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## A JOURNEY TO THE SUMMIT OF MOUNT KENYA, BRITISH EAST AFRICA.\*

By H. J. MACKINDER, M.A.

IN East Africa stand two snow-capped mountains, extinct volcanic cones, whose names have been known for fifty years—Kilimanjaro and Kenya. They are about 200 miles apart, due north and south of one another, the equator crossing Kenya, the more northern of the two. It was the missionary Rebmann of Mombasa who, in 1848, first reported the existence of Kilimanjaro. In the following year his colleague, Krapf, saw Kenya from Kitui, a spot 90 miles south-east of the peak. Since that time Kilimanjaro is said to have been visited by more than a hundred Europeans, and both the British and the German Governments have now established stations in its immediate proximity. Its summit was conquered in 1889 by Dr. Hans Meyer. Kenya, on the other hand, being further inland, and for other reasons less accessible, has been more rarely visited. It was seen, for the second time only, in 1883 by Joseph Thomson, when he crossed the plateau of Laikipia, out of which rise the north-western slopes of the mountain. In 1887 Count Teleki penetrated the forest girdle of Kenya, and succeeded in reaching an elevation of nearly 14,000 feet. Six years later Dr. Gregory attained to a height probably about 2000 feet greater. Both of these attempts were on the south-western quadrant of the mountain. Captain Dundas had previously failed to emerge from the forests of the southern slope, but Dr. Kolb at a later time reached the open "alp" above the eastern forest. It appeared, therefore, that when the Uganda railway had reduced the distance from the coast to Kenya by two-thirds, it should be possible,

\* Read at the Royal Geographical Society, January 22, 1900. Maps, p. 564.  
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with no great expenditure of time, to convey a well-equipped expedition in a state of European health to the foot of the mountain, and that such an expedition would have a reasonable chance of completing the revelation of its alpine secrets.

Rail-head having arrived at the requisite point in the summer of last year, our party, consisting of six Europeans, left Marseilles on June 10. My colleagues were Mr. C. B. Hausburg, who shared with me the expense of the expedition; Mr. E. H. Saunders, a collector; Mr. C. F. Camburn, a taxidermist; César Ollier, an Alpine guide from Courmayeur; and Joseph Brocherel, a porter from the same village. We were aided by a grant from this Society. Mr. Hausburg was good enough to act, not merely as photographer, but also as camp-master, thus leaving me free for observation and survey. The most important item in our equipment was a series of forty boxes, tin-lined, each weighing 25 lbs., and containing a day's complete rations for six white men. Two of these boxes were a man's load, and we carried them to the mountain, where food could not be obtained. They served our purpose admirably, and in a year of unusual drought were the basis of our success. By any other method of packing, theft and waste would have compelled retreat long before our work was accomplished.

We reached Zanzibar on June 28, and, warned by a telegram from Mombasa informing us that other caravans were about to set out for the interior, and that porters were in unusual demand, we asked for and obtained the kind permission of General Matthews, the Sultan's first minister, to recruit Swahilis in Zanzibar. On July 4 we landed at Mombasa, where famine-stricken Wanyika were engaged on relief works, and small-pox was prevalent. We therefore arranged with Major Souttar, to whom our thanks are due, that the fifty-nine Zanzibaris, who arrived on the 6th, should march to the fort and be isolated for the night. On the following morning they were placed in the train and sent to rail-head, then at Nairobi, a three days' journey from Mombasa. Mr. Hausburg took charge of them, and with him there went the other four Europeans, while I remained at Mombasa until the 12th, completing our arrangements. The advanced party were delayed by a railway accident, and Hausburg had to undertake the transshipment of all our goods at midnight. During my stay at Mombasa, I enjoyed the very kind hospitality of the chief engineer of the Uganda railway and Mrs. Whitehouse.

At Nairobi we camped alongside Mr. S. L. Hinde, the collector of Masailand. There we recruited local porters, with the invaluable help of Mr. F. G. Hall, the well-known district officer at Fort Smith. We also learned something of the ways of the country and of its game, and spent pleasant days in the company of the railway and Protectorate officials. With the aid of Captain Bearcroft of H.M.S. *Philomel*, of the Eastern Telegraph Company and Mr. Anderson, their manager at

Zanzibar, and of the Uganda railway and Mr. Stallibrass, the director of telegraphs, I endeavoured to fix telegraphically the longitude of Nairobi as a base for our work. Most unfortunately, the sky was overcast on two successive days selected for the operation; then the spread of small-pox compelled us to clear precipitately from Nairobi under threat of quarantine. On my return from Kenya, the *Philomel* had gone to Delagoa bay to take part in the Boer war.

We parted from Mr. and Mrs. Hinde at Nairobi, but we owe so much to their kind help, that they must be counted as members of the expedition in charge of the base.

The last detachment of the caravan left the railway on July 26, and



ON THE ATHI PLAINS.

marched to our first camp on the Nairobi river, 9 miles from the station. There we concentrated, and after a day's delay commenced our journey to Kenya in the morning mist of the 28th. All told we were 170 strong—six Europeans, sixty-six Swahilis, two tall Masai guides, and the remainder naked Wakikuyu. For four days we crossed the Kapoti plains, steering by Donyo Sabuk, the “great mountain” of the Masai. The plains are treeless and carpeted with sweet grass, which at this season was burned brown and crumbled under the foot. In addition to the Nairobi, we crossed three considerable streams—the Ruiru, the Daruku, and the Thika—whose waters, thigh-deep, are drawn from the slopes of Kikuyu away to the north-west. Their winding valleys are trenched into the plateau, and along the bottoms a continuous belt of

tree and bush overarches the river-channel. There was evidence of lions at the river-banks, but game was not very abundant in this part of the plain, although we had seen herds of 1500 zebra, wildebeeste, and hartebeeste at a distance of 20 or 30 miles to southward beyond the Nairobi station. Rhinoceros were the most striking tenants of the waste. On two occasions, when we went more than usually near to them, they charged into the caravan, fortunately without serious effect.

At one point the Nairobi river, flowing flush with the plain and encumbered with tall mop-headed papyrus, suddenly plunges into a gorge with twin falls divided by an islet. The gorge head, moist with spray, is choked with tropical vegetation, including palms, which we had not seen since we left Voi, only 100 miles from the coast.

On the banks of the Athi, here called the Begazi, and at the foot of Donyo Sabuk, we fell in with Mbuthia, a wizened Kikuyu chief, with avarice and cunning written in every line of his face, who was returning to his village from a visit to Mr. Ainsworth at Machakos. He brought two cows, the one a gift to him from Mr. Ainsworth, the other for me to present on the Sub-Commissioner's behalf to the principal mzee or elder of Meranga. As long as he was with us it was Mbuthia's proud function, like a Hebrew king, to make pretence of driving these cows. If they strayed, his attendants turned them again to walk in front of him.

On July 31 we made a march of 15 miles from the Athi to Muluka, Mbuthia's village. Our way lay over the plain and across the Thika river into a country set thinly with scraggy trees, like a great apple orchard with drought-burned grass. This is the march-land between the grassy plain of the Masai and the cultivated hills and valleys of the Wakikuyu. Gradually the grass became longer and greener, until at last it was shoulder-high and seed-topped. Then we came suddenly to the brink of the deep valley of the Thuge brook, along which, in the bottom, wound a strip of irrigated cornland. On the opposite side, in a glade of the bush which ran up the slope, we pitched our camp in close neighbourhood to Muluka.

Here our troubles began, for our Kikuyu headmen came to us with strong expressions of distrust as to the intentions of their countryman, Mbuthia. It took some diplomacy to secure peace, and that evening we for the first time put a boma or fence round the camp, and the white men took turn in keeping guard. Next day we made a state entry into Muluka, photographed Mbuthia and his wives, and shifted camp across the ridge on which the village is placed, into the next valley—that of the Ilula brook. It was in this district that Mr. Haslam, one of the Protectorate officers, had been murdered a short time before, and here a neighbour of Mbuthia's, Mudiu of Katumba, a man of singularly deceitful and repellent countenance, intrigued with the Wakikuyu of our caravan, trying to make them desert us, in the hope, no doubt, of looting what

we could not carry without their aid. In the evening, by firelight, our Kikuyu headmen endeavoured to counteract his and similar influences by orations, whose resounding periods and eloquent vowel sounds were seductive even to those of us who could not understand a word that was spoken. As the peroration was reached the orator put questions to the crowd, who replied unanimously, with an effect which resembled the rapid recital of the Church Litany, punctuated by the loud grunting



IN THE KENYA FOREST.

responses of the congregation. These Kikuyu headmen behaved well on the whole, and were loyal to us in spite of considerable temptations. Next morning, however, the whole body of Kikuyu porters attempted to desert, and were only checked by a display of firearms.

From this until August 6 we struck northward and eastward through a difficult country with successive ridges at right angles to our path, and deep-cut valleys between them. Rich banana shambas crowned the summits; irrigated strips of maize wound along the valleys. From a single prominent point in one of these valleys I

counted fourteen separate villages. The soil was of a brilliant red; the grass was green, and the wild-flowers of an English aspect; the well-trodden paths were often sunk like Devonshire lanes, and when the morning dew was on the weeds, and the bananas for a moment out of sight, the whole scene appeared familiar and far from equatorial.

