

the distances travelled over landward, and at Kilima-Njaro this exaggeration amounts to about 30 geographical miles. The known geography of the coast-land, and especially the astronomical positions obtained by Von der Decken, however, give a scale by which the distances on the routes beyond the mountains have been reduced to what is believed to be nearly true.

“The leading features of the new geography thus opened up, and which may almost be termed discoveries, are the existence of numerous summits, besides those of Kenia and Kilima-Njaro, along the margin of the table-land; and among these the Dóenyo Ngái, reported by Erhardt, and said to be higher than Kilima-Njaro, though not so massive. Then the salt lake Návasha, mentioned by so many of the travellers on the coast, and possibly the Lebassa, heard of by Grant when in Unyamwesi, and the Njémsi volcano, which has a special interest since it is the only one, excepting the volcano of Artali in the Afar country, described by Mr. Munzinger, which is known to present any signs of activity in the African continent. The information respecting it is confirmed by various independent reports obtained by Erhardt, and by two separate accounts received by Dr. Krapf.

“The dimensions and general direction of the fresh-water lake Baringo are stated, and it is remarkable that, according to the newer information, this lake falls almost exactly into the same position as that assigned to it by Captain Speke; but between it and the sea of Ukara, a double route makes known a populous, pastoral, and even hilly country, allowing no possibility of a strait or water-communication of any kind between the two.

“The position of Baharini, and with it that of the shore of the sea of Ukara (or the Ukeréwe), is a very important one, and though its place cannot be laid down with great certainty, yet it is believed that the position given to it is nearly its true one. The reduction of the length of the route to the scale given by Von der Decken's observations draws Baharini about one degree further eastward than it is shown upon Mr. Wakefield's manuscript; but it is connected with more certain positions by two routes, a westward one from Lake Návasha, and a south-easterly one to Arusha, south of Kilima-Njaro. If the position of Baharini is somewhat altered by more exact information, it is probable that it will be brought still further east, rather than taken westward.

“The main point of interest in connection with the great lake on whose shore Sádi bin Ahédi stood at Baharini, is the question whether it is indeed the same lake which Captain Speke saw, and named the Victoria Nyanza.

“It is observed that the reduction of the newly reported routes, made entirely without any reference to the extent of this lake, places its eastern shores very nearly in the same position as that indicated for them indefinitely by Captain Speke, and that its supposed area is not materially altered. That the names of the lake here given, the sea of Ukara (Ukerewe), the ‘Second Sea,’ or the Nyanja, should differ in some degree from that received by Captain Speke is of very little moment, but it is remarkable that not one single name of district, people, or place (with the exception of that of the Wa-Masai, a general name for the people of the whole region east of the lake) given in these new routes has any such remote resemblance to names reported by Speke and Burton, as to warrant an identification with any one of these. At p. 275 of his ‘Lake Regions,’ Captain Burton says—‘These races (of the people of the eastern side of the Victoria Nyanza) are successively from the south, the Washaki, at a distance of three marches, and their inland neighbours the Wataturu’ (lat. 2° 10’ in Speke's map). Then the Warudi, a wild tribe, rich in ivory, lying about a fortnight's distance, and beyond them the Wahumba or Wamasai. ‘Commercial transactions extend along the eastern shore as far as Thiri or Ut'hiri, a district between Urudi and Uhumba.’ The fortnight's distance from the south end of the lake should approach very near, if not actually, to the position given to Ukara by the new routes. It is possible that Ut'hiri lies close to the south of the district of Ukara.

“Again, the names of the native States indicated by Captain Speke as lying between the north-east of the Nyanza and the Bahari Ngo, are in no degree similar to those of the populous districts named on the caravan-routes which traverse these States.”

Then followed the extract from the notes, *vide* ‘Journal,’ vol. xl. pp. 333-4.

2.—*On the Ukara, or the Ukerewe Lake of Equatorial Africa.* By
Captain R. F. BURTON, Gold Medallist R.G.S.

[ABSTRACT.]

In this paper the author repeated his conviction that the so-called Victoria Nyanza is not a lake, but a lake region. He had found new matter in support of this opinion in the able paper upon Routes in East Africa, published by the Rev. Thomas Wakefield, of Mom-basa, in the last volume of the ‘Journal’ of the Society. As these routes were wholly taken from native authority, the President, Sir Henry Rawlinson, had remarked that the “Pundit system” might be found as useful in Africa as it has proved to be in high Asia. Mr.

Wakefield's notes had been ably and judiciously commented upon by Mr. Keith Johnston, and Captain Burton's object was to add emphasis to that geographer's remarks, and to supplement them with the experiences of a practical traveller. He laid down from native report the length and breadth of the Ukara Lake, which appears in the Ukerewe of Captain Speke, and in the Garawa of old maps. A caravan-route between the Baringo Lake—the Barenca of Mercator—enabled him to separate that basin altogether from the so-called Victoria Nyanza, and to divide the latter into three; remarking, at the same time, that many more such features were necessary in order to account for the number of effluents supplied by the explorers Captains Speke and Grant at the northern portion of their lake's inverted delta.

