

From inquiries made, the same remark appears to be true of those which I have been unable to visit.

In absence of expert investigation I formed the following conclusions :

These caves have, at any rate, been mainly formed by the labour of man, and, though resulting from an industry somewhat alien to the Lumbwa character, do not represent such a heavy task as might be imagined. For instance, Kibipiten, say fifty years ago, was only 25 yards long, now it is reported to take two and a half hours to search the end, though I was unable to verify this fact. I should say, however, that this represents a mile at the outside—this therefore means a progress of about 35 yards a year, but personally I should not think it likely that this cave is a mile long, since the task of removing a basket filled with rock this distance would occupy nearly a day.

While crawling about in caves like these without any means of measurement one naturally forms totally erroneous ideas of distance—apart from the usual exaggeration of native reports.

Again, the fact that these caves appear to be universally suffering from their roofs falling in, in the absence of any marked disturbance, hardly seems to point to their being of any great antiquity.

It was most unfortunate that these phenomena coincided with the investigation.

NOTE ON THE FORMER LEVEL OF THE VICTORIA NYANZA

BY FELIX OSWALD, D.Sc., F.G.S.

In compliance with the Editor's request, I am appending to his article the results of my observations indicating a higher level of the Victoria Nyanza within a recent geological period, together with their effect upon the question of the origin of the caves on Mount Elgon.

My personal knowledge is confined to the area south of the Kavirondo Gulf, between Karungu and Kendu ; and the evidence which I was able to collect did not disclose a higher level of the lake in former times than about 300 ft. above the present water-line. At this altitude, viz. approximately 4000 ft., I found quantities of well-rounded pebbles of quartzite and gneiss, especially at Kikongo, near the lake, and farther up the valley of the Kuja River, e.g. on the south side of its left tributary, the Olasi River, between Nangena and Nyaroya ; and also along the low ridge above the Ogo Ford over the Kuja, viz. at about 16 miles in a direct line inland from the lake.

I have already suggested¹ that this zone of pebbles at the 4000-foot level marks an old beach-line of the Victoria Nyanza, and it is an extremely noticeable feature of the landscape that in the whole of this area the hills below this altitude are gentle and rounded, with particularly broad valleys, whilst abruptly above this level I noticed that the hills are pointed and terminate in rough and rugged crags. The same striking contrast is evident in looking northward across the Kavirondo Gulf from Kendu. It seems to me also to be more than a coincidence that on the western coast of the Victoria Nyanza gravel deposits and caves occur likewise at a height about 300 ft. above the lake in the cliffs of the coast of Buddu, north of the Kagera River.² This uniformity in level of the old beach-line on both the eastern and western shores would seem to indicate that a similar uniformity persists all round the lake. But the caves on Mount Elgon occur at heights varying from 6100 to 7000 ft., i.e. as much as 3000 ft. above the present level ; whilst I was unable to find evidence of a beach-line higher than 300 ft.

I find it difficult therefore to conceive that the waters of the Victoria Nyanza could ever have stood as high as 3000 ft. above the present level so as to be able to erode the caves of Mount Elgon, although I speak with great diffidence since I was not able to visit this mountain. On the other hand, it is equally difficult to understand how this vast volcano could

¹ 'The Miocene Beds of the Victoria Nyanza, &c.,' *Quart. Journ. Geol. Soc.*, vol. lxx., 1914, p. 146.

² Sir William Garstin, *Report on the Upper Nile*, Cairo, 1904, pp. 32-39.

have been elevated several thousand feet, for it is more probable that (like other volcanoes) it owes its present altitude (14,200 ft.) merely to the long-continued accumulation of its lavas and tuffs. Evidence of downward sagging of the surrounding strata is indeed likely to be forthcoming, and a local analogous instance of such sagging is furnished a little farther south by the northerly tilting of the Miocene beds in the Karungu district towards the centre of the volcanic mass of Gwasi (6384 ft.), owing to the enormous weight of its successive lava-flows and tuffs, which are revealed so graphically in the lofty cliff-sections between the mouth of the Kavirondo Gulf and Karungu.

The fact that the caves of Mount Elgon occur at varying altitudes, and not at the same level, would seem also to militate against their having been excavated by wave-action of the Victoria Nyanza ; and I should feel inclined to ascribe the formation of these caves rather to springs arising from water percolating through the friable tuffs in which the caves occur, and issuing at the junction with an underlying impervious flow of lava. It is noteworthy that Mr. Hobley mentions the dripping of a spring from the roof of one of the Elgon caves, and he also states that in the case of the caves of the Nandi Escarpment small streams still occur in some of them. It seems to me, therefore, not unreasonable to suppose that both the Elgon and Nandi caves may owe their origin to the erosion of underground water at a period when the annual rainfall was heavier than at the present day and before the progressive desiccation had set in to which Mr. Hobley has called attention in the pages of this Journal (No. 9, p. 4).

GAME AND DISEASE

BY A. BLAYNEY PERCIVAL

When talking from personal observation of disease amongst game, one must of necessity be vague: for it is at the best but conjecture. One cannot, as with domestic stock, use a