There seems to be no superior government among the Wakikuyu, and our fortunes varied with the character and temper of each local chief or elder. At one camp, on the Iseragua brook, the whole countryside was afraid of us, and through fear was hostile. At night large fires lit up the hilltops around us, the centres, no doubt, of shauri and medicine-making. A woman, probably a spy, tried to gain entry to the boma, and our old Masai, Ndani, got hold of her by the wrist across the fence and was about to run her through with his sword, but Hausburg saved her, and she got away. In the morning we found that the guides had deserted, and that no natives were visible except a group of spearmen high up on one of the remoter paths. We sent out an armed party with our Kikuyu headmen, who, after long parley at a distance gradually reduced, finally brought in two chiefs trembling like aspens. With these we set out, and by much shouting they induced others to join us. None the less, an arrow fell at my feet when we were traversing a thicket that day.

In sharp contrast to this was our treatment by Wanganga, an elder whose village was perched on the highest and steepest ridge which we had to traverse. After having rather nervously climbed some 500 feet under the eyes of spearmen perched on the rocks above us, we were surprised by a warm handshake from a tall dignified savage, supported by his son and by colleagues, and surrounded by the ladies of his harem, who presented to us a "chit," or letter, which he had obtained from Mr. Lane when on a visit to Kitui, and with it the finest sheep which we received as a present during the whole of our journey. We were still more surprised to find that some men, whom our Swahilis and Masai would have disarmed and plundered as suspects but for a fortunate interference on our part, had been guides sent out by Wanganga to bring us safely across his country. I was much impressed about this time by the significance of an inquiry from a chief as to whether I was a good or a bad white man.

On August 6 we marched out of the hill country of Kikuyu—which is a trenched and denuded lava plateau—over the brow of the gneissic hill Kandundu, with an extensive view upon plains to eastward, and then through the gap between the gneissic hills, Kamuti and Kambijo, across the Sagana, to the plain which is the beginning of Meranga. Here we pitched camp and stayed for three days. In the last two marches we had again had to deal with rivers rather than brooks, and of these the Maragua, the Kaiahue, and the Mathioya are worthy of mention.

Meranga is a country about 30 miles across, extending from the

Sagana northward to the edge of the Kenya forests. It has very definite limits. We entered it when we crossed the Sagana; we left it when we crossed the Ragati. It is part of Kikuyu, and yet very distinct from the remainder of that land. It appears to be ruled by a system of informal meetings, or shauris, of elders, who sit on little stools in a great ring. Such a shauri was held within sight of our camp on the day of our arrival, summoned, no doubt, by Magonie, the elder of the neighbouring village, with whom we had made friends. Through our glasses we watched one orator after another address the assembly, and daylight was failing before the interpreter came to announce that "the



THE CLOUDS ON LAIKIPIA PLATEAU, WITH NĀNDARUA AND SATTIMA ON THE WESTERN HORIZON, AS SEEN FROM THE UPPER LIMIT OF FOREST (ABOUT 10,300 FEET) ON THE SHOULDER OF MOUNT KENYA.

rich men of Meranga," as he put it, had come to visit us. The shauri had, in fact, adjourned to our camp, and when the ring had been re-established, and when Hausburg and I had joined it, and Magonie had made speeches, we were informed that the Wameranga were our friends, and would do all they could for us. Then the fifty Wazee rose, and, shaking hands with us, filed away each to his own village, or, in the case of the more remote, to stay the night with Magonie. Even at this first interview, however, we heard that the Wameranga were at enmity with the Kikuyu peoples, through whose territories, beyond Meranga, we should have to approach the western foot of Kenya, and that consequently there were limits to their power of helping us. Accidentally

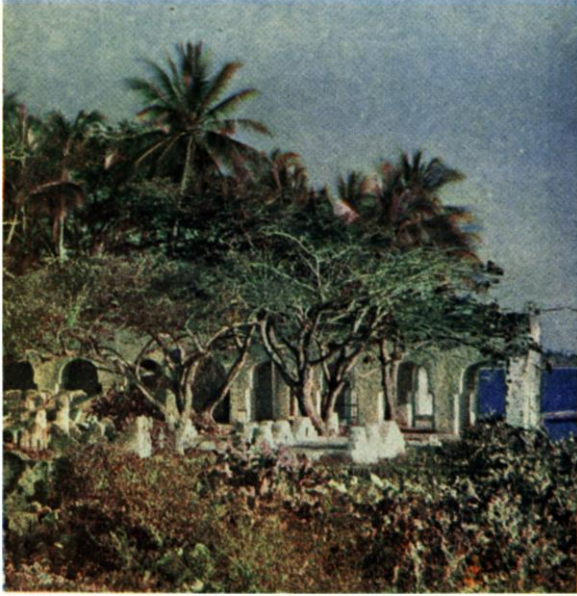


I learned, what I afterwards abundantly verified, that Meranga has an alternative name, Ilyaini. There is some legend about a great chief, who was the father or founder of the country, and had two names, Meranga and Ilyaini.

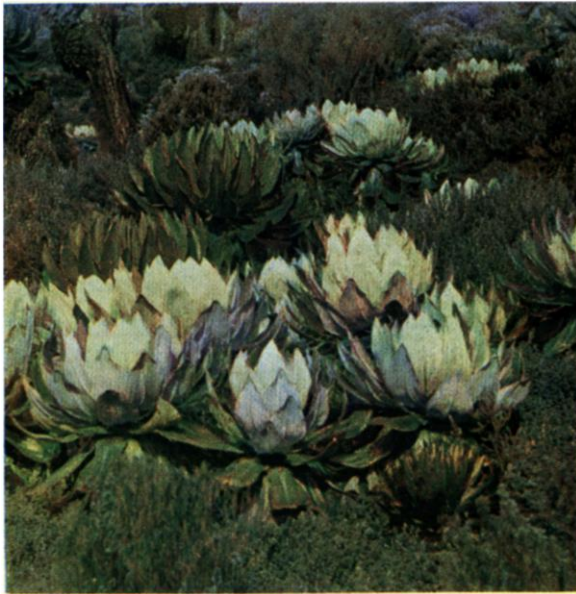
Along the north bank of the Sagana is a most elaborate system of pits intended to trap hippopotamus, which are still plentiful in the river, and invade the native shambas by night, doing much damage. These pits are large and extend so far that together they constitute a considerable work of engineering. We found frequent hippopotamus skulls in their neighbourhood, each the record of a feast, for all the bones except the skull had been removed, and the teeth had gone from that. To supply our men with meat, Hausburg shot two hippopotamus in a pool 3 miles above our camp, into which the Sagana and Ragati rivers fall over edges of the lava sheets which here underlie the plain. But he won greatest renown by killing a hawk on the wing, a feat not usually attempted by the native bowmen. I tried in vain to obtain astronomical sights. For many days the weather here and at previous camps followed a constant *régime*. It did not rain, but the sky was always overcast, except for a gleam of sunshine shortly before evening. As might be expected under such conditions, the temperature was very equable.

We left Magonie's on August 10, our guides being three wazee—Kamanga, Kerrerri, and Magonie. Kamanga was an important elder verging on old age, a pleasant man, but of no strength of character. Magonie was a pushing, boisterous individual, friendly enough, but rather oppressive. We were told that he was a notorious drunkard. Kerrerri was a young man of somewhat Japanese countenance, very pleasant and intelligent, but of slippery character. I learned a great deal from him, but found it necessary to verify everything by the cross-examination of more stupid persons. A young friend of his who joined us later was the handsomest man I saw in Africa, and it struck me frequently that the better-bred Wakikuyu, with their comparatively thin lips, copper skin, well-bridged noses, and slightly oblique eyes, were a far more intelligent people than the average negro, more intelligent also than the negroid rank and file of their own people. In some respects resembling the Masai, they differ markedly from them in character, for the Wakikuyu are mercurial, and the Masai are reserved and silent. Yet the Wakikuyu have nothing of the childish and fatalistic temperament of the Swahili. They are responsible free men, not emancipated slaves.

For 7 miles from Magonie's our way was over the plain through fields of maize and maize stubble, and past banana groves. For the first time since we left the mango trees of the coast, we saw really fine spreading trees of the general appearance of walnut-trees, with large dark foliage—the remainder, no doubt, of the forest which seems to



ZANZIBAR.



"ALPINE VEGETATION ON MOUNT KENYA."

have clothed the greater part of the Kikuyu country at no distant date. The hedges between the fields were mostly of wild tomato, and bore both fruit and flowers. Beans, sweet potatoes, yams, and gourds were abundant. Narrow paths of greasy red soil traversed the country in all directions, crossing the streams by bridges formed of felled trees, the trunks of which are cleft down the centre, the flat surface being upturned. The paths were usually fenced in, and wild flowers grew along their edges. We saw evidence of the use of manure.

Towards the end of this march we entered a hill country, but the cultivation became if anything more extensive and more continuous, and



GIANT LOBELIAS.

the crops more luxuriant, for we had now come to that part of Kikuyu in which it appears to rain almost daily. From August 7 to the 15th, it rained every day from midnight, or earlier, until noon or later. We travelled under the most depressing conditions, drenched to the skin from the moment that we rose, making short marches over slippery paths, and pitching our camp on wet ground. Yet the aspect of the country was something never to be forgotten. Here, in the heart of Africa, in a region previously approached by half a dozen white men at most, we traversed square miles of standing maize, neatly divided by slight furrows into rectangular half-acre plots, each, we were told, valued for sale at the price of a goat, and we had to pitch camp in a market-place strewn with corn-cobs, or to march for several miles to the next vacant

space. As we approached the end of Meranga, however, a singular change took place in the aspect of the people. At Magonie's, on the Sagana, they had worn cloth, and, friendship once established, had come freely into our camp, maintaining a day-long market outside it. Here, as we approached the borders of Wangombe and of the dreaded Watumutumu, even the chiefs wore skins, and for hours we marched over a land heavy with crops, and yet saw neither man nor woman. Again and again Kerrerri asked me to prevent our Swahilis from shouting and singing, in order that the inhabitants might not be frightened, and that he might have an opportunity of establishing relations with them.

