

the 20th, after having experienced terrific weather. Both ships were signalled off the heads at Lyttelton on the 29th.

Telegrams can only give the barest outline of the work achieved. We must wait for the return of our gallant friends to hear all the deeply interesting details, and to learn the conclusions that have been reached on the numerous geographical problems, the richness and fulness of the numerous scientific results, and the share taken by each individual. All we now know is that all have done their best. Taking all things into consideration, these two years of the work of the Antarctic Expedition represent an achievement unequalled, certainly unsurpassed, in the annals of polar exploration—Arctic or Antarctic.

With the great Antarctic Expedition the name of William Colbeck must always be associated as the leader of the two relief expeditions of 1902-3 and 1903-4; nor should his excellent officers and zealous, well-conducted crew on board our good ship *Morning* be forgotten. Our Society owes a debt to Lieut. Colbeck and his followers which can never be repaid, though the Council will endeavour to recognize their great services in the person of their commander.

We may look forward to giving all our friends an enthusiastic welcome before many months are over.

EXPLORATION IN THE SOUTHERN BORDERLAND OF ABYSSINIA.*

By Captain PHILIP MAUD, R.E.

THE main object of this expedition, undertaken and organized by Mr. Archibald Butter, was to place in the hands of Sir John Harrington, his Majesty's Agent and Consul-General in Abyssinia, information which would make it possible for him to discuss the question of the British East African and Abyssinian frontier with the Emperor Menelik, with a view to its being defined by treaty.

There was no reliable information concerning the tribes in that part of Africa, nor as to the exact limits of Abyssinian occupation or influence. There had been previous expeditions in this direction from the Sudan under Major Austin, the second of which, it will be remembered, reached as far east as the Murrle district, north of Lake Rudolf. Failing, however, to meet there the Abyssinian relief caravan as expected, Major Austin turned south, down the west shore of Lake Rudolf, and, after a very hard time, reached the Uganda railway near Lake Baringo. Another expedition, with the Abyssinian southern frontier as its objective, left Zeila in 1901, but, owing to the illness of two of the survey party, the expedition was unable to continue further than the Hawash valley.

* Read at the Royal Geographical Society, January 11, 1904. Map, p. 704.

Mr. Butter had been associated with this expedition, and on his return to the coast, after making arrangements for the collection of a large number of camels at the rail head of the Jibuti railway, which was then under construction, he came home in 1902 to organize and equip an expedition which would be capable of carrying the project through.

By arrangement with the Foreign Office, I was enlisted in the expedition to take charge of the survey and report on the country and tribes which would be involved in the frontier settlement. Mr. Butter, with great public spirit, made the successful accomplishment of the survey the object of the expedition, and pursued it throughout irrespective of any questions of personal convenience or expenditure. I think it right to preface my account by stating that it is to his conduct in this respect that the satisfactory completion of the work is primarily due.

Early in September, 1902, Sir John Harrington, Mr. Butter, and I left England and duly reached Aden, where we were the guests of the Resident, Colonel Abud. Here we were met by my two survey assistants, Khan Sahib Sher Jang, of the Survey of India, and Jemadar Shahzad Mir, Bengal Lancers. Shahzad Mir had accompanied the late Captain Wellby in his two great journeys—one through Tibet, and the other from the Somali coast through Abyssinia to the Nile. Curiously enough, I had met Sher Jung in 1898, when he was plane-tabling, and I was on a reconnaissance in the grand mountain region north of Chitral and Mastuj, near the Hindu Kush watershed.

At Aden we were also met by Mohamed Hassan, the head Somali of the caravan. He reported that the camels and camel-men were awaiting our arrival at the Jibuti rail head. Mr. Butter was good enough to let me have Mohamed Hassan as head of my little survey caravan and interpreter during the most important part of the trip, and but for his skill and tact in that capacity, I might still be trying to extract information from the thick-headed natives with whom we had to deal.

After three days at Aden we crossed over to Jibuti, where we were hospitably entertained by the governor, M. Bonhoure. A day in the train landed us at rail head, at that time about 30 miles short of its present terminus, Adis Harrar. Here Butter was able to rejoice at the sight of eighty fine camels and about seventy smart Somalis specially picked by Mohamed Hassan. Of these about fifty were camel-men, and the remainder shikaris, tent-boys, cooks, and survey assistants. Most of the camels were from the Danakil country. They are distinguished by their dark colour, and are noted as hill camels. They require more water than the light-coloured Berbera camel. The latter, though he can, with average feed, march for seven days or so without water, yet makes very heavy weather on a steep incline.

Our march to the Hawash river through the Danakil country was uneventful. This tribe have a bad reputation, but except for the

inevitable altercations at wells and water-holes, and stealing a camel, which they were made to return, we had no trouble with them. Specimens of kudu, aoul, water-buck, oryx, bush buck, gerenuk, and ostrich were bagged, and Butter, after a long track, shot a fine lion which had been committing depredations near one of our camps.

