

## NGORONGORO, THE GIANT CRATER; AND THE GORILLA, THE GIANT APE<sup>1</sup>

ONE hundred and twenty-five miles west of Kilimanjaro in Northern Tanganyika Territory (late German East Africa) lies a remote region known as the Land of the Giant or Great Craters. It is a plateau composed of and formed by volcanic magma, mud and *débris* ejected by a group of some of the largest and most interesting volcanoes in the world. Roughly it is about ninety miles long by some thirty broad, and is not easy of access to the ordinary traveller, for it lies away from the main caravan routes, being surrounded by waterless tracts to the north and west, and enclosed to the south, east and north-east by extensive lakes and active craters.

When referring to this part of East Africa, Sir Harry Johnston writes: "This region, so curiously withdrawn from the other great watersheds of East Africa, sending its rivers neither towards the Indian Ocean nor to Tanganyika, nor to the Nile basin, but using them up in large and small salt lakes, in measureless swamps and vast depressions that were once shallow lakes in times of greater rainfall; of rift valleys and faults; of large, small, and even gigantic craters, the rims of which reach almost to snow-level; of conifer forests; of grassy prairies teeming still with game; of beautifully moulded hills and wooded valleys; of tumultuous rivers that flow for hundreds of miles and then sink into the ground and finish; of hot mineral springs; of phosphate and soda deposits—*is deserving of the most minute research*. Its dried-up lake-beds are believed to contain deposits of Pleistocene, Pliocene, and Miocene age which may yield evidence of an earlier mammalian fauna, or may elucidate the origin of the existing mammalian types of Africa, together with the evolution of the African forms of man."

<sup>1</sup> This paper was read at a Meeting of the African Society, held at the Royal Society of Arts on January 30th, 1923. For report of other proceedings on this occasion see p. 237.

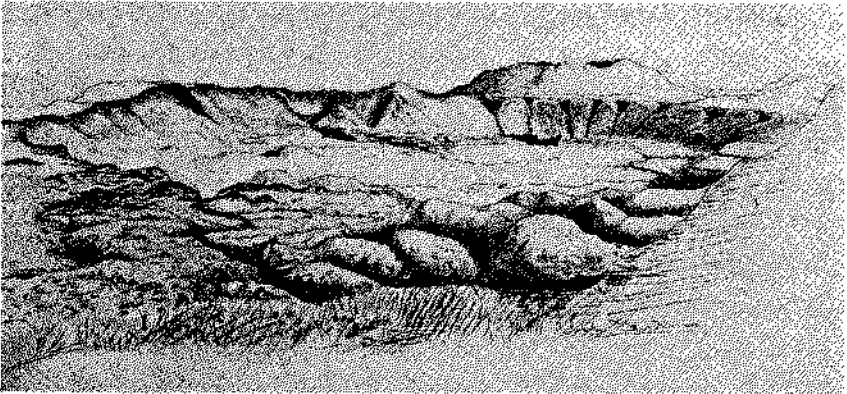
It is hard to understand the reason why such a remarkable region has escaped the attention of English travellers and explorers, but such is the case. Until my article appeared in the *Geographical Journal* of December last, very little if anything had been written about the district either in connection with its natural features or natural history. Not one Englishman in a hundred, even in Africa, could tell one anything about the Great Craters or even knew that such a place existed. Apart from the German publications describing the region, the only written accounts of it so far as I know are contained in the *Geographical Journal* of so long ago as 1870 and 1882, when maps were constructed and published by the Society—from native information only.

It appears that some rough inkling of the remarkable features of the country had been gained by missionaries, which induced the German explorer Baumann to visit it in 1906, and since then other German travellers and Government officials have mapped the country fairly accurately. Doubtless the fact that valuable fossil and prehistoric remains as well as diamonds and gold were located on the plateau of the Great Craters by the Germans made a reason for keeping foreign travellers out of the country, and it is not unlikely that on this account the region has escaped the attention it is now arousing.

Last year I spent some weeks in this very wonderful place, exploring and collecting insects, which enables me to record in the following pages a few of its many unique features.

The plateau or highlands of the Great Craters is a veritable fairyland alive with interest. The scientist and man of affairs will find much there to intrigue him, but the artist will find it difficult to tear himself away from the place once he gets there, and will need a restraining hand at his shoulder for fear he should be overwhelmed with beauty or threaten to build a studio on the precipice of Ngorongoro.