Through Meranga we followed the valley of the Ragati, an important tributary of the Sagana not marked on the maps, which descends due southwards from Kenya. On August 12 and 13 we crossed its upper basin, where a number of streams from the Kenya forests converge to form the Ragati proper. Here the higher grounds rise above the cultivation and have the aspect of a rough English common, of the kind that would here be overgrown with gorse and bracken. Both the uplands and the stream-edges were brilliant with flowers; indeed, the whole of the upper part of Meranga is a paradise of wild-flowers.

On August 13 we crossed the Ragati and entered the little country of Kaleti, ruled by the chief Wangombe, a terror to the whole neighbourhood. We were told that at the time of our visit he held prisoner the son of our Masai, Ndani, and the brother of our Meranga, Kerrerri. In the early morning of the 14th, before we had as yet met the chief, Magonie and Kerrerri fled from us rather than encounter him. We had no alternative but to advance into his country without a guide. We made straight for his village, with the effect that he came out to meet us. After a long and irritating interview, he at last abandoned his effort to induce us to camp alongside of him, and undertook to guide us to the Sagana and to supply us with food, but he would have nothing to do with our friends the Wameranga.

We now marched for two days through a forest containing many elephants, whose paths we followed. The flowers were here rarer, but of the same species as in the cultivated country. The most singular point, however, was the almost complete absence of winged insects, at any rate in the day-time. Song birds, on the other hand, were abundant. The lofty trees were hung with beard-moss. Here and there we traversed green glades, from which conical hills, clothed with forest, could be seen to rise from among the trees in our neighbourhood. Niana and Kehari, the most prominent of these hills, became important landmarks at a later stage of our journey.

The rain now ceased, though it obviously persisted in the country that we had traversed. Ahead, to northward, was a great arch of blue sky, a clearing which had been seen at times, low on the horizon, from so distant a point as Magonie's. The relation of rain, wind, and

land-relief was, in fact, strikingly illustrated by our experiences. The south-east monsoon was blowing strongly without depositing rain on the plains of the Athi and Sagana, whose elevation is about 5000 feet. When it struck the slope of Kikuyu, which rises gradually from 5000 feet to about 7000 feet, it drenched the whole country side. The high plains of Laikipia, which surmount the slope at an elevation of about 7000 feet, were dry. So sudden is the change from Kikuyu to Laikipia, that in the course of a single march of about 9 miles we left a



TREE GROUNDSSEL.

dripping forest and came to a land which was the scene during the next few weeks, not merely of prairie fires, but also of forest fires. Yet in the presence of these fires we could see the heavy bank of clouds close at hand, driving up over the brink of the plateau and melting into thin air.

It was on the afternoon of August 15 that we emerged from the forest of Kikuyu, and crossing the Sagana again, here flowing to south-westward as a brawling mountain stream, we pitched the camp which

was to be the base of our operations on Kenya. The site was a high one, and gave a wide view over the brown steppe of Laikipia to the distant curves of the Aberdare range. That evening the setting sun lit up the peak and snows of Kenya, which rose abruptly above the forest curtain of the mountain, at whose edge, splayed out for some distance on to the plain, we had now arrived.

Our first attention was to commissariat. Wangombe had promised us food for our porters, and he now refused to deliver it. We had no alternative but to detain him until he made his word good. We had a store of grain, accumulated during our passage through Meranga, but that was essential for the porters who were to be sent on to the mountain. In two days, as a consequence of our action, a caravan arrived, both of men and women, bringing a considerable supply, for which we paid liberally in cloth. We then paid off a portion of our Wakikuyu and sent them home. At the same time Wagombe left us, promising further supplies.

Next day, August 18, two parties left the camp—the one, under Sulimani, our Swahili headman, returned to Wangombe's to buy more food; the other was the mountain party in my own charge. Hausburg stayed in camp until the return of Sulimani, and was then to join me. Of the porters going to the mountain, twelve were equipped to remain there for some time, old Metropolitan police coats, boots, and extra blankets being served out to them.

On the evening of the 18th my party made a short march to a point at the forest edge, close to that by which Gregory entered it. Next day we commenced what we expected to be a tedious passage of perhaps three days. César and Joseph, woodmen as well as icemen, led the way with axes, and two askaris followed with machetes. Thus we cut what the guides christened "la grande route du Mont Kenya." Our work was eased by availing ourselves of elephant-paths and by keeping steadily to the ridge, thus avoiding the tangle by the streams. There was hoar-frost on the ground as we passed through the portal of the first trees in the early morning. Within, tall straight branchless conifers supported a dark roof of foliage with frequent gaps to the sky. The undergrowth was at first of laurel-like shrub and of tall stinging-nettles, and here green parrots flew screeching in flocks just above the treetops. Presently tufts of bamboo appeared, and then bamboo ousted all growth but the conifers, the ground-weeds, and the rope and string-like creepers. Hour after hour we forged onward, and after a time upward also, until with unexpected progress we grew ambitious of making the passage of the forest-zone in a single day. And this we accomplished, with one hour to spare before the inexorable tropical nightfall. We camped in a glade, part of the glade-maze which runs along the upper edge of the forest, and above us, comparatively close, was the green treeless shoulder of the mountain, hiding the central peak.

The next day we reconnoitred upward with a view to finding a site for the standing camp, which was to be the halfway shelter between the base of the mountain and the foot of the central peak, and in the afternoon we moved the tents to the spot selected. It was at an elevation of about 10,300 feet, and commanded a view over the forest slopes, across the Laikipian steppes, to Sattima and Nandarua, the twin heights of the Aberdare range. The phenomena of wind and cloud were of unceasing interest as watched from this position. At the camp itself even the lightest wind was rare, yet the drift of the smoke from the fires below showed the constant strength of the monsoon on the



KENYA PEAK AND THE TELEKI VALLEY, FROM THE SOUTH-WEST.

plain which we had left. A vast stratum of cloud hung day and night over the rainy slope by which we had ascended to the plain, and this we came to call the "cloud roof of Kikuyu." On one occasion I looked over its upper surface, across 80 miles of white woolly cloud, to the peaks of Donyo Lamuyu emerging like an island from a sea. Especially in the early morning, a tongue of cloud extended from the Kikuyu roof along the eastern foot of Sattima, thus masking from us the western half of Laikipia. At sunrise the summits of Nandarua and Sattima stood out cold and hard against the western sky, but as the morning advanced clouds capped the heights—clouds, however, of quite independent origin from the Kikuyu roof below, or its Laikipian tongue.

On August 21, César, Joseph, and I went up to what proved to be Gregory's Höhnel valley, and here for the first time we saw the

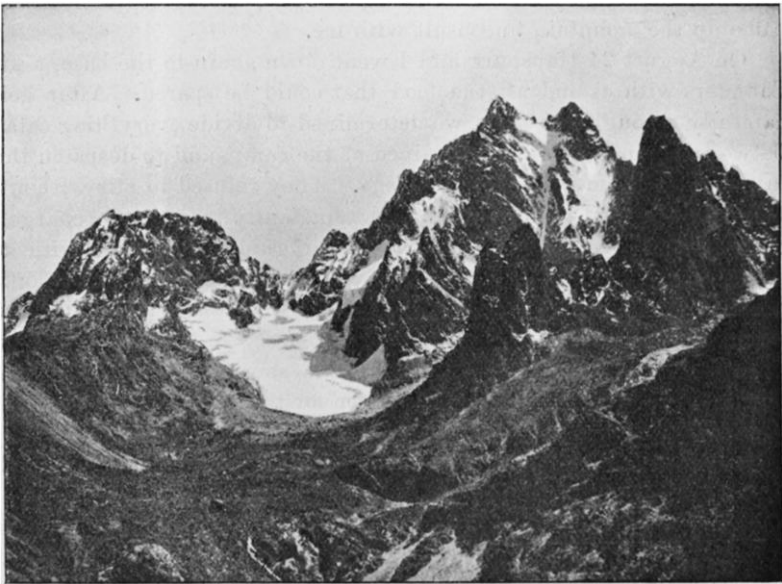
extraordinary vegetation of the alpine zone of the mountain. The unbroken side of the valley, crowned with owl-haunted crags, has a moist peaty soil, in which are set yard-broad hemispherical tufts of wiry grass, each tuft having a moist rotten centre. Well beaten rat-paths ramify in all directions between the tufts, while every here and there are groups of cactus-like giant lobelia, of which some send up tall spikes bearing the flowers. In general appearance very like the lobelia, except as regards the flower, is a species of giant groundsel with silvery leaves; but the greatest curiosity of all is the tree groundsel, with a thick dark trunk 8 or 10 feet high, surmounted by a cactus-like head of green leaves, beneath which is pendant a mass of dead leaves, dry as tinder towards their tips, but moist and rotten near the trunk. Occasionally a tall spike, several feet in height, bearing yellow groundsel flowers and fluffy seeds, stands erect above the leaf-head, or broken and leaning gauntly to one side. In other spots are yellow composites, something like dandelions, but with blossoms sessile on the ground, and bushy everlasting flowers. Beautiful sunbirds with lark-like song fly from lobelia to lobelia.

