

ance that the honour has been adjudged to it of being read at our opening meeting of this evening, and I recommend it accordingly to your best attention.

The only other subject that I have to notice is a very valuable paper which has also been submitted to us by Lieutenant Blakiston, and which describes his journey round the Island of Yesso. This island is of great interest to us, not only from its geological structure and its precarious political condition, but also from its having been the habitat of that remarkable race of hairy men, called the Ainos, regarding whom there has been so much discussion among physiologists. Lieutenant Blakiston is already favourably known to us from his pioneering expedition up the Yang-tse-kiang, and, as he travelled on this occasion in the capacity of an agent of the Japanese Government, he must have enjoyed unusual opportunities for observation. His paper will be read at an early meeting.

Captain Burton also, who is not less indefatigable as a writer than as a traveller, has promised us another Syrian paper on the Anti-Libanus, and may, perhaps, re-enter the lists in defence of his old opinions regarding the true Geography of the Lake Regions of Equatorial Africa.

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The following paper was read:—

*Journal of Exploration of the Limpopo River.* By Captain FREDERICK ELTON.

[ABSTRACT.]

CAPTAIN ELTON'S expedition to explore the Limpopo River was undertaken for the purpose of opening up water-communication, and a more convenient route, from the settlement on the Tati River to the sea-coast, a distance of nearly a thousand miles by the road used at present, to Port Natal. A flat-bottomed boat, 13 feet long, with mast, sails, and oars, was constructed on the Tati; and Mr. Elton started, on July 6th, 1870, with the boat and baggage in a waggon, and three pack-oxen following. The first portion of the long journey was from the Tati to the point of embarkation on the Limpopo.

The country is here covered with a vast area of undulating bush, consisting chiefly of the thorny acacia, the mimosa, occasional fig-trees, and thorny underwood. The rivers are periodical, and run in broad, sandy beds, thickly fringed with reeds and rushes. Water-pools are few and far between in the inhospitable and thirsty tracts between the streams. Lions are numerous, and prowl about

the river-banks by night, in search of the game which they know must be forced, by thirst, into their clutches. Guinea-fowls, bush-pheasants, and partridges, troop down in the cool of the evening across the sands. The rhinoceros, buffalo, gnu, koodoo, zebra, and giraffe—hidden in the shade of the bush during the day—before daybreak, and at sundown, turn their heads towards the water. The elephant travels rapidly from one river to another, the constant war waged with him by the hunters keeping him nervously on the alert.

The inhabitants of this region belong to the Makalaka tribe. They have no cattle; goats and a few sheep compose their flocks, but as cultivators they are successful and hard-working. The castor-oil, millet, tobacco, and hemp are raised, and pumpkins are met with in the gardens near the kraals. In character the Makalaka is cunning, and horribly avaricious, cowardly in war, but daring in the chase, abjectly obedient to his chiefs, and from infancy impressed with the uselessness of resistance to the Matabele tribe, which is the conqueror of the Makalaka. The Makalaka huts and utensils are fairly and neatly finished.

After some annoying delays at the kraal of one of the chiefs, where it was necessary to leave the wagon, Capt. Elton continued his journey, the boat being carried on the shoulders of twenty men. The route followed the course of the Tuli River to its junction with the Shasha; and on the 30th of July the party encamped in the dry bed of the Shasha, at a distance of 100 yards from the Limpopo. This point is 175 miles in a direct line from the Tati settlement, and 258 miles by the route that Capt. Elton found it necessary to take.

The Limpopo is here a broad deep stream, about 200 yards across, fringed with large trees and thick underwood, where the first sight to greet the eyes of the travellers was a family of crocodiles, sleeping upon a small sand-island. At dawn, on the 1st of August, Capt. Elton began his voyage. Crocodiles were seen in numbers, and at one place a large herd of buffaloes broke from their covert in the reeds, and halted to watch the boat from the lower slope of the hills on the left bank. One or two large fish-eagles rose from the shadow of the cliffs, with shrill screams. An occasional cormorant, a few pairs of Egyptian geese, and graceful blue and white herons, lazily watched the approach of the boat; and, towards evening, large flocks of hornbills passed in their clumsy flight across the river. Where the hills receded, large tamarind figs, and a few baobabs towered over the thick foliage of the smaller trees, and the dense underbrush was interlaced with

coils of "monkey-rope," the resting-place of innumerable birds and their colonies of nests:—

"The river trailing like a silver cord  
Through all, and curling lovely, both before  
And after, over the whole stretch of land."