The culminating glory of the land is of course Ngorongoro—the Father Crater of the World—which forms the core around which this volcanic plateau rests. The second glory is the active volcano of Oldonyo-lengai—the “Mountain of God” of the Māsai—which thrusts its tapering and slender, yet massive form 9350 feet to the skies in one glorious grey, white



A SKETCH OF NGORONGORO, LOOKING SOUTH-EAST FROM THE OLOLMOTI VOLCANO.



THE "MOUNTAIN OF GOD."

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and pink pyramid, arabesqued in folds and furrows of quaint shape.

Ngorongoro! No one knows the meaning of the word or whence it came, and I have asked many of the wandering Māasai about it. It stands for a counterpart of the moon's surface—a blister on the earth's crust—twelve miles in diameter one way by eleven another, surrounded by a thirty-five mile circle of cliffs 2000 feet deep. A wonder of the world, holding within its "ring fence" uncountable herds of big game—Hippo, Rhino, Blue Wildebeeste, Eland, Zebra, Kongoni, Thompson's and Grant's Gazelle, Chandler's Reedbuck, Oribi, Lions, Leopards, Cheetah, Hyæna, Ostrich—75,000 of them, some say, and they never leave the crater. Then in the primeval forests that clothe the outer slopes are Elephant and Buffalo.

A fair-sized lake four miles in length fills a shallow depression in the southern portion of the "floor," around which feed every kind of wild-fowl. The lake, which has no outlet other than perhaps a subterranean one—known to the Māasai by the name of Magad—is fed by a river called the Lemunge, which has its rise in the heart of the extinct Ololmoti volcano overlooking Ngorongoro from the north. Then there is another volcano called Oldeani (or Bamboo Mountain in Māesai) to the south.

How such a vast quantity of game manages to subsist and keep their condition, year in and year out, on this one area is rather perplexing, until one realises after a walk across Ngorongoro that the pasture is practically composed of one close mat of succulent white and red clover, in places growing to such luxuriance on the rich volcanic mud and débris that acres and acres of it stand knee-deep in one solid mass of green, as if it had been heavily sown and fertilised by man. Such wild clover pasture I have never before seen, and it is probably unique in the whole breadth of Africa.

The volcanoes I have mentioned, Ololmoti and Oldeani (one to the north and one to the south), both overshadow the giant central crater of Ngorongoro between them. They stand poised, as it were, on the edge of its circular crater wall, but their summits reaching up many thousands of feet above it.

These two volcanoes, although immense in themselves, for

the crater of one of them measures over three and a half miles in width, are dwarfed into insignificance by the colossal proportions of the great abyss on the edge of which they stand.

Ololmoti, the northern crater, attracted me the most, for not only was it the second largest of the group, but it contained the source of the Lemunge river, which rises within it and gushes out through a curious cleft in its side, as if Vulcan himself had split the great wall with one titanic blow of his hammer. I had a great hankering to see into it and experience such a thrill as a bird's-eye view from its summit was likely to give. This I eventually accomplished, and the scenery from such a pre-eminent and commanding position and the sketch I made from it well repaid me for my trouble. The ascent from my camp took me a good four hours of climbing before I reached the highest point. Naturally, my followers and I arrived at the top very much out of breath and pretty well fagged, so it was a very mean advantage that two Rhino took of us on the very summit, by charging us in the rough scrub, shaking us up very badly after the arduous climb. The whole crater, inside and out, is closely overgrown with arborescent "Lad's Love" bushes, very hard to push one's way through but of a fascinating fragrance. No wonder the Rhino make their home here, for the crater sides are a mass of fragrant herbs and mints and alpine flowers, and there are some sheltered alpine meadows in the deep folds round this crater that are marvels of beauty, carpeted with a lush green thick-leaved flora, and surrounded by an arborescent kind of broom, and massive moss and fern-hung *Hagenia* trees of the utmost grace and beauty. The map gives the impression that the Ololmoti Crater is closely covered with primeval forest; this is wrong, for there are only the very smallest patches of *Hagenia* forest that could be described as such—fragrant scrub interspersed with patches of coarse grass covers the crater within and without.

My aneroid showed 10,000 feet as the highest point we reached on the lip of the crater. It is a perfect ring some three and a half miles across, and contains quite a respectable mountain in its centre, which is in reality a gigantic core of ash and lava. The catchment area of this crater basin

forms itself into small pools and runnels of water on each side of this core, which then drain out through the narrow cleft of which I have spoken as the Lemunge river. The scenic effect of the Ngorongoro abyss below and the extensive view beyond it to Lake Manyara is unsurpassable.