That evening, as we were on the point of returning to the camp, a lighted match was dropped, for it never occurred to us that where the ground was boggy to the tread any special precaution was needful against fire. But the fire spread behind us with alarming rapidity, feeding on the surface of the grass tufts and the dry ends of the dead groundsel leaves. Next morning, when we set out with eight porters to carry stores up to form a *dépôt*, a great column of smoke rose in front of us, and above it was white cloud drifting away to north-west, as though the volcano were once more in activity. Fortunately the men had boots with them, and, beating an entry through the hissing line of red flames, which broke into a roar as they grasped a tree groundsel or shrub heath, we raced for 50 yards through the acrid smoke. It was fully a quarter of a mile before we could see and breathe freely again, and then we were in a new land. The mountain-side was black, covered with velvety mounds which had once been grass tufts, but set with thousands of gleaming points—the silvery groundsel, which had been protected by the moisture cupped in their broad leaves. Presently we realized that we were within a vast circle of fire, and that the whole of the collecting-ground convenient to our middle camp was endangered. We determined to preserve the upper Höhnel valley, and fought the fire for two hours, at last with success, though a long watch was still necessary to check the flames which every now and again broke from the border of the smouldering area. The sun went down that evening amid smoke-banks of mauve and orange, the orb itself changing from blood-red to a glorious ruddy gold, while above were roseate and pale green clouds. The after-glow was of copper. As night settled down the ruddy glare rose high over the edges of the deep black valley,



and the silver groundsels gleamed weirdly in the diffused light; but in rear—to eastward—was the cold dark valley head, the reward of our struggle in the afternoon.

The next morning we went up to the col above us and looked across the Teleki valley—in and from which Teleki and Gregory reached their highest points—on to the rocks and glaciers of the central peak. We chose, from a distance, the position of our topmost camp, a mile from the foot of the ice, and then returned to our tents by the rushing Höhnel stream, to receive a further relay of stores and to prepare for the final advance on the following day. But that afternoon a message came up from Hausburg, who had just arrived at the middle camp, to



KENYA PEAK AND THE TYNDALL GLACIER.

the effect that two of our Swahilis had been murdered, and that the base camp was nearly devoid of supplies. I immediately left the two guides where they were, and joined Hausburg at sunset.

It appeared that the food caravan sent out on the 18th, in charge of Sulimani, had duly arrived at Wangombe's, and that the porters had bought food for themselves, and also a small quantity to be added to our store. Wangombe then said that he could not get much more in his village, and asked that men should be sent with him to make purchases in another village. This Sulimani refused to arrange, but Sudullah, an energetic and favourite askari, insisted on going, and five others volunteered to go with him. Wangombe and many of his men accompanied them. While passing through a banana shamba, our

party was attacked with arrows and spears by a force in ambush, led, apparently, by Wangombe's brother. A fight ensued, in which two men fell on our side, and, it was reported, five on that of the enemy. The remainder of our men got back to camp, bringing with them the weapons of their slain adversaries, but Sudullah was unfortunately one of the killed. Wangombe came to Sulimani that evening, asking him to stay where he was, as he wished for a shauri in the morning; but Sulimani struck camp at midnight, and returned to Hausburg on the morning of the 21st. On the 22nd Hausburg despatched Sulimani with thirty-five men, including the two Masai guides, to buy food at the Government station on Lake Naivasha, and leaving the base camp, now protected by a good boma, in charge of Ali, the interpreter, himself came up the mountain to consult with me.

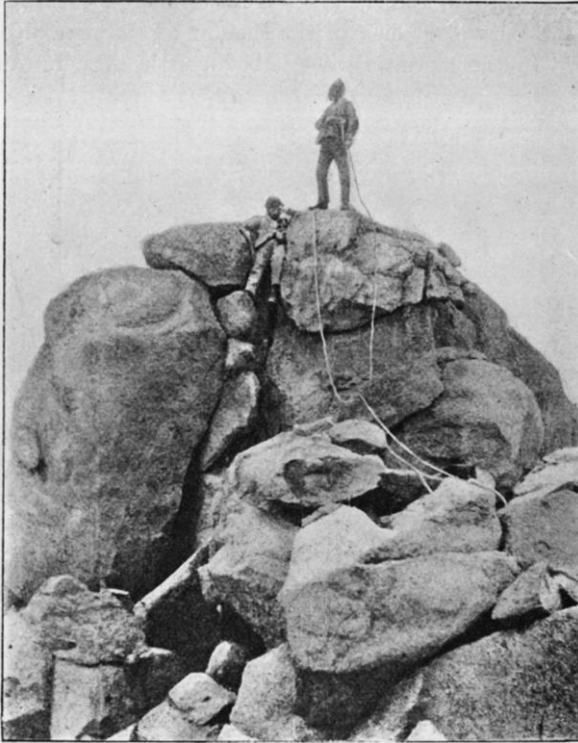
On August 24 Hausburg and I went down again to the base, taking Saunders with us and all the food that could be spared. After going carefully through our stock, we determined to divide everything eatable between the men who still remained at the camp, and to despatch them in Sulimani's track towards Naivasha. They refused to stir without a white man to lead them, and we had reluctantly to give the charge to our collector, Mr. Saunders. The Masai guides had gone with the previous party, and Saunders had to undertake the crossing of an untraversed country with no better guide than a pocket-compass and an envelope bearing approximate directions. On the evening of the 25th, having accompanied the caravan a short distance on the way, Hausburg and I turned aside to shelter for the night under the lee of a valley brink, with feelings of no little anxiety for the fate both of Sulimani and Saunders. The garrison on the mountain had food for about three weeks.

The next day we returned through the forest to the middle camp, and, while Hausburg helped Camburn to collect there and in the Höhnel valley, I rejoined César and Joseph in the Teleki valley, where they had established our top camp and built a stone hut. Thence, in the early morning of the 30th, we set out on our first attempt to climb the peak.

The central peak of Kenya is a pyramid of highly crystalline rock, cleft at the summit into two points, standing north-west and south-east of one another, the north-western being some 30 or 40 feet higher than the other, and the two perhaps 1000 feet higher than any other point on the mountain. The Masai have a legend that they had their origin on Kenya, and I propose that the twin points should be named after the great Masai chief, Batian, and Nelion, his brother. I owe the suggestion to Mr. S. L. Hinde. Nearly three-quarters of a mile to south-eastward an ice-clad peak, visible from the plains of Laikipia, rises to about 16,300 feet, and for this I suggest the name of the living Masai chief, Lenana. Between Lenana and the central peak are glacier passes from

which descend to northward and southward respectively, the two chief glaciers of Kenya, which have been named after Gregory and Lewis. As the word *Kenya* is probably a corruption of the Masai word signifying "mist," it seems appropriate, on that as well as physical grounds, to describe the notch in the summit between Batian and Nelion as the "Gate of the Mist."

Our way led up the left lateral moraine of the Lewis glacier, then



THE SUMMIT OF KENYA (POINT BATIAN).

diagonally across the glacier to a snow-filled couloir near its north-western corner. A short distance up the couloir we turned to the left and climbed the eastern face of the southern *arête* of the peak. We were here delayed by three *mauvais pas* and the treacherous nature of the fissured rock. On the ridge we were further delayed by the broken character of the edge, which compelled frequent traverses, so that night fell upon us at the foot of the point Nelion. We therefore sought a slab of rock just below the *arête* on its western side, and, after such food as could be afforded, tied ourselves to the rocks and prepared for the twelve hours of equatorial darkness. We were at an elevation of

about 16,800 feet, but the cold was fortunately less than at the camp in the hollow of the head of the Teleki valley. It was not until 2 a.m. that the east wind, which had been moaning and screaming through the chinks of the rock-wall behind us, began to reach over and to stroke us with paws of cold air, making us draw close together and beat our knees. The sky was cloudless, and the stars, shining like lamps without twinkling, shed light enough to reveal the lakelets on the Two Tarn col to west of us. At 3 p.m. the moon rose, casting a cold light over the vast cloud roof of Kikuyu, and by diffused illumination making clear the surface of the Darwin glacier in the shadow of the precipice, 1500 feet beneath us. In the morning we climbed a little higher, aiming at the



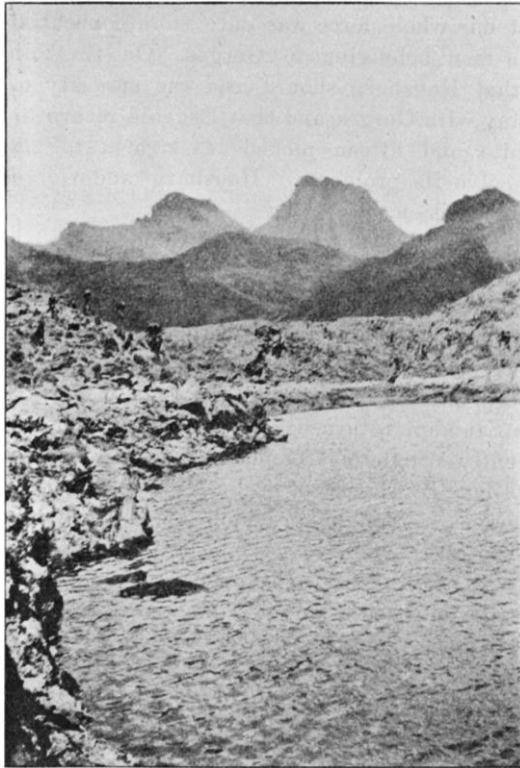
AT AN ELEVATION OF 14,000 FEET, NEAR THE NORTHERN FOOT OF KENYA PEAK.

point Nelion, but were speedily brought up by a cleft cut completely through the peak, dividing the southern *arête* from Nelion. We had no alternative but to abandon the effort and return to our camp.