Spare time was utilized in drilling the boys, twenty-five of whom were armed with Martini, and twenty-five with Lee-Metford carbines. They were taught to handle, load, and fire their rifles, and to take alarm posts rapidly. A few rounds of ammunition were spared for practice shooting. Very few of the boys had ever handled a rifle before, and they have little natural aptitude for marksmanship, though letting off their rifles gave them the keenest pleasure. To attempt to make even moderate shots of them was impossible. They, however, quite enjoyed their drills, and, judging by these boys, I can understand the opinion which I believe our officers in Somaliland have arrived at—that Somalis take kindly to drill up to a certain point and make excellent scouts, but cannot stand much discipline, and could never make smart, well-trained, and reliable troops like those in our native regiments of Northern India.

We marched along the foot of the range of hills which separates the province of Harrar from the Danakil country, and struck the Hawash river at Billen, which is noted for its hot springs.

After one march up the right bank of the river, Harrington, Butter, and I separated from Butter's main caravan, which was sent up the Hawash valley to await our arrival in the neighbourhood of the great extinct volcano Gara Zukwala, while we with a small caravan of mules followed the main route to Adis Ababa. This separation was necessary, as Adis Ababa stands 8000 feet above the sea, an altitude unsuitable for camels. On nearing the Abyssinian capital, we were met by Mr. J. J. Baird, who had been acting for Sir John Harrington during his absence at home, and Captain A. A. Duff. They had managed to survive the dreary rain season, which was just over.

For three weeks we were the guests of Sir John Harrington at the British residency. During that time he arranged matters with the Emperor Menelik, and when all was settled, we rode over the 30 miles to Adis Alam, Menelik's rain station, to be presented to the "King of Kings of Ethiopia." The new carriage road from Adis Alam to Adis Ababa, engineered by Italians, had been started from the Adis Alam end, and some very solid work was being put into it. After lunch at the Italian Legation, where we were the guests of the Italian minister, Major Frederick Ciccodicola, we rode to Menelik's residence, and were presented by Sir John Harrington.

The "tukle" is the universal form of architecture in Abyssinia. Churches and houses only differ in size. It is circular, with a conical roof, generally supported by a centre pole. The walls consist of wooden

uprights covered with wattle and daub. A group of these in the distance gives the effect of tents. The "Gibbe," Menelik's residence at Adis Ababa, is much more elaborate, the Indian artificers whom Menelik employs having added a bungalow in the European style to the royal "tukles."

Menelik's rain-season quarters at Adis Alam consist of a collection of large and well-built "tukles," situated on a small hill, the whole surrounded by a high wooden stockade. His Majesty received us seated cross-legged on a brass bedstead, which was covered with rugs. He was dressed in white, his head-dress a white handkerchief fitting closely round his brow and knotted behind. In turn we shook hands with the monarch, and then sat on chairs in a row in front of him. His attendants grouped themselves, standing on either side. They were dressed in their national costume—white cotton pyjamas, and the "shama" or white shoulder-wrap, which is intersected by a broad red band. There was a marked absence of the pomp and circumstance of the Abyssinian court, which is so well described by Major Swayne in his account of the Rodd Mission to Menelik.

The emperor is now an old man; but, though I only saw him seated, he appeared full of vigour, and took great interest in the conversation (conducted by an interpreter), the subject of which was supplied when Butter presented him with a pointer dog. Menelik is a great lover of dogs, and was very pleased with the present. After a short audience we took our leave, with Menelik's best wishes for the success of the expedition.

The next day we returned to Adis Ababa, and on November 6, 1902, we took leave of our kind host Harrington, and set off south towards Gara Zukwala, which towered its 5000 feet 30 miles distant over the grassy undulating plain. The expedition had been now augmented by Mr. J. L. Baird and Mr. Wakeman, the residency surgeon. Count Colli di Felizano, secretary to the Italian legation, also accompanied the expedition with the intention of going as far as Lake Rudolf, and then returning direct to Adis Ababa. It had been arranged that Captain Duff, who remained at Adis Ababa, should take a relief caravan with provisions to meet us at the north end of Lake Rudolf at the beginning of April, 1903. Menelik was represented on the expedition by two Kaniasmuches, one of the Boran country and one of Sidamo, and by an Abyssinian gentleman, Atta Mama. The two former were simply instructed to follow us wherever we went, and to render us every assistance they could. Atta Mama, who has spent several years in France and is an educated man, was instructed to write an account of the expedition.