To the north-east lies yet another giant, the Elanairobi Crater. By reason of its aspect, facing the rising sun, and also no doubt on account of the ideal conditions of moisture prevailing, the eastern slope of this volcano has become a veritable alpine "herbaceous border" of flowers. Amongst those that I could place were a large-flowering, sweet-scented Larkspur, white with black stamens, Anemones, Canterbury Bells, red and white Geraniums, purple Thistles in great bunches, verbena-scented Thymes, Mints, Docks, Fennels, Burrage, Sorrel, Forget-me-nots, Mallows, Campions, Crow's-foot, Petunias, Poker-plants, ground Orchids, at least a dozen kinds of Clovers and Trefoils of a wonderful range of colours from white to salmon-pink, Violets, Nettles, Marguerites with scented leaves (all plants seemed to have scented leaves), wild Turnips, Star of Parnassus, purple and white Lupins, Scabious of many kinds, Camomiles, Daisies, and great beds of Crinum lilies.

Elanairobi is made both interesting and beautiful by reason of the lake it contains. This body of water is over two miles across, green-blue in colour and covered with a heavy film of metallic substance. It is said to be of great depth. The northern interior slope of the crater is covered to the water's edge with primeval forest. Judging by the inundations along the shore line, there has been a considerable rise recently in the level of this crater lake. The highest point of this crater reaches an elevation in my opinion of well over 10,500 feet.

From the north-eastern lip of the Elanairobi Crater I obtained my first view of Oldonyo-lengai, or the Mountain of God, as the Māasai call it. Little wonder that these savages look upon this extraordinarily beautiful volcano with the utmost awe and veneration, for even from this distance it presents a picture of enchantment, the mysterious fascination of which is hard to resist.

This volcano erupted during the war, one eruption taking

place in January and another in March 1917. These eruptions were reported, but owing to the war no further notice was given to this interesting phenomenon at the time.

The Māsai look upon the volcano as sacred and the source of all blessings and benefits for their race. The internal rumblings that preceded the eruptions of 1917 were put down to the bellowings of cattle that were to come out to enrich them.

After the last eruption, and when it was safe to approach, the Māsai picketed the neighbourhood, allowing no one but a Māsai to go near the volcano on pain of death. They afterwards took goats and cattle there, and conducted thither many of their women with blood and milk, which was poured out at the foot of the mountain. These women, who were mothers, were supposed to milk their breasts there, as a form of sacrifice to the mountain god, and were also left there alone for a period, supposedly becoming pregnant during that time.

There is no previous record of this volcano having erupted; it was, in fact, covered with mountain scrub right to its peak, where there were two small extinct craters. Its height was placed by the Germans at 9,350 feet; it must now be considerably higher than this, and culminates in a single crater on its tapering and graceful summit. The sides are now so steep that it is impossible to climb this volcano.

I reached the "Mountain of God" by way of the barren watercourses that run below it, through the difficult and fatiguing country to the west of the Kerimassi volcano. Even after four years the grey mud put out by the former is still to be seen covering the ground in many places that are ten miles or more away from it.

A saddle of ash and mud, white and shining, out of which emerge two curiously formed parasitic craters, join Oldonyolengai to the green cliffs of the Rift Valley escarpment. The entire scene is a contrast in effects and colours that enthralls the beholder, giving him that sense of detachment and unreality in his surroundings that beautiful or bizarre pictures or landscapes are apt to do. A thin film of vapour rises over the sharply cut edge of the narrow vent, but no glow is perceptible from this volcano at night.

The grey mud-plastered valley that runs along its southern foot, merging into the steaming lava lake under the volcano of Gelei, might have been transplanted from some other world, so weird and desolate does it appear. The lower part of this valley abounds with steaming parasitic craters, ash-cones, and fumeroles of all sizes and shapes, some of them raised up in tiny truncated cones, whilst others have formed themselves into great cracks and round caverns, flush with the surrounding surface of volcanic mud.

That famous warrior race, the Māsai, inhabit the Land of the Great Craters. They are, however, too well known to need description here, but to the south, in the Iraku country, are to be found other peoples less well known concerning which a few notes might be of interest.

The Wambulu natives occupy the high and fertile plateau of Iraku. They are an interesting, industrious, and intelligent people of Nilotic origin, tall, with fine features, and in many ways similar to the Watusi of Ruanda. Owing, however, to the continuous raids of the Māsai in former times, they are not numerous. They are very clever pastoralists and agriculturists, both the men and women working hard tending their large stocks of cattle, sheep and goats, and growing large and well-matured crops of maize, rice, sorghum, millet, eleusine, beans, yams, many kinds of native vegetables and European potatoes; they also raise quantities of fowls.