On the 2nd, coming suddenly round a bend, the boat was driven down by the stream, and upset under the wide-spreading branches of a large tree, which, undermined by the current, had partially fallen into the water, remaining firmly attached to the banks by its curling roots. Capt. Elton lost his blankets, waterproof sheets, thick overcoat, and cooking utensils; and his store of sugar and tobacco was irreparably spoilt. The boat, bottom upwards, was brought up on a sandbank about half a mile lower down the river. On the 3rd the land party, with bullocks, was joined at a village called Mafelagure's.

The Limpopo, from the Shasha to this point is only obstructed by small rapids, and gradually increases in importance. A broad channel, with from 4 to 10 feet of water, can easily be followed, the prevailing direction being s.e.

The people at Mafelagure's are offshoots of the Makalaka tribe, and darker than the men on the Shasha and Tuli. They are armed with bows and arrows, quiet and inoffensive, and afraid of strangers. It was from these people that Capt. Elton first heard of the falls of the Limpopo, which they described as a "wall of water," and a desolate region where lions abounded and had driven out everybody, and where hippopotami and crocodiles were to be found in legions.

At about nine miles below Mafelagure's, the party came to a group of isolated conical hills on the right bank, and a little beyond this point a high range ran nearly parallel to the opposite shore. Rapids now became more frequent, and of a more formidable character, until a large river, running in from the north, was reached, called 'Mzinyani. Here the Limpopo, stretching out to more than a mile in width, rushes in a dozen different channels over large boulders, in seething and foaming rapids, interrupted by circling eddies and deep dark silent pools, the abode of hippopotami, who feed on the long waving grass of the thickly wooded islands—the surrounding reeds being honeycombed, in every direction, with the paths by which they travel on their nocturnal journeys. At a distance of five miles the river culminates in the cataracts of Tolo Azime.

The boat had been racing down with the current, and all Capt.

Elton's energies were directed towards running on shore. The trees on either bank of the channel, and the abrupt turns, entirely prevented any looking ahead; but the increasing roar of distant waters, gradually overcoming even the constant boiling of the rapids, was a danger-warning of ominous portent. At last they ran the boat safely into a creek under a large shelving rock, where they made fast, and scrambled through a sea of reeds and brush-wood, in order to obtain a view of the situation.

Twenty yards' walk opened up a spectacle well calculated to make the whole party shudder at the peril they had so narrowly escaped. A magnificent fall dashed down into a yawning chasm right ahead of the channel where they had stopped the boat, and formed one of a succession of cataracts by which the river precipitates its waters through a vast rent in the land to a lower level. Torrents of pale-green water tore through the narrow passage beneath their feet, foaming and breaking in clouds of spray, over huge boulders, syenitic and micaceous rocks, intermixed with masses of a reddish-coloured granite, rising perpendicularly from the gorge, and overtopped by a sombre columnar wall of basalt, imprisoning the roaring flood between dark and lofty barriers.

Granitic and hornblendic rocks and boulders lie scattered broadcast, and in the wildest confusion, over all the barren land on the right bank, stretching away to a low line of hills in the distance, witnesses of the convulsions and upheavals to which the land has been subjected in order to form the "deep lateral gorges" through which the Limpopo descends from "the central plateau lands." The whole country from here takes one downward step, and descends to a lower level in a most striking manner.

In the foregoing sentences Capt. Elton quotes the very words of Sir Roderick Murchison, in the hypothesis on the physical structure of the African continent contained in our revered President's Address for 1852.

The position of Capt. Elton and his little party was not an enviable one. They stood on an island where their boat was of no assistance to them, and the sun was nearly down before they discovered a large fallen tree, lying over the head of a smaller fall higher up. Over this they passed, making themselves fast to the rope of the keedge which they took from the boat, and scrambling over the rocks of the smaller rapids beyond, until they reached their camp on the right bank at near midnight: a long day of feverish excitement.

In the morning they moved down below the falls, and spent two days in endeavouring to extricate the boat from its awkward position. No assistance was at hand. Mafelagure's people had

spoken truly—not a human being could be discovered. They succeeded, however, in carrying the boat to the foot of one of the higher falls, where it was swept down the chasm, the wreck finally lodging on a ledge of rocks, completely knocked to pieces, and of no further service. The *Freeman*, as the boat was named, was consequently abandoned—a most unfortunate loss.