From Adis Ababa to Gara Zukwala there stretches an open undulating plain with a steady fall to the south. It is intersected by deep ravines carrying tributary water to the Hawash river. The plain is dotted over with villages and cultivation, but the greater part, though covered

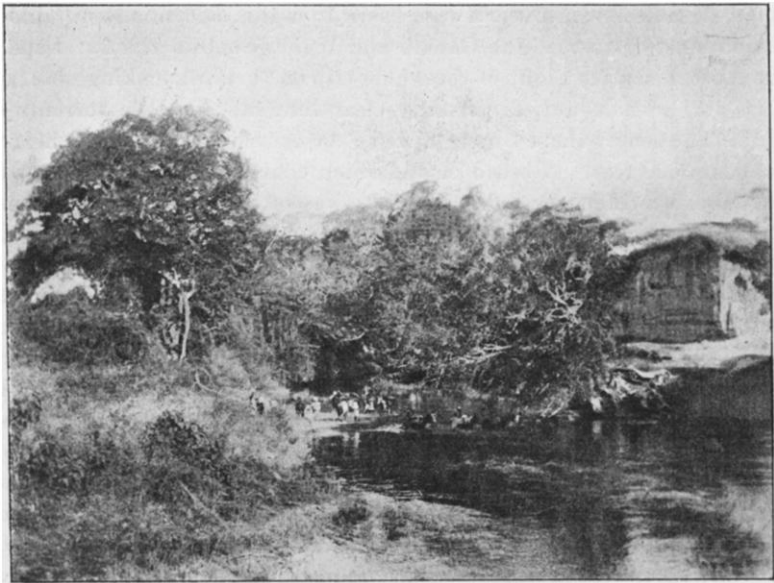
with excellent grass, is ungrazed and left waste. East of Zukwala we found Mahomed Hassan with the main caravan, all impatient to be on the march. Baird and I made the ascent of Gara Zukwala, while the remainder, after halting a day, continued to march south. Gara Zukwala is an extinct volcano, and in shape is a wonderfully symmetrical cone. The apex is blunted and hollowed into a large crater, at the bottom of which is a lake supposed to be unfathomable. The summit is inhabited by Abyssinian priests, and there are several churches nestling among its trees and rocks. The place is regarded as sacred, and pilgrimages are made to it from far round. From every point on the edge of the crater a magnificent panorama lay before us. The best part of the night was spent taking astronomical observations on a prominent point on the edge of the crater in a gale of wind, which made work very difficult.

On our way down the mountain next day we were invited to a feast by the Fitorari of the district, who was up there superintending the building of a church. Entering his "tukle," we were conducted to a settee covered with skins. Serving-women brought us water to wash our hands, and then flat baskets, on which were high piles of thin flat breads, like the "chuppaties" of the East. The women cooks brought in large dishes of stewed meat, and, after tasting each dish to show that it was not poisoned, they picked out tit-bits and presented them to us on "chuppaties." The whole meal was served without plates, knives, or forks. It is surprising how easily these necessities of our civilization can be dispensed with. Serving-men meantime plied us with "tej," the national drink of Abyssinia, which is made from honey. Old "tej" is very heady, but not unpleasant in taste. Abyssinians of importance never travel without their "tej" women. These ladies make the "tej" in camp, and carry it on the march. The Fitorari—a courteous and dignified Abyssinian—did not join us at this meal, but remained seated on his couch, giving orders for our entertainment. Our Somalis were given a similar meal in another division of the "tukle," and I noticed that though they must have guessed that their food had not been cooked by one of the faithful of Islam, yet they asked no questions. Hunger is a great leveller.

It was late before we reached the foot of the mountain, and, being unable in the dark to find the tracks of the caravan, which had marched on, we had some difficulty in making camp, but eventually our signal shots were answered by a rocket from camp, and then our troubles were over. On several occasions these signal rockets, which are made up in a large cartridge and fired from a pistol, were found invaluable for finding camp after dark. From Gara Zukwala to the south end of Lake Zwai the country we passed through was an immense park of mimosa cedars and other smaller thorn trees, with thick patches of high grass and bush in places. The Hawash river, which is only fordable

in places, is fringed with fine tropical jungle. The few inhabitants we came across were Galla cattle-herds who do not cultivate. Game was scarce except at the foot of Gara Alutu, where there were large herds of Swayne's hartebeest and Grant's gazelle.

Baird and I ascended Gara Alutu, and from it obtained a fine view of the lake district. Lake Zwai, the level of which is about 5500 feet above the sea, is the most north-easterly of the lakes in the great chain which terminates with Lake Rudolf (level, 1300 feet), or perhaps I should say Lake Sugota. The three northern lakes in this chain are connected. Lake Abaya is reported to have an overflow in the rains into the Sagan river, so that its basin is at times connected with that



FORDING THE SUK SUKI RIVER.

of Lake Stefanie, which has no outlet. Lake Rudolf lies in a separate basin, as most probably does also Lake Sugota. Thus the drainage of the large area of country which finds its way into this chain of lakes is self-contained. To the south-east it is cut off from the basins of the Daua, Ganalo and Webbe Shebeli rivers by the main Sidamo range which forms part of the unbroken watershed extending from the hills east of Lake Stefanie to the Harrar range.

South of Lake Langanu (the water of which, like that of Lake Zwai, is slightly brackish, but drinkable) the flat country is studded with a *Euphorbia*, which in this district grows to a great size. South of Lake Shala there were thick patches of forest, between which we came on Abyssinian settlements and cultivation.