Hausburg and I now changed places, and while he and the two guides took the photographic camera, in one long day, completely round the foot of the peak, I went down on to the Laikipian plain to watch for the return of our caravans. I had to traverse the smouldering remains of a fire, which had seized the lower edge of the Kenya forest where it was crossed by our path.

As the days went by, spent chiefly in scanning the plain with a glass, and no one approached us, my wait became an anxious one; and

on September 5, being the fifteenth day since the departure of Sulimani and the eleventh since that of Saunders, I had to send word for all to come down from the mountain in order to start for Naivasha on the 7th, lest starvation should overtake us. On the day arranged Hausburg duly conducted the retreat, to the bitter chagrin of César who had again been defeated by the peak. He and Joseph had laboriously cut their way up the Darwin glacier, and, bad weather intervening,



KENYA PEAK AND LENANA, FROM THE EAST. THE HALL TARN IN THE FOREGROUND.

could neither mount higher nor yet return by the dangerous way that they had come. They managed, however, to effect a traverse to the south *arête*, and returned by the route which we had followed in the first attempt.

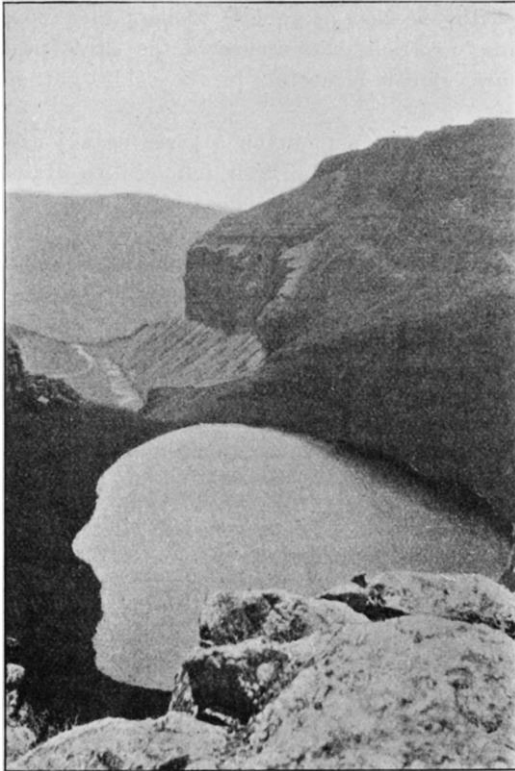
Most fortunately, however, some two hours before Hausburg's arrival, Sulimani and Saunders marched in, and with them Captain Gorges, who commands at Naivasha. Sulimani had reached Naivasha, and after three days, consumed by an official correspondence, Captain Gorges had obtained leave to return with him to the foot of Kenya.

They took local Masai guides, and followed an important native track over the Aberdare range to the north of Sattima, a track apparently unrecorded except in the native itineraries collected at Mombasa and published by Wakefield in 1870. By an extraordinary chance, Saunders, who had made a difficult and toilsome journey over the shoulders of Sattima through trackless ravines choked with bush, struck the path which Gorges was following just half an hour before the caravan from Naivasha came up, two days out from the station. Thus it happened that our whole force was once more concentrated, and reinforced by the men belonging to Gorges. On the following day it was decided that Hausburg should lead the majority of our caravan back in company with Gorges, and that I should return to the mountain with four white and fifteen picked black men to make one more endeavour to solve its problems. Hausburg and Gorges left within six hours of our decision.

I now determined to move our base camp some 3 miles into the forest, and to leave Saunders and Camburn there, on a new collecting-ground. Our little force could not effect the removal of our stores at a single journey, and, following a practice which we had hitherto found successful, a portion of them was hidden in the bush. Unfortunately, we were watched on this occasion without our knowledge, and on the morrow, when Saunders returned to complete the removal, he surprised natives, apparently Wanderobo (elephant hunters of the forest), in the very act of looting. By the use of bird-calls as a warning, they managed to escape. They carried off much which was of little value to us; but the tin-lined food cases, whose loss would have compelled our immediate flight, had proved too difficult to be opened in a hurry by Wanderobo. This was not the only occasion on which we had evidence of the Wanderobo on Kenya, though they were so timid that we never succeeded in establishing relations with them. On one occasion, however, at an elevation of over 12,000 feet, when white men were absent, a party of eight of them came to three of our porters and inquired their business. They went away with the laconic remark that there was much shooting on the mountain.

At last, on September 12, César, Joseph, and I left our top camp at noon to make the final attempt to reach the summit. The journey round the peak, made by Hausburg, had clearly shown that no way was practicable up the northern precipice, and we had already failed twice on the southern side, once on rock and once on ice. We now planned a route partly over rock and partly over ice. We followed our first track up and across the Lewis glacier, and up the face of the southern *arête*, near the top of which we spent the night under a Mummery tent. We were up at earliest dawn, and away as soon as the sun rose out of the cloud roof to eastward, thawing our hands so that we could grasp the rocks. A traverse, with steps across the head of the Darwin glacier,

brought us to a rocky rib descending from the western corner of Nelion, and up this we crept for a short way. We then decided to cross the glacier which hangs from the Gate of the Mist between the two points, and drains by a couloir into the Darwin glacier below. It proved very steep and intensely hard, so that three hours were consumed in cutting steps on a traverse which we had hoped to make in twenty minutes. A final rock scramble enabled us to set foot on the summit of



LAKE MICHAELSON. THE LAKE WAS ABOUT 1500 FEET BELOW THE POINT OF OBSERVATION.

Batian precisely at noon on September 13. The view from the Gate of the Mist had been magnificent. At the summit we were a few moments too late, for the mist, driving up, gave only momentary glimpses into the valleys beneath.

The mountain-top is like a stunted tower rising from among ruins and crowned by three or four low turrets, upon which we sat, feet inward. There was no snow there, and the thermometer slung in the air gave a temperature of 40° Fahr., while several kinds of lichen grew on the rocks. We dare, however, stay only forty minutes—time enough

to make observations and to photograph—and then had to descend, not from any physical inconvenience due to the elevation, but for fear of the afternoon storm. We made our way downward from step to step cautiously in the mist, and reached our sleeping-place of the previous night at sunset; but we continued down the rocks by the moonlight, and arrived in camp after 10 p.m., exhausted, but victorious. We supped by the fire at midnight, with the sound of the Nairobi torrent ringing on the rocks and swelling and falling in the breeze, and from time to time with the hoot of an owl or bark of a leopard, yet none of them seeming to break the silence of the great peak which rose among the stars, sternly graceful, in the cold light of the sinking moon.

After a day's rest, we set out on a three days' journey round the mountain by a wider circuit than that followed by Hausburg. As no native could accompany us, and as we carried a plane-table in addition to food, we had to forego a tent, and to sleep in the open beside a fire of tree groundsel. We traversed the heads of six valleys, each with a character of its own. The Hobley valley has a great scree at its head of coarse blocks, for the most part brilliantly red, and it has a glaciated platform on its side bearing a tarn, with a second tarn in the bed of the valley. The Gorges valley has apparently been half filled with a subsequent flow of lava, so that it has a broad pavement, upon which are everywhere traces of extensive glaciation, and among them many tarns, mostly dry, and some containing pumice. A gorge, 1500 feet in depth, has at one place been worn into this platform, leading down to a black lake surrounded by cliffs. The Hinde valley is the widest and altogether the most spacious of the six, although it does not originate in the central peak. The Mackinder valley bears the drainage from the Gregory and minor northern glaciers, and is dominated on the north by two grand crags, which I have named, from Masai chiefs, Sendeyo and Tereri. The Hausburg valley is double-headed, being invaded by the glaciated end of the ridge which forms the central peak. It receives water from three glaciers. The Teleki valley has four distinct features at its head—two rocky corries or cirques, the Lewis glacier, and the central peak. To these six valleys should be added a seventh, the Höhnel, although we had no occasion to traverse it during this circuit. It has a considerable lake in its head, and, like the Hinde valley, does not derive immediately from the central peak. All these valleys are thrown eastward and westward from a lightly devious craggy ridge, lying nearly north and south, and bearing Lenana, but not the central peak. The axis of the central peak, on the other hand, lies at right angles to this, striking from Lenana to the head of the Hausburg valley, and throwing down the glaciers northward and southward.

From the end of the high ridge, between the Gorges and Hinde



valleys, we looked on to what we called provisionally the East mountain—a broad green mound at a distance of about 10 miles, far larger and loftier than the numerous small cones which rise from the forest of the eastern and southern slopes. Between the East mountain and Kenya proper is green rolling country, scored by valleys, the whole of it above the level of trees.

We returned to the camp in the forest on September 20, where we rejoined Saunders and Camburn, and on the following day commenced our homeward journey. We crossed Laikipia north-westward, fording streams both of the Nairobi and Guaso Nyiro systems, but the most interesting features encountered were two parallel escarpments, striking with curious straightness north-north-west for many miles, and defining a strip of raised country some 8 or 9 miles across. The surface of the strip dipped gently northward, so that the escarpments were highest towards the south, that on the western side being seen to rise to quite 2000 feet above the plain. These are probably fault scarps, and lie nearly parallel to the scarps of the Great Rift valley. Together with Sattima and Nandarua they form Thomson's Aberdare range, and I would suggest that we should add to the presidential character of the range by speaking of the raised strip north of Sattima as the Markham Downs, for the landscape is markedly unlike that of Laikipia, and resembles that of the Sussex hills.