Capt. Elton says that the beauty of the scenery round the Tolo Azime Fall cannot be exaggerated. Although much inferior, in point of size, to Niagara or to the falls of the Zambesi, the "combination of contrasts" afforded by the falls of the Limpopo, in their peculiar formation and surroundings, render them well worthy of a place in future African maps, and of sufficient interest and importance to repay the exertions of any future traveller whom curiosity may prompt to bend his steps in their direction.

Beyond the mouth of the 'Mzinyani, the Limpopo rushes in a dozen different channels, in seething and foaming rapids separated by islands. The channel on the extreme right bank continues its direction towards the south-east, boiling and sweeping over rocks and boulders, and is precipitated by a series of gradual and successive falls into a narrow gorge, where the volume of water is quickly increased by other channels seeking the same outlet. The gorge speedily increases in depth, and at last runs between perpendicular walls, principally composed of granite and basalt, 70 to 150 feet in height. Here the remaining branches of the river, inclining suddenly to the south, leap in a succession of parallel cascades into this abyss, thundering majestically into the chasm, and almost hidden by clouds of spray rising in white vapour from the torrent below, which foams and races down into a circular basin, surrounded by high escarped cliffs, and then, turning rapidly to the south, escapes in a deep narrow swift channel, on its journey towards the sea.

The large trees and the vivid colouring of the left bank, extending to the islands and to the very verge of the fall, is in marked contrast to the barren lands, sandy valleys, and scattered rocks on the other side, where, from the summit of the basaltic rocks overhanging the falls, a magnificent perspective is obtained. In front, and on a higher level, is the perpendicular barrier over which the river leaps into space; below thunder the waters into the chasm; far away to the left the gradual descent and commencement of the gorge is distinguished; while to the right abrupt and escarped rocks overshadow the circling depths of the basin, dense woods sloping gradually from its margin towards a blue range of distant hills.

Hippopotami abound both above and below the falls; koodoo, numerous monkeys and baboons, otters, and a few buffalo, were observed on the left bank; but on the right there were few signs of life, and the oxen had to be driven for some miles from the river-bank to find a few parched blades of grass.

No hunter has previously visited the Limpopo Falls, nor are they laid down on any map up to the present date.

At Tolo Azime the Upper Limpopo may be considered to terminate, and to debouch from the central plateau. The falls, of course, are an insurmountable obstacle to navigation; and indeed the rapids, for some distance higher up, had already condemned this river as unnavigable.

Capt. Elton continued his journey from the falls, on the 8th of August, with three pack-oxen and his four followers. On the 9th he encamped within a few miles of the last peak of a lofty range on the right bank—one of the spurs of the Zoutpansberg. On the 11th the party was opposite an immense extent of reeds visible on the left bank, probably the mouth of the Subischani River; and from here the Limpopo, which had been running free from obstacles, after a rapid bend, tore down in a narrow channel over a rocky bed, in a succession of rapids and falls, until, on the 12th, a rocky causeway was reached, constituting a second fall in the level of the river.

The scenery here was peculiarly wild and interesting. A large range of hills on the left bank formed the background, from which a thickly wooded country sloped down towards the river. Huge boulders of granite overtopped the network of rents through which the river dashed noisily down, either in shallow foaming rapids or in successive and miniature cascades. Great hornblendic rocks encumbered the whole stretch of the valley, pent in between the river and escarped hills. The progress of the oxen was impeded to such an extent that Capt. Elton began to despair of success, and to fear that he would be obliged to abandon any further descent of the Limpopo. The wildness of the scene was increased by a group of lions, which continued to fight over the carcase of a zebra, without paying the least attention to the travellers.

That evening they were compelled to ford the river, breast high in places, to the left bank; the small path they had hitherto been following being cut off by a considerable range of hills rising abruptly from the water's edge. The river was now running between parallel ranges of escarped hills, in rapids and small falls, boiling and foaming through shallow passages and around islands.

They had met with no human beings since they left Mafelagure's.

kraal, but on the evening of the 13th they arrived at Amabaga's kraal, where they met with a hospitable reception. This is another of the nondescript villages met with on the Limpopo—a composition of people from surrounding tribes, the Makalaka element predominating. They have no flocks, but depend for flesh on the chase, while the low alluvial lands abutting on the river yield them large crops of *holcus*, the surplus of which is converted into beer, and its consumption seems to form the principal aim of their existence.