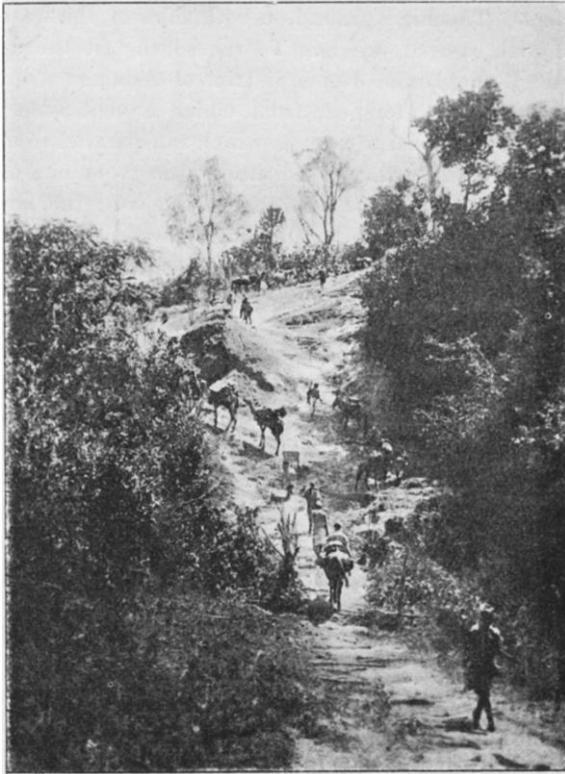
A gradual ascent from the lakes brought us to a low watershed, which separates the basin of the Zwai group of lakes from that of Lake Awasa. To the west Gara Abaro, covered with virgin forest, forms a very prominent landmark. It was with great difficulty, and in torrents of rain, that the survey party forced its way up this hill through thick matted undergrowth. Near the summit, which we only found with difficulty, we "jumped" some buffalo, but did not get a glimpse of them. There were also fresh tracks of greater kudu, but no indication that man had ever disturbed this retreat before. After making a few lanes through the trees on the summit, I was able to see from this commanding point that the country to the east was mountainous, and covered with dense forest as far as the eye could reach. As only very small streams flow into the Awasa basin from this side, this mountainous region must drain into the Ganale and Webbi Shebele rivers. I spent the most miserable night of the whole trip on this hill, making observations for latitude during partially clear intervals between torrents of rain. The saucer-shaped basin of Lake Awasa has no outlet; its height is about 5600 feet. A broad canal, which connects the two portions of the lake, is bridged by a floating causeway of reeds. We passed long strings of Galla women threading their way in file through the high grass, carrying grain to market.

A short steep ascent from the Awasa basin brought us on to the fertile plateau of Sidamo, the level of which is some 6500 feet above the sea. The monotonous bush of Africa had been left behind, and we entered into a lovely country where only man, in the shape of miserable specimens of the Galla race, was vile. Our camps, pitched in grass glades lying snugly between patches of thick forest, were besieged by the maimed, halt, and blind, who hoped that the white man would heal them. Our camels were regarded by the natives with great wonder; few of them had ever seen a camel before. It was only about 1895 that the Abyssinians conquered and annexed this country. It is now subdivided into districts under Abyssinian governors, who live with their feudal retainers in stockaded villages.

The country is sparsely inhabited, though it is very fertile and well watered by many perennial streams flowing west into Lake Abaya. The climate is delightful, but there is probably a large, though well-distributed rainfall.

In order to reach our objective point on the Ganale river, it was necessary for us now to be turning south-west, and inquiry decided us that the best place to cross the main Sidamo range, which rose before us in that direction, was near Gurbicho. The ascent looked most unpromising, if not impossible, for camels. Abyssinians are very fond of high ground for their settlements. Two prominent hills, Sisha and Gurbicho, were crowned by large stockaded villages. Baird and I broke off from the main caravan south of the Giddabo river, and, after visiting

Sisha, we struck across some fine hill country, in places covered with magnificent forest, to Gurbicho. The normal light green of the foliage was relieved by the sombre hue of giant cotton trees. Torrents, fringed with huge ferns and other tropical vegetation, frequently intersected our path. Rounding a shoulder of Gara Gurbicho, which is 8300 feet above the sea, we came on the main track to the stockaded village, up which the camels of the caravan were toiling painfully. The altitude of the Sidamo plateau had already been too much for them, and this



CROSSING RAVINE IN SIDAMO.

steep 2000-foot ascent practically finished them off. Camp was pitched a mile beyond and overlooking Gurbicho. A zareba was at once made, and piles of firewood collected inside, to keep the camels warm at night, but in spite of these precautions several camels died.

Mr. Butter decided that the main caravan, with the stronger camels very lightly laden, and the remainder without loads, should hurry on over the watershed and down to a lower altitude and green thorn feed, which are the camel's best medicine. The Sidamo Kaniasmuch, who was with us, obligingly arranged to collect Galla porters to carry the

remaining loads. Meanwhile I was to follow on with the survey party and a small caravan of donkeys and mules as fast as the survey work would allow. While making these arrangements we received a visit from the local Fitorari, whose headquarters were at the foot of Gara Gurbicho. He was accompanied by a retinue of over 200 men—Abyssinians and Gallas—all armed with rifles, but he apologized for the smallness of his following.