Beyond the second scarp we came down on to the Masai country of Ondagobbus, in which, towards the north, we saw the lake "El Bor Lossat," possibly identical with Thomson's Telphusa swamp. With the aid of the observations made by Saunders when crossing Sattima, I was able to lay out approximately the upper course of the river Morendat, and then, leaving the caravan to follow, I walked ahead to Naivasha, where I arrived on September 29. Thence, by the help of Captain Gorges and other friends, I was rapidly forwarded on my way to the coast, and, catching a steamer without delay, arrived in London on October 30. The remainder of the party, in the kind charge of Mr. Hausburg, came by the French mail, and reached Marseilles on November 13.

The results of our expedition are a plane-table sketch of the upper part of Kenya, together with rock specimens, two route surveys along lines not previously traversed, a series of meteorological and hypsometrical observations, photographs by the ordinary and by the Ives colour processes, collections of mammals, birds, and plants, and a small collection of insects. But we were unfortunate enough to lose a portion of our plants on the homeward journey.

Finally, I wish to express my sense of the indispensable services rendered to the expedition by my colleagues. César and Joseph had a passion for work which made itself especially evident upon the ice and in the forest. Our success upon the peak was in large measure due to

César's judgment. Of the plucky crossing of Sattima by Saunders I have already spoken. To him and to Camburn we owe the excellent condition of the collections brought home. Above all I owe thanks to my friend Mr. C. B. Hausburg, who not only shared the expense of the expedition, but took so large a part in the management of the caravan, and proved himself so invaluable a shot and so accomplished a photographer. And we all owe thanks to those in East Africa who helped and befriended us.

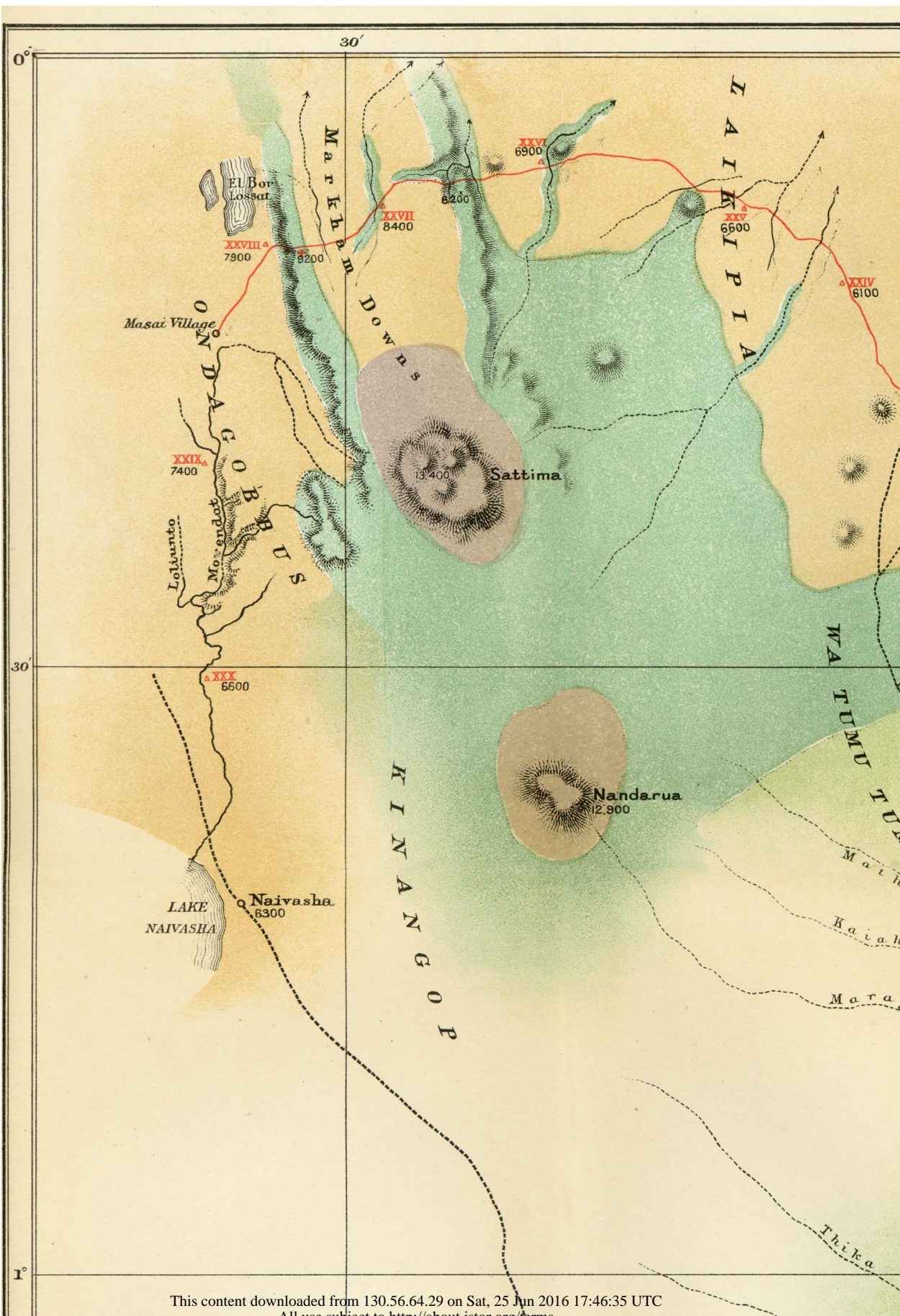
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. Before the reading of the paper, the Chairman, Sir THOMAS HOLDICH (Vice-President), said: Mr. Mackinder, who will read the paper to-night, is well known to all of us as a scientific geographer; to-night he comes before us as a most successful traveller, as the first man to ascend one of the principal peaks in East Africa, Mount Kenya. I would particularly ask your attention to the illustrations of his paper. This is the first time, I believe, in which the art of colour photography has been applied to the illustration of a scientific expedition; at any rate, it is the first time the results have been shown in this room. I will now ask Mr. Mackinder to read his paper.

After the reading of the paper, the following discussion took place:—

Sir THOMAS HOLDICH: Mr. Mackinder's story of difficulties met and overcome in his plucky ascent of Mount Kenya, together with the delightful series of illustrations he has given us, may, I think, be considered a model of descriptive illustration. His expedition was so well armed at all points to meet the scientific requirements of an expedition of this nature, that it does, to a certain extent, in a way which an expedition less well equipped would hardly do, challenge, not criticism, but discussion. Dr. Gregory, who was some years ago in East Africa, whose name you have heard mentioned by Mr. Mackinder in connection with this particular peak, has written a few words of comment on the altitudes obtained, which I will read to you, and after reading them, I hope that some of the gentlemen here present will speak. Mr. Hinde, the resident in Masailand; Captain Smith, the surveyor of the route from Mombasa; Dr. Bowdler Sharpe, who can tell us something of the natural history of these regions; and Mr. Ravenstein, the well-known geographer, will, I trust, give us some of their views. I will now read Dr. Gregory's letter.

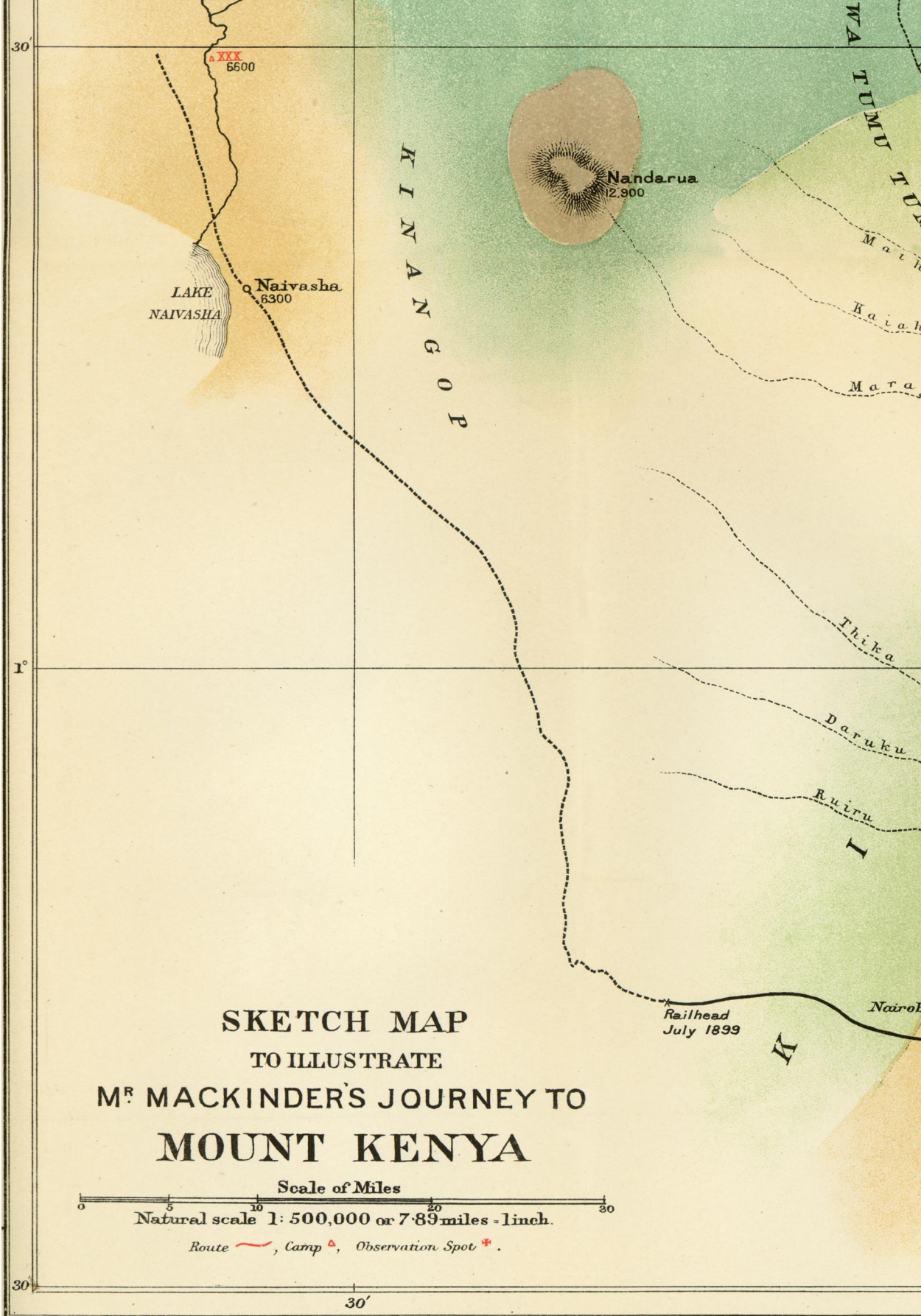
"I much regret that the necessity for my reaching Melbourne well before the end of February, prevents my attending next Monday's meeting to personally congratulate Mr. Mackinder on the success of his expedition to Kenya. I can offer him my sincerest congratulations, as I have heard from him an account of his work and results. As a couple of years ago doubt was thrown on my explanation of the mountain, I am glad to hear from Mr. Mackinder that we are fully in accord as to its structure. The only point where we do not agree is as to the absolute height of the highest peak. Mr. Mackinder, from his result with the Watkin aneroid, supports Captain Smith's determination of 17,200 feet, whereas from a rough triangulation with an Abney level from some bases in the alpine zone determined by boiling-point observations, I accepted Lieut. von Höhnel's result of little over 19,000 feet. Smith and von Höhnel's results were both based on careful triangulation, and the question is whose data was the most reliable. Von Höhnel's observations were made at the west foot of the mountain, whence the peak rose above him with an elevation of about 29° (as I write in train, I can only trust to memory for these figures). This base-line was short, and the errors of observation and refraction under such circumstances were at a minimum. Captain Smith's



