entrance, leaving only a narrow slit by which to feed his mate, exactly suiting the form of his beak. The female makes a nest of her own feathers, lays her eggs, hatches them, and remains with the young till they are fully fledged; during all which time, stated to be two or three months, the male continues to feed her and the young family. The prisoner generally becomes quite fat, while the poor slave of a husband gets so lean that on any sudden lowering of the temperature he is benumbed, falls down, and dies. This is the month in which the female enters the nest; she