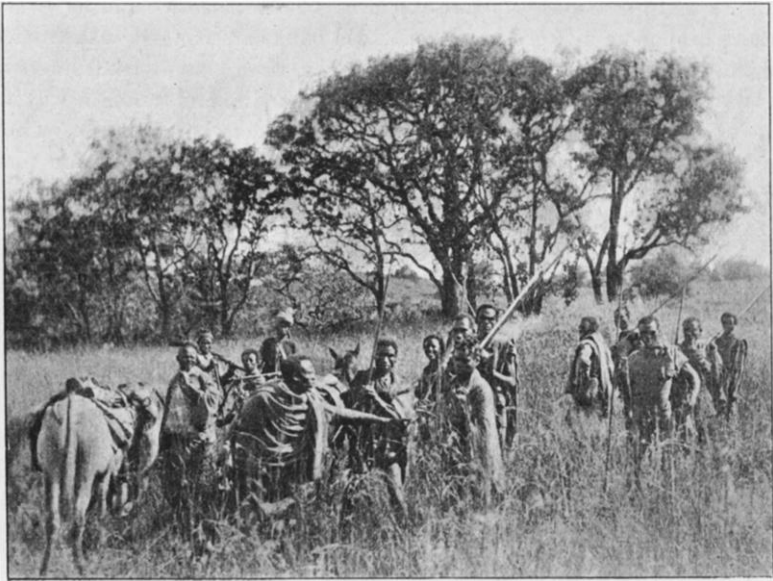
Leaving Gurbicho on December 6, an ascent of a few hundred feet brought us to the main watershed, over which we passed at a height of about 9000 feet. The high ground on both sides of the watershed was well wooded with bamboo jungle. To the south-east the descent was gradual through the Jumm Jumm district of Sidamo. Our route lay along an undulating watershed, from which a succession of nullahs branched off to join two large valleys which ran parallel to us on either side. The valley to the east proved afterwards to be one of the main tributaries of the Ganale river, and that to the west the largest head-water of the Daua river. The hilltops were covered with dense forests, while the broad swampy valleys, which all contained perennial water, were open grass. There were very few inhabitants and little cultivation. I found the stockaded village Irba Moda on the top of a hill which I visited for surveying, and was told that this was the most southerly Abyssinian settlement in Sidamo. The natives were another section of the ubiquitous Galla race. These highlands are abruptly terminated by a well-marked escarpment, which runs from the Ganale valley in a southerly direction. The Daua river, after forcing its way through this escarp in a deep gorge, bends round south and follows its foot for some 40 miles. Here this escarp is approached by another escarp, which forms the western boundary of the north-western Liban, and the Daua river enters the deep valley thus formed.

The top and slopes of the Sidamo escarpment, as I call the first one, are covered with dense forest. The original narrow path through the forest had been improved into a route for our benefit by our Abyssinian colleagues, who had sent Galla clearing parties on ahead. My guide explained to me as we entered the forest that this point was considered the dividing-line between the high cold country and the hot low country, and it is certainly the natural eastern boundary of the Sidamo highlands. In the dimly lit forest we were frequently entertained by troops of the handsome white-tailed Colobus monkey. These were the first undomesticated animals we had seen in Sidamo.

Emerging from the forest at the bottom of the steep descent of the escarpment, we came on a low watershed, from either side of which a broad valley runs down to the Ganale and Daua rivers. The latter opens out into the undulating forest-clad plain of Adola, which is enclosed by the two escarpments to which I have just referred. Here were fresh tracks of elephants. I afterwards learnt that Butter, while

hunting in the thick forest, had a narrow escape. An infuriated cow elephant charged him in an alley walled in by impenetrable undergrowth. His shots failed to turn her, and she got right over him as he attempted to wriggle out of sight. While she searched around with her trunk, Butter gave her both barrels of his .577 rifle from underneath, which caused her to depart, luckily without treading on him. Baird was more fortunate, and secured a good bull with tusks weighing about 50 lbs. each.

Continuing south-east, an ascent of a few hundred feet brought us on to some hilly uplands. The country had changed its character, but not its name, as we were still in Jumm Jumm. The forest became



GALLAS IN SIDAMO.

smaller and rarer as we marched south-east, and gradually gave way to thorn bush. For weeks past we had never given a thought to water, as it flowed in every valley; but very soon we passed out of the region of running water, and except the main Ganale and Daua rivers, we found no perennial streams again till south of Lake Rudolf. The water question had henceforth to be always uppermost in our thoughts.

On December 21 I found the main camp halted at Darar, in Liban, just over the Jumm Jumm frontier. The whole of the eastern part of Jumm Jumm from the Sidamo escarpment to Darar was uninhabited, but here we made the acquaintance of some of the Boran and Gubbra people, who had brought camels for sale. We were destined to improve

our knowledge of them later on. The Darar district contains no permanent villages, but is a religious centre, to which Borans make pilgrimages. We all spent Christmas together at Darar, and then Baird and I set off with a small caravan of mules and donkeys north-east to hunt for the bend on the Ganale river, which was our "jumping-off" point. Meanwhile Butter, taking the main caravan, struck south to find the Daua river, and to survey and investigate in its neighbourhood till our arrival.