37°

30°





**SKETCH MAP**  
**TO ILLUSTRATE**  
**MR MACKINDER'S JOURNEY TO**  
**MOUNT KENYA**

Scale of Miles  
 0 5 10 20 30  
 Natural scale 1: 500,000 or 7.89 miles - 1 inch.

Route —, Camp Δ, Observation Spot \*.

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


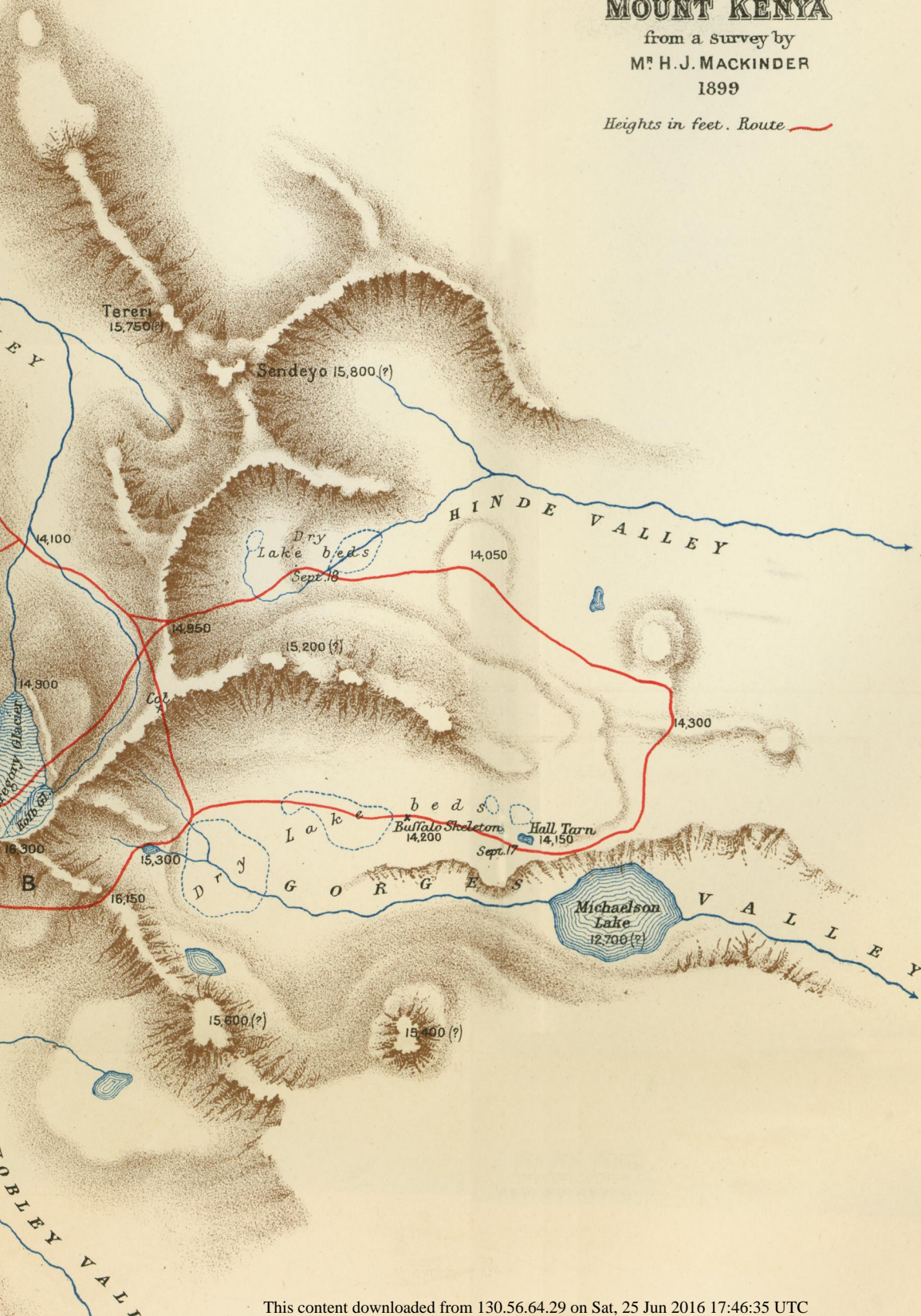


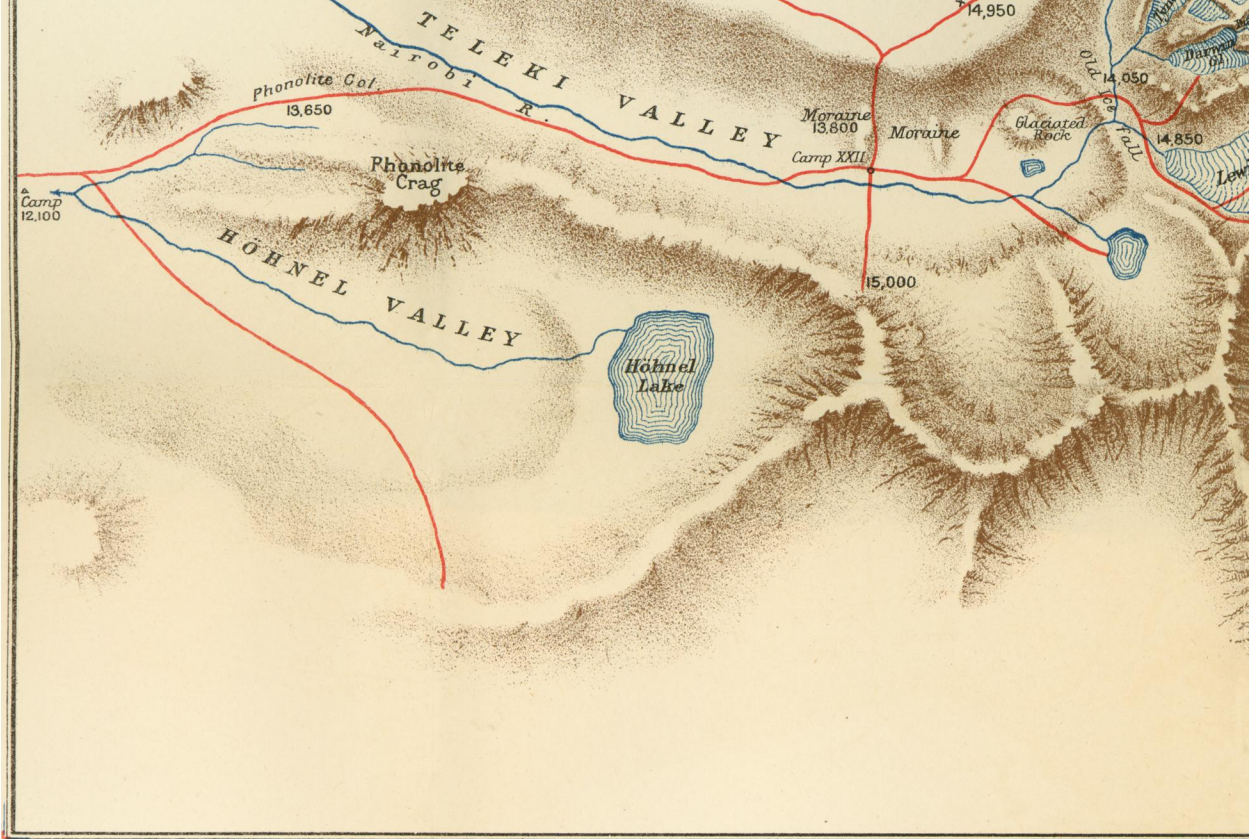


# SUMMIT OF MOUNT KENYA

from a survey by  
M<sup>r</sup> H. J. MACKINDER  
1899

Heights in feet. Route 

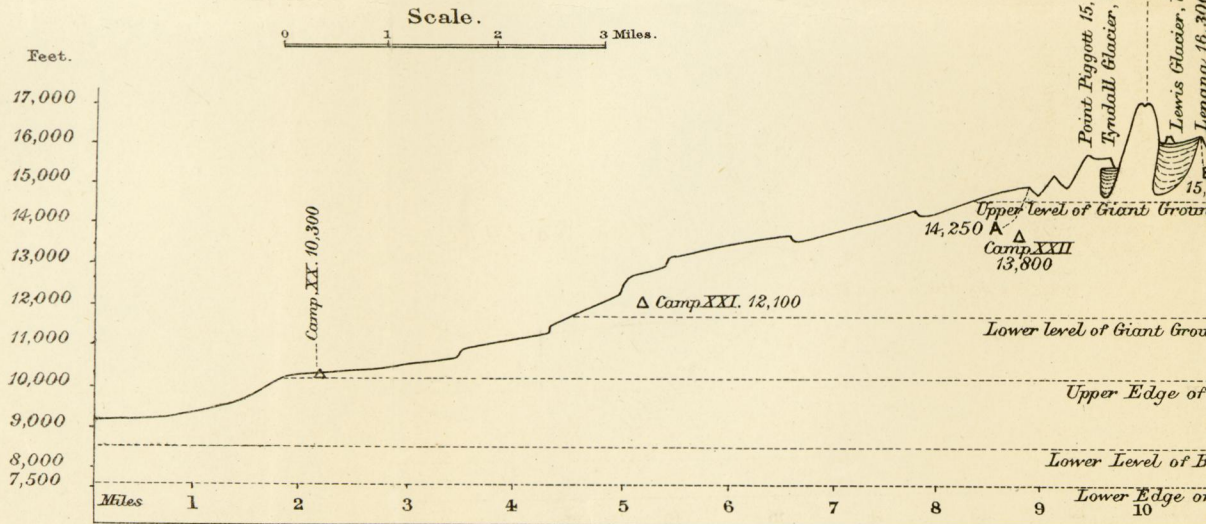