Beyond this village the hills rise precipitously on either bank of the river, and the travellers passed the greater part of the 15th in the water. They crossed and re-crossed *nine* times during that one day.

After the last crossing they surprised a *Knobnuizen*—a wretched specimen of humanity, and a living testimony in favour of the Darwinian theory—without a vestige of clothing, tattooed with a line of knobs bearing a striking resemblance to nuts, extending from the roots of his wool perpendicularly down the forehead to the end of the nose. These unfortunate people inhabit small huts hidden away in the bush, and live by their bows and arrows or upon edible roots. Intensely black in colour, with exaggerated everted lips, they bear on their persons all the outward signs of want, abasement, and degradation. They are of inferior stature, small limbed, with large hands and feet, pot-bellied and spindle-shanked. Starvation continually stares them in the face, and their life is one constant battle for existence.

After a somewhat dangerous encounter with some warriors of Umseila's tribe, the party, stumbling through high reeds and wet grass up to their shoulders, reached a large kraal of Maloios, where they were well treated, and where they procured a guide who took them to the junction of the Limpopo with a river called Nuanetzi. Here many kraals are met with, and there is a fertile country, bounded by a distant range of sandstone hills, and extending between the Leviebu and down the Limpopo, to some distance below the Nuanetzi. It is peopled by Maloios, an offshoot of the extensive Amatonga family, paying tribute to Umseila. Their kraals are neat, well built, and shaded by trees, in marked contrast to the custom of the Zulu tribes, who cut down every tree near their villages with scrupulous care.

The journey from the confluence of the Nuanetzi, down the Limpopo, to the Lipalule River, occupied ten days, from the 19th to the 29th of August, following the right bank. The land is composed of a rich fertile soil, and is sufficiently raised above the

level of the river to guard against fever and sudden inundations. Wild cotton is very abundant and of singularly good quality, growing frequently in bushes 8 or 10 feet high. On the 21st and 22nd the left bank was hemmed in by a succession of escarped mountains, the road lying over low broad hills and undulating flats of forest land. Here the Limpopo flows in a deep and open channel.

Further on they descended into open rich grass lands, covered with large trees, through which the river winds majestically in an uninterrupted course far away into the distance—a splendid landscape, fresh, green, and enlivened with the most vivid tints. On the 29th, through a continuation of this park-like country, they marched into a rich district stretching away to the banks of the Lipalule, thickly peopled by Amatonga, under the government of Madumelan, who commands the Limpopo from the junction of the Lipalule, and collects the tribute paid by the kraals between the two great rivers—the Limpopo and the Uncomogazi (King George's River). The land is highly cultivated—sesame, *holcus*, tobacco, castor-oil, hemp, and ground-nuts being raised in great quantities.

The Limpopo, from the Nuanetzi to the Lipalule, will afford a navigable channel even in the driest season of the year; and it would be quite practicable to use the river as a way of water-communication, cargoes being towed in flats by steamers with a light draught of water. The right bank presents great facilities for the construction of a road, and the district being rich and alluvial, it would, if colonized by Europeans, rapidly become a fertile and important centre, monopolising a considerable trade with the interior, and connecting with the Transvaal by two routes, the one by the Luribu and Zoutpansberg, the other by the Lipalule.

The dreaded *tsetse* was seen on the 19th and 20th of August, and although Capt. Elton's oxen were bitten, none of them experienced any bad effects. He believes that the danger of the bite of the *tsetse* has been exaggerated. The natives do not believe it to be universally fatal, unless the animal bitten is in low condition, and exposed suddenly to heavy rains. A strong, healthy animal runs little or no danger.

Game of every description abounds on this part of the Limpopo's course; buffalo, elephants, rhinoceros, giraffe, waterbuck,gnu, zebra, eland, koodoo, wild boar, the striped hyæna, wild dogs, leopards, and lions; while large dragon-flies and brilliant butterfly-flies are seen in the vicinity of water. Cormorants and fish-eagles



poach the rivers; and there are white-necked ravens, hornbills, green pigeons, paroquets, vultures, hawks, white herons, partridges, numerous waterfowl, and an infinite variety of small birds with gorgeous and striking plumage.