After two days' march over hilly country, we sighted the Ganala river to the east, and commenced a long descent to its banks. The whole district was uninhabited. The river flows in a broad, deep valley, which occasionally narrows to a gorge. There were many rapids, and occasional broad expanses of deep, slow-running water where hippopotami were numerous. Its banks are fringed with tropical vegetation, but a few yards away from the river one is confronted by thick thorn bush, through which it was often difficult to find a way for the caravan. Elephant and rhino tracks were ubiquitous. These monsters are certainly the best road-makers in Africa; but for their engineering efforts in this line our progress would have been much slower. Baird shot a good rhino, but, except partridges and dik dik near the river-banks, we had no other sport. Among the hills some of the rhino paths were extraordinarily well graded. Unfortunately, the rhino has a hide some three-quarters of an inch thick, and so does not see the necessity of clearing the thorn bush from over his road. An elephant is more considerate—he makes a clean sweep of everything in his path.

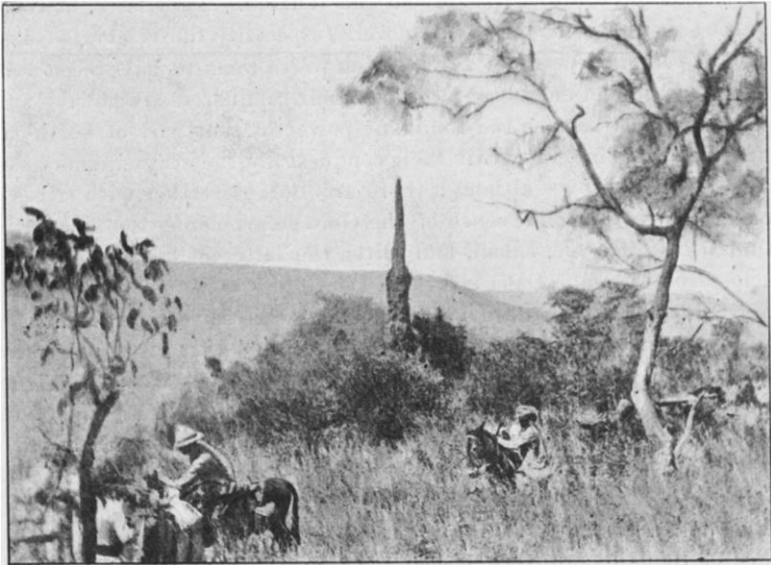
It was not until I had surveyed about 50 miles of the river that I was able to identify the bend of which we were in quest, as Böttego, the only traveller who had previously been up the river, had surveyed this part of his exploration roughly, and his latitude was about 20' too far north. His topography of the river is, however, very accurate considering the rough methods he employed.

The country called Liban varies greatly in character. To the north are the uninhabited highlands. From the sharp bend of the Ganale river, which was our first objective, a well-marked ridge covered with "ted" fir trees extends south to the Daua river. West of this ridge, Kurre Liban, the country is undulating, with a steady fall to the Daua valley. To the east of Kurre Liban extends Dida Liban, a vast waterless plain, in places open and dead flat for miles, in others undulating with patches of thorn bush. Here we found ostriches, hartebeest, oryx, and Grant's gazelle in large numbers.

The only inhabitants of Liban cluster round the perennial wells which surround the northern parts of Kurre Liban. In the rains they trek within a radius of about two marches distant from their headquarters. These people are the Gona section of the Boran tribe. Their chief, Aba

Guyo Ana (Aba means "father of"), was too old and decrepit to accompany us, so sent his cousin Gullgullo, who became my "intelligence officer" for the next few months.

On January 22, 1903, the expedition reunited near the junction of the Awata and Aflata rivers, the combined waters of which constitute the Daua river. After fitting out two flying caravans with provisions for two months, Mr. Butter sent the main caravan six marches southwest to Ronso, where good grazing was reported. From information received, it seemed certain that this place would lie close to our route when we later on would travel west to Lake Rudolf.



COUNTRY NEAR GANALE RIVER.

Owing to the large area of country which it was necessary to investigate, these two caravans, after making a wide loop eastwards and meeting again, were subdivided, and for the next three months Butter, Baird, and I were generally exploring separately in different directions, thus making the network of tracks in the Boran and Gurre country which are shown on the map. Some two months later, when in Western Dirri, we refitted from the main caravan, which was again sent on ahead. The whole expedition was not reunited till May 24, on the shore of Lake Rudolf.

We constantly communicated with each other by mounted messengers. The Somalis selected for this important work could speak a little Galla. By the aid of occasional inquiries and their cleverness in tracking, they never went far astray. They travelled, walking and riding, over 40

The western part of the Golbo, between Dirri and Lake Stefanie, is uninhabited, but east of Gorai there are Borans called Hofta (to distinguish them from their highland brethren) and Gubbra Algan, who are a small tribe subject to the Borans. They are a different type, but copy the Boran's dress and ornaments, and their old men wear the pigtail. They do not inter-marry with the Boran, nor share their religion with its peculiar customs. They believe in a spirit, Rubbi (doubtless the same as the Arabic "Rubb," meaning God), but only call on him when they want rain. They are camel-owners and nomads, but have lately closed eastward to avoid being raided by a naked tribe called Summader, who come from the direction of the south end of Lake Rudolf.