## Section of MOUNT KENYA.

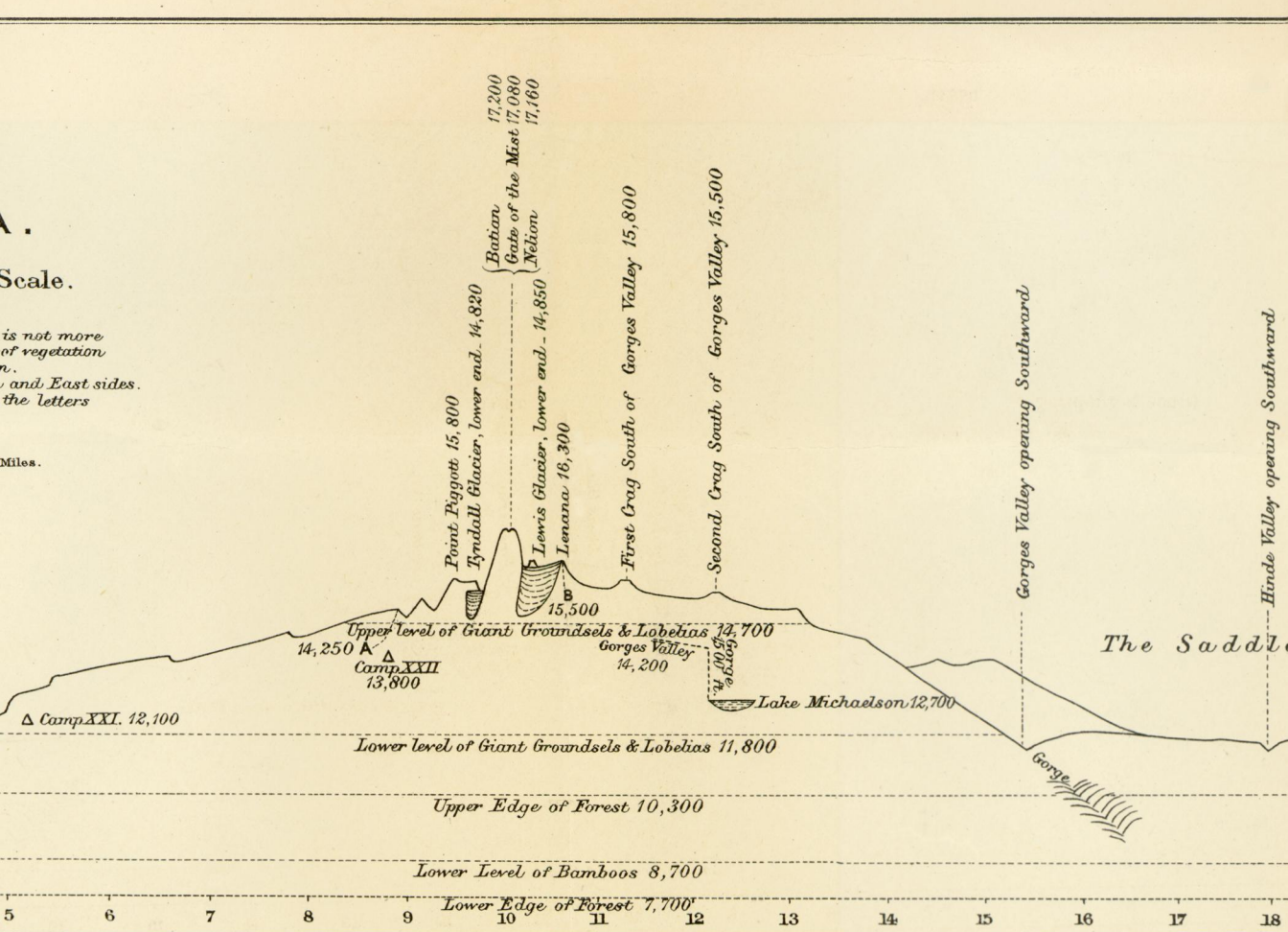
Vertical twice Horizontal Scale.

N.B. The average slope within the Forest Zone is not more than one in twenty. The levels of the zones of vegetation were fixed on the West side of the Mountain. Forest probably extends lower on the South and East sides. The letters A & B on this Section refer to the letters on the Map of the Summit.



Del. H.J. Mackinder

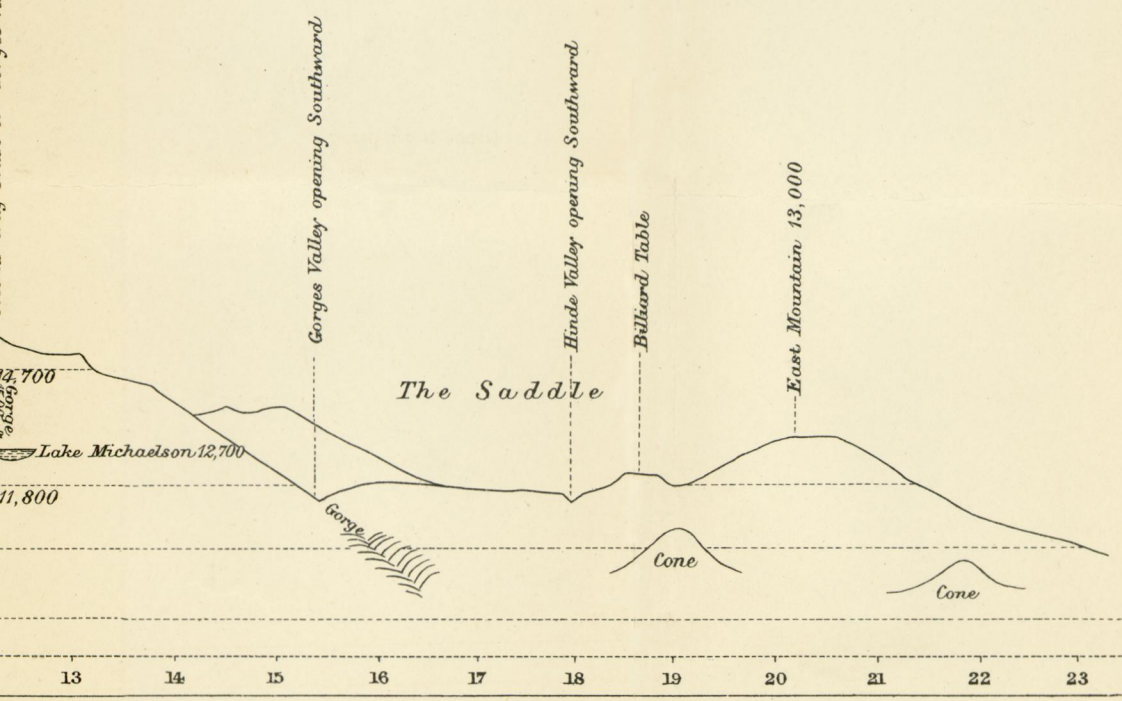
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