The baobab is constantly met with, and, from the enormous bulk which some of the trees have attained, they must date back for many centuries. Euphorbiæ, four varieties of fig-tree—one of which reaches a large size, the graceful tamarind, acacias, mimosas, the dwarf date-palm, are the most prominent components of the wood-lands. The pale-blue lotus is not uncommon, and reeds and bulrushes border the water's edge in many places. The banks are fringed with waving feathery-topped grass, while prickly pears, aloes, and cacti form the dense under-thicket. Hanging lianas, formidable hook-thorns, and labyrinthine monkey-rope, choke up the "beast-paths;" and a magnificent yellow creeper, convolvuli, and various parasitical plants, either entwine the gnarled trunks of the larger trees or are to be seen fixed between the branches. The district is well drained by deep ravines, and appears to be dry and healthy.

From this point (the junction of the Lipalule with the Limpopo) Mr. St. Vincent Erskine had already traced the latter river to the sea. As Capt. Elton, single-handed and without a boat, could make no practical survey of the lower waters and the bar, he determined to strike across the Lipalule, cross the Uncomogazi, and so reach Delagoa Bay, where there is a Portuguese settlement called Lorenzo Marques.

On the opposite bank of the Lipalule the party struck through a dense bush country, in order to reach a path leading to the Uncomogazi. They halted, after walking all day, by a small pool, where elephants and a large herd of buffalo came down to drink. The next day, the 31st, they still travelled through the same monotonous jungle, meeting giraffe, gnu, and zebras on their way, and at last found the path. On the 3rd they came to a number of Amatonga villages, near a lake communicating with the Uncomogazi. Capt. Elton went down to the lake, and got within shot of a large bull hippopotamus, with his head and shoulders out of the water, yawning and clashing his jaws together. A ten-to-the-pound bullet, and six drachms of fine powder through his neck, finished him; and in his dying struggles he crossed the lake into shallow water, pursued by four or five of his companions, who hunted him about, and attacked him fiercely, the water all around being white with foam, one of the most exciting scenes possible. When he was fairly dead they left him, and the Amatonga people

were delighted at seeing his huge barrel-shaped carcase lying on the shoal.

The ferry across the Uncomogazi is farmed to a small chief on the river, who drove a terribly hard bargain with the travellers. Capt. Elton gave him the last piece of cloth, the last knife, and the last string of beads he possessed; and then was obliged to add ten bullets, half the last canister of powder, and his own pocket handkerchief, before the usurious ferryman would embark the party. The ferry-boat was hollowed out of the trunk of an immense tree, and carried the baggage and eight men with ease, in addition to two Amatonga men who managed the navigation. From this ferry to the sea the natives call it three days' journey, and here this magnificent river is running in a navigable channel of deep water for almost its entire breadth of about 600 yards. Yet, although it falls into Delagoa Bay, almost within sight of Lorenzo Marques, the Portuguese absolutely turn it to no account. The river is known by various names,—among them the Uncomogazi and King George's River,—and it has been curiously confused with the Limpopo by former geographers.

It fell to the perseverance and good fortune of Mr. St. Vincent Erskine to carry down the Limpopo from the affluence of the Lipalule to the sea, and prove it to be the river laid down on Captain Owen's chart as the Inhampura; and he also traced the upper waters of the Uncomogazi.

Turning their backs on the latter river, Capt. Elton and his party passed through a thickly wooded grass country, where lions gave them some trouble during the night; and on the 7th of September, in pouring rain, they arrived at the gates of Lorenzo Marques, where the sentry appeared to have some scruples in admitting a party headed by a white man, dressed in an old leathern kilt and gaiters, considerably travel-stained, and rather excusably over-excited at his safe arrival at the sea-board.

The main part of the country travelled over from the Lipalule presents an arenaceous aspect, and consists of a succession of easy undulations and rounded sandstone hills, traversed by protrusions of trap. On the rivers, a soil rich in vegetable matter, and capable of constant irrigation, richly repays the agricultural labours of the Amatonga, who raise large crops of millet, rice, sesame, ground-nuts, pumpkins, castor-oil, and Indian hemsps, as well as bananas, oranges, limes, onions, and cabbages. The ridges, running parallel to King George's River, and extending to the heights commanding Lorenzo Marques, are bounded by dead flats, and between the vast sea of reeds fringing the river's banks and these bluffs lies a strip

of peculiarly rich soil, admirably adapted for the cultivation of cotton, and which at present yields to the natives extraordinary returns in *holcus* and maize.