After visiting Gara Hichenni, which was one of my most commanding survey stations, I skirted round the south shore of Lake Stefanie, where there were large herds of oryx, zebra, and Grant gazelle. The oryx were very unsophisticated. One herd, full of curiosity, charged up to within 150 yards of me, and then stood in a long line staring their fill at the extraordinary apparition. Both sides remained motionless, but I quietly got my glasses on to them to see if there were any with particularly good horns. The spell was broken by my shikari pointing excitedly to indicate one he thought bigger than the rest. The herd, as if by signal, made off at a gallop in a cloud of dust.

Here, as is always the case where there are large herds of game, were numerous lion tracks. Threading my way through the thorn bush, I got a shot at a fine leopard, and was lucky enough to lay him low. A little further on I sighted Mr. Butter's camp, from which I had been separated for about ten days, and was soon receiving congratulations on my leopard from Butter, Baird, and Duff, who modestly pointed to the result of their morning's sport—four fine lion-skins, then being pegged out to dry. They had also secured two pretty little cubs, which were fed on tinned milk, but it did not agree with their internal economy, and after a few days they died. Mr. Butter decided to march from here westward, and appointed me a rendezvous on the east shore of Lake Rudolf. Meanwhile I set off on May 8, 1903, to survey the country between Lakes Rudolf and Stefanie.

Working north towards the Hummurr mountains, we came on tracks of men and cattle; but the owners disappeared with extraordinary rapidity. Some of the boys volunteered to go in pursuit, and the next day they arrived with a man and a woman of the Arbore tribe. They had tracked them and come on their settlement at night, and managed to get on friendly terms with them. The pair whom they brought could speak a little Galla, which was a foreign language to them, and had been bribed to come with promises of many beads—the only garments affected by these people. These were the first naked race we had met, and Mohamed Hassan, afraid of shocking my susceptibilities, had them clothed before

bringing them to me to be questioned. I was much amused to see that the man was resplendent in an old shirt of Mohamed's, while the lady had to content herself with leather coverings. They did not seem at all at ease in their new clothes, and thought the whole proceeding most unnecessary. The small section of Arbore to which the couple belonged keep a few cattle and goats, and wander about in search of grazing. They build no huts of any sort. Rain causes them no more inconvenience than it does an antelope.

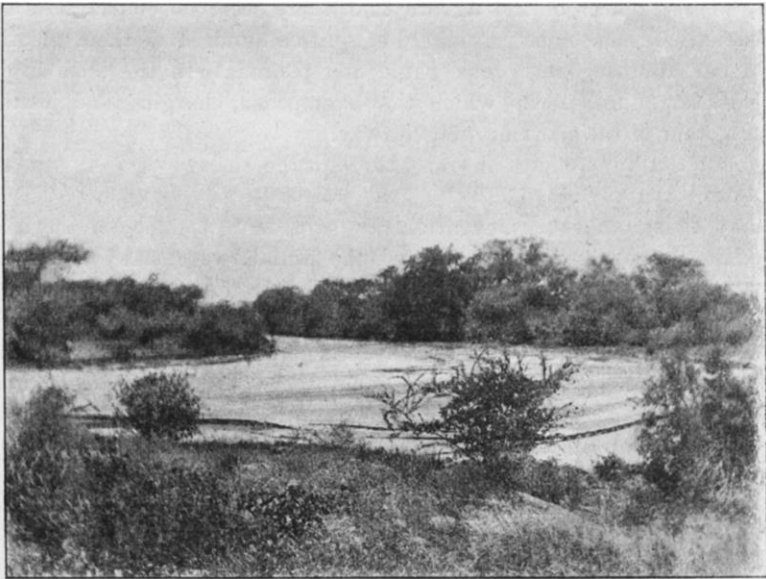
From here I sent my caravan due north to cut off a *détour* which I was obliged to make to visit a hill in the Hummurr range. The country we marched through was thick bush and forest, and in spite of the assurances of the Arbore that there were no elephants in this district, we soon came on a herd of quite a hundred of them feeding. On our approach they took panic and poured from the bush into a broad sandy nullah, up which they stampeded, charging and jostling each other in their anxiety to get away.

After trying to force our way through the bush, we gave it up, and followed up one of the well-graded sandy nullah-beds, which, with many twists and turns, eventually brought us to the foot of the hills. In the large trees which fringed the nullah were many well-made cylindrical wooden beehives, in one of which we found some disc-shaped honeycombs half filled with excellent honey.