The Mbulu country has an exceedingly pleasing aspect with its well-ordered, often terraced, patches of cultivation, its quaint houses, its herds of cattle and sheep, its curious combination of clumps of thin-stemmed, tall Phoenix palms (with orange-coloured fruits), with large stretches of heather and bracken, and, along the many beautiful streams, clumps of graceful Tree Ferns.

The Wambulu houses are interesting. They are of three kinds: round, square, and oblong, either thatched with reeds, or with low mud roofs, sometimes above, and sometimes below ground. Those below ground, which may be called "dug-outs," are probably the oldest form of Wambulu houses; they are so well hidden in many cases by being dug-in to the sides of a steep slope or gully and covered with earth, upon



which grass has grown, as to be indistinguishable from their surroundings. Many of them have a narrow, winding trench entrance in the best military style. Until recently the Wambulu were in the habit of kraaling their stock in similar cave houses, but now they are kept in low-arched mud-roofed houses above ground, this style of cattle pen being in use even amongst the Sandawi natives of Kondoa-Irangi.

The Wambulu "dug-outs" have, as a rule, three compartments—a kind of entrance hall running across the breadth of the dwelling, and two other divisions behind this. Some of the houses are of quite large dimensions, fifteen feet by twenty-five feet being not uncommon. They contain raised pole tables for their earthenware cooking and other utensils and a raised reed bed. These natives use both the wooden mortar and a hollowed stone for pounding their flour. They bray skins well, which the women wear, and on to which are sewn beads and cowrie-shells, and are frequently tasselled in a neat manner. The men take their produce to market sewn into skin sacks, which they pack on to their small grey donkeys. The women carry large loads on their backs, strapped round their shoulders.

The country in many respects resembles the Ruanda, but there are no bananas, and it is, of course, cultivated to an extent that is never seen there. It is extremely well watered, with a rich, pasty soil of pink mica schist through which run large seams of mica and pink quartz. The contour of the highlands of the Great Craters to the north has been altered by the hoofs of millions of cattle passing and repassing across the centuries. Here, however, the run of the land has been altered by the hand of man, for, with the flight of time and a continual scooping out of the sides and heads of the water-courses for cultivation the face of the country has been completely changed.

Near the White Father's Mission of Mbulu is a small lake in and around which live many pythons, which are held in veneration by the Wambulu. The natives in the vicinity have the curious custom of carrying back to this lake any python that is found any distance away from it.

To the west of the Wambulu, inhabiting the neighbourhood

of the Yaida Swamp, are the Kindiga (wrongly called the Watindiga), of mixed Bantu and Nilotic affinities; also it is said some wandering Pygmy tribes. To the south again of the Kindiga are the pastoral Mangati (also Nilotic), a small tribe but immensely rich in cattle. Their cattle, being handed down from father to son, remain in the hands of individuals, each owner of a herd being a chief to himself. One man may own as many as 10,000 head of cattle. One of the Mangati customs is the right to wear an ivory bangle (or two as the case may be) above the elbow, when one of them has killed a lion and a man (a man may mean a child, and often does). A Mangati warrior, therefore, is thought very little of unless he can show this ivory bangle. To kill a lion is comparatively easy, but to kill a man in these days rather more difficult, hence this custom is becoming the cause of frequent murders amongst the otherwise peaceful Mangati. At the time of my visit to the neighbourhood, one chieftain had just been fined 500 head of cattle for killing a baby, for the sole purpose, it would appear, of obtaining the right to wear the bangle. The Mangati women on any special occasion or when visiting each other, don very fine soft, beaded leather cloaks, which are greatly prized amongst them.

To the south again of the Mangati are the Tatoga, under their present chief Yidahonga, once a powerful race and owners of the Great Craters and many heads of cattle, but now, due to the bloodthirsty Māsai, their power and possessions have dwindled to a mere shadow of their former greatness. Then there are still other tribes, the Wasi and Barungi. To the east of the Wambulu country, and down in the Rift Valley at the south end of Lake Manyara, are the Wambugwe, with a physique and language purely Bantu, it would seem. Although living so close to the Wambulu, they apparently have little to do with each other, as they are unable to understand each other's language. The Wambugwe are short and thickset and great runners; it is said they are able to run down and spear a wildebeest.

In conclusion let me say that as the Press has recently made reference to the great crater of Ngorongoro and the remarkable opportunity it affords of being made into a game sanctuary,

it may be of interest to note that my friend and travelling companion, Sir Charles Ross of Balnagown Castle, Ross-shire, who joined me on the expedition to which this article refers, was so impressed with the place, that on the first opportunity presenting itself he purchased the major portion of it with a view to carrying out a scheme of game preservation there.

T. ALEXANDER BARNES.