The principal trade at Lorenzo Marques is in the hands of a French house, and of the Banyans from Diu. The town is built on a whale-backed sand-flat, nearly surrounded by water at low tide, and is entirely commanded by the neighbouring heights, from which the Portuguese have been threatened by the natives from time to time, with comparative impunity. The town is surrounded by a wall, and defended by three bastions fronting the land, and a bastion at each extreme angle. The feeble garrison consists of 120 soldiers, and 16 useless old honeycombed guns. A half-ruined fort, a *place d'armes*, around which the best houses and the custom-house are built, and three parallel streets connected by narrow lanes, compose the town of Lorenzo Marques. Banyans, half-castes from India, a few Europeans, negro soldiers, and a large number of slaves, constitute the population. Capt. Elton ascribes the decayed condition of the Portuguese possessions on the east coast of Africa to the incessant intrigue and the evil passions aroused by the ancient slave-trade, to the apathy and incapacity of preceding governments, and to a general dearth of money.

The entire country, from the Lipalule to Delagoa Bay, is inhabited by Amatonga, and by the men of Umseila, who is the paramount ruler of the region extending from the Uncomogazi to the Busi.

The distance, in a direct line, from the Tati settlement to the confluence of the Shasha and Limpopo is 175 miles, thence to the Limpopo falls 60, thence to the Nuenetzi 119, from the Nuenetzi to the Lipalule 110, and from the Lipalule to Lorenzo Marques 165. The total direct distance of the five divisions of the journey combined is thus 629, and Capt. Elton estimates the distance actually travelled over at 964 miles in 52 marching days. He says that, with six months' preparation, he will undertake to run steamers and flats to the Nuenetzi in fifteen days, and connect with a wagon road, by way of Zoutpansberg, to the Tati, a journey which should be made easily in fifteen more, or thirty days in all. He believes that the unhealthiness of the Limpopo and the coast has been greatly exaggerated.

The paper will be printed entire, with the author's map, in the 'Journal,' vol. xlii.

Sir BARTLE FRERE said it might be of interest to note the remarkable illustration afforded by the paper of the truthfulness of a very nearly forgotten romance by Defoe, 'The Adventures of Captain Singleton.' Captain Singleton

is described in the book as having been a buccaneer or filibuster in the days of James II., who, after acting as a pirate for some years in the Indian Seas, was at length wrecked on the coast of Madagascar. With the help of the surviving crew he built a boat and made his way to the African coast, whence he proceeded through a country which might very well be described in the words of Captain Elton's Journal, or in the terms which Dr. Livingstone used in speaking of the country between the Zambesi falls and the sea. They went through a rich, alluvial, tropical country, until they came to a steep wall, up which they had to climb to the top of the falls which they found interrupting the course of the great river which they had followed from the coast. They then got on to a sandy region, where they were very much pestered by the lions and other wild animals, and suffered greatly from want of water. After many days' journeying they at length made their way to the Portuguese settlements on the west coast of Africa. The interest of this romance lay in this, that there was ground for supposing that De Foe never wrote one of his novels without some substratum of fact he had gathered from the stories he had heard from voyagers and travellers whom he met at the taverns about London. It was a very curious fact, that the description of the country in this almost forgotten story might seem to be taken from the accounts given by Sir Roderick Murchison from the narratives of men like Livingstone and the traveller whose journal had just been read.

MR. FRANCIS GALTON said, twenty-five years ago the map of the country about the Limpopo was nearly a blank, and, he might add, that perhaps the most appropriate memorial of the geographical labours of Sir Roderick Murchison would be two maps, one representing the world as known at the time when he first interested himself actively in the affairs of the Society, and the other representing the world as known at the present time; for in the twenty-five or thirty years that had elapsed between those two periods, the progress of geography had been immense. In the Arctic regions, in Africa, north and south, in Australia, in all parts of the world, explorations of the highest importance had taken place, and every exploration met with his heartfelt sympathy, in many cases with his guidance, and in some with his initiation. Previous to 1848, the limit of African travellers, proceeding from the south, was a dry, arid country, in the neighbourhood of Livingstone's first missionary station, not far from which the Limpopo perennially flowed, no one knew where, to the northward. It was the old story of African rivers over again,—the case of the Niger on a small scale,—that is, of a large river flowing in a direction that was not seaward. Since then, various travels had been made in the interior of Southern Africa, and a great portion of its interior had become known; but now, for the first time, complete information was obtained concerning the course of the Limpopo. The nature of its course threw great light on the general features of the geography of Africa. The Limpopo makes a curve concentric with the lower course of the Zambesi, and mimics it in many ways, showing the similarity of the physical features of the banks of the two rivers. It has also its great fall; and the position of that fall, as laid down by Captain Elton, gives very fairly the boundary line of the great African plateau in which so many rivers have their rise.