The proprietors of the beehives were another section of the Arbore tribe who live in the hills. Ascending a long spur, I came upon their cultivation, the first I had seen since we were in Sidamo. They grow only a grain known in India as "juari." The Arbore had got wind of us, and we saw them decamping over adjacent spurs. Signs of peace made them by the lowland Arbore couple with us had no effect. Outside their rough shelters fires were burning and gourd cooking-utensils lying about. Rounding a sharp corner, we came on one small boy unsuspectingly pounding some grain in a bowl. The others, in their terror, had failed to warn him, and he was caught. Though terribly frightened at first, he was reassured by our Arbore couple, and given some beads and meat. On the way down the hill next day not a soul was to be seen, but we had frequent indications that some of them were moving parallel to us in the bush on either side—seeing us off the premises. On arrival in camp, which I had seen through my glasses from the top of the mountain, Mohamed showed me five elephants' tails, the former proprietors of which were lying dead in the bush. On the march the caravan had suddenly found itself in the midst of a herd of elephants, and (so Mohamed declared) they had been obliged to clear the front by shooting five elephants to let the camels through! The Somali is as keen on elephant-hunting as any one, so I had my own opinion on the subject, and reproved Muhammad. The ivory was eventually sent to Menelik.

Our march to the north end of Lake Rudolf was delayed on May 16 by the big nullah which flows from the Hummurr range south-west into Lake Rudolf. The usually dry watercourse was in flood from recent rains; the brown water swirled down, carrying and tossing about huge logs of wood. Wherever there was an obstruction, a mighty wave arose and the waters roared. The flood subsided in thirty-six hours, and as soon as it was safe for camels, we crossed.

From the rocky isolated hill east of the north end of Rudolf, I was able to complete the survey as far as necessary to the north-west. North of the lake, as far as Mount Nakua, stretched a green marshy

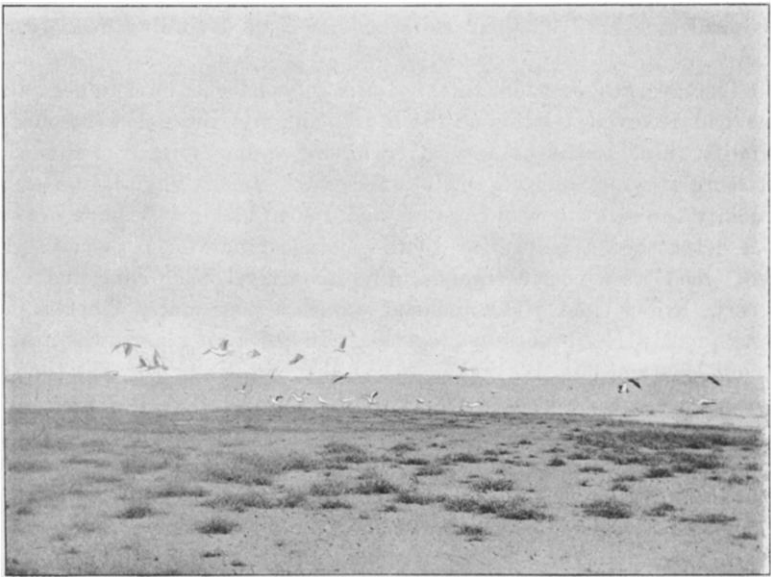


BIG NULLAH AFTER FLOOD.

plain flooded in many places, through which the Omo river winds its way. From here I turned to the shore of Lake Rudolf.

As we travelled south, keeping in touch with the east shore of the lake, the country became more open. Our route was intersected by a series of nullahs running westwards to the lake. The shores of the lake teemed with game. I was lucky enough in four days to secure a very varied bag, consisting of a good elephant, with tusks weighing over 80 lbs. each, a fine lesser kudu, a giraffe, a zebra, a rhino, a splendid oryx, and two good lions. On May 24 I came on the main caravan camped on some rising ground about halfway down the lake. Baird had a few days before been mauled by a lion. The brute charged out from a patch of bush, and Baird's shot had failed to stop him. The next

moment the lion had knocked him down and was mauling him. Baird's fox-terrier "James," who had hitherto had a well-merited reputation for discretion, performed prodigies of valour, and positively found his way into the lion's mouth. But he was not to his majesty's taste, and was ejected, strangely enough with little hurt. Meanwhile Baird's two shikaris behaved splendidly. One caught the lion by the tail and pulled, while the other very coolly shot him through the heart. Baird had several wounds, some of them deep, but the miracle of his escape, as well as that of "James," was explained when it was seen that the lion's jaw had been broken by Baird's first shot. Luckily Wakeman was close at hand, and Baird's wounds were quickly dressed.



WATERFOWL ON LAKE RUDOLF.

Owing to his excellent state of health, his wounds took a good turn from the first. Except for this mishap, they had had grand sport with the lions, which abounded on the route they had taken from the south end of Lake Stefanie. Including my two, there were now twenty-one lions' skins in camp. Altogether eighteen lions had been killed by the party between May 7 and May 23.

Having accompanied us as far as Lake Rudolf, our Abyssinian colleagues had completed their mission, and now signified their intention of returning to their own country. Mr. Butter held a parting durbar, and made the chiefs presents of rifles, which are to an Abyssinian of more value than anything. They fired us a parting salute, to which we