Admiral HALL said the entrance to the Limpopo was very insignificant, and he was glad to hear such a good account of the interior. It was his good fortune to command the *Nemesis*, the first iron steamer that ever rounded the Cape of Good Hope. He left the Cape in the dead of winter, and off Algoa Bay encountered a tremendous gale. At last, fortunately, he reached Delagoa Bay, where he found smooth water and let go the anchor. He stayed there three weeks, and tried to get up the Limpopo, but only succeeded in doing so for a short distance, though he met with hippopotami, zebras, and all sorts of game. The great want of English vessels going round the Cape was a good

harbour, there being none such between Simon's Bay and Delagoa Bay: he therefore recommended that England should extend her South African possessions to that bay.

Mr. SAUNDERS asked if Captain Elton in his Journal had given the altitudes of the range through which the Limpopo breaks in its course to the sea.

Mr. CLEMENTS MARKHAM said Captain Elton appeared to have lost everything when his boat capsized in the upper part of the river, so that he made no observations for height.

The PRESIDENT said the information afforded by Captain Elton's Journal formed a great stride in geographical knowledge. The curious parallel which Sir Bartle Frere had discovered between the journey of Captain Singleton and that of Captain Elton must have arisen from knowledge which Defoe picked up in conversation with Portuguese travellers, who, no doubt, in those days had passed from the east to the west coast of Africa. He quite appreciated Admiral Hall's sailor-like wish that England should extend her coast and get a good harbour; but he was afraid this was hardly consistent with a due regard to international considerations, as Delagoa Bay happened to be in the possession of our old and intimate allies the Portuguese. It was a curious fact that all the rivers on the east coast of Africa, however large they might be in the interior, were almost lost at their embouchures; some of them actually had no mouth, there being sandbanks across the entrance. The Zambesi had a bar across the mouth, and the Limpopo and the Lorenzo Marques were so small at their entrances that boats could hardly enter them. A paper had recently been submitted to the Society by Dr. Mann on this very subject. In conclusion, he asked the Society to record their thanks to Captain Elton for his very interesting paper.

Mr. GEORGE FRERE wished to inform the Meeting that the English claimed the east coast of Africa up to latitude  $26^{\circ}$ . He recollected one of our admirals stationing a party of men on Inyak Island, which lies in the bay, within that limit, in assertion of the claim. The place had the reputation of being a wretched hole, which might account for some apparent indifference about it, but its importance had not been lost sight of in the proper quarter.

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*Second Meeting, November 27th, 1871.*

MAJOR-GENERAL SIR HENRY C. RAWLINSON, K.C.B., PRESIDENT,  
in the Chair.

ELECTIONS.—*Lieutenant William de Wiveleslie Abney, R.E.; Hon. J. F. Birch; Charles de la Barre Bodenham; Captain Alexander Bowers; Samuel Constantine Burke; Lieutenant Reginald Chalmer, 60th Royal Rifles; Arthur Cockshott, M.A.; Lieutenant Gustavus W. Berry Collis, 6th Royal Regiment; Rev. James W. Cook; Charles Couper, C.M.G.; Henry Augustus Couper; William Campbell Eyton; James Murray Foster; Captain John Clinton Greene, R.A.; Edgar Christmas Harvie; George F. Head; Dr. Henderson; Henry Tylston Hodgson; Rev. James John Hornby, D.D., Head Master of Eton College; Captain Alexander Hadden Hutchinson, R.A.; Thomas Hughes Jackson; T. Johnston; Robert Jones; Edgar John David Ludlow; Henry Major, B.A.; Baron de Maltzan; Edward Ellis Morris; H. W. Mozley, M.A.;*