Mr. GALTON thought it had not been made sufficiently clear that the great breadth assigned to the south end of the lake rested mainly on data supplied by Captain Burton himself, who, in the account of his great expedition, gave the names on native authority of the tribes on its shore, east of where Speke reached them, and the distances to which these tribes extended, amounting in all to more than 17 days' journey. He stated this, to show the unsatisfactory character of geography based on native African information; and for the same purpose he would remind them of the information collected by Captain Burton only 20 miles from the north end of the Tanganyika Lake, as to the fact whether the river ran in or out of that lake. It was a cardinal point in African geography. Yet the information so collected was set aside on other grounds, in a paper read by Captain Burton a few years later. These facts were especially worthy of note, because Captain Burton's proficiency as a linguist and his assiduity in collecting information were well known to be extraordinarily great. As regards Captain Burton's opinion of the Nyanza Lake, he seemed to acquiesce in the breadth originally assigned to it, when he wrote the paper above alluded to, because he proposed in that memoir to alter its shape by dividing it into two parts by a horizontal line, whereas in the present paper he proposes to divide it by a vertical line. This sort of uncertainty, which was characteristic of all hypothetical geography, justified the policy of this Society which required the actual mapping of a country, to a degree which to some might seem out of proportion to its real merit; the reason being, that such a map, once made, was good for all time, whereas one based on native information continually required modification in essential particulars. Therefore, however elaborately these lake regions of Africa might be mapped upon the testimony of uneducated natives, he hoped that future explorers would not look upon the ground as preoccupied. He was sure that whoever succeeded in mapping them from actual observation would perform as good, and, in the true sense of the word, as original geographical work as he could do anywhere else in Africa.

General RIGBY said, in reading Mr. Wakefield's paper he had been very much struck with the remark that his native informant told him it was 60 days' journey along the shores of the lake from the southern end to the north, and even then they did not know the end of it. He himself had repeatedly heard the same account from natives at Zanzibar, who knew the lake perfectly well. The overseer of the Sultan's plantations at Zanzibar, a native of a village on the borders of the lake, assured him that he had been 60 days' journey along the eastern shores without coming to the end, and that nobody could tell how far further north it extended. He traced with his finger in the sand an

outline of the shape of the lake as known to him, which wonderfully agreed with Captain Speke's description.

Mr. BALL said, with reference to the reliability of natives, he had made during the present year a short expedition in the great Atlas, and had made inquiries, through interpreters, of every person he came across with regard to the geography of the country, but at last was obliged to give up those inquiries in despair, because the statements made were so utterly inconsistent with each other. He was therefore convinced that native information must be received with the greatest possible mistrust, until verified by the observation of educated travellers.

Captain BURTON said that the shape which he originally ascribed to the Victoria Nyanza was quite different from that which Captain Speke had given to it. He supposed it to be more in the form of a stocking. He had been within 20 miles of the end of Tanganyika, and did his best to get to the end, but failed. He had entirely modified his views with regard to the Victoria Nyanza. To General Rigby he answered that the 60 days' journey was not made by himself; he had merely heard that it was 60 days' journey. General Rigby knew as well as any person that an African would talk of 60 days just as he would of 30 days or 100 days, being utterly indifferent as to the number. He could quite understand how it was that Mr. Ball came to grief in trying to obtain information from the natives in Morocco. Dragomans were very difficult people to deal with. If the traveller knew anything of their language he would be their master, but if he knew nothing of the language they would be his.

Admiral COLLINSON asked Captain Burton what he considered to be the height of Lake Tanganyika.

Captain BURTON said it had been laid down by Mr. Findlay at 2800 feet. He had found a pencil note by Captain Speke, which had never been published, that his thermometer was 1000 feet below actuality, and therefore Speke had supposed the height to be 1800 feet. The other height, 2800 feet, was considerably above that of the Albert Nyanza.

Admiral COLLINSON asked if Captain Burton himself had made any observations for elevation on Lake Tanganyika.

Captain BURTON said when he was there all the best thermometers were broken, and they only had a common bath-thermometer left, which gave 1800 feet; but it was subsequently found to be two degrees wrong, or 1000 feet.

Mr. T. SAUNDERS hoped that the day had now arrived when that fabulous piece of water, Victoria Nyanza, was about to be resolved into its constituent parts. He was convinced that Captain Speke had been induced to lay down the eastern end of the lake from the representations of Mr. Macqueen, who had a great affection for Baringo. It was in consequence of what Mr. Macqueen said that he (Mr. Saunders) had placed Baringo on the map which Captain Speke took with him as an embodiment of the information regarding the countries he was about to traverse; and what Captain Speke did was too hastily to accept the answers given by natives to leading questions, and to show too great anxiety to join together the pieces of water which he noticed at intervals, so as to make a startling phenomenon to grace his name and discoveries. There was no need to go further than Speke's own narrative to show that there was not an atom of proof for the combination of the various pieces of water which he saw at different times. He only saw three separate pieces, and these he combined, for the water to the south of the falls he never saw at all. That was entirely an invention. He hoped that the time had arrived when people would no longer submit to that great blot on the map of Africa which had resulted from Captain Speke's error. Moreover, he hoped that the discussion of this subject would tempt some enterprising young men to explore these

almost unknown regions. Very little indeed was known about the relation of the western slopes of the mountains of East Africa to the eastern slope of the Nile basin, and even the extent of the Nile basin had not yet been determined. If African exploration was again to be taken up, he hoped a little more respect would be paid to the Congo. If there were such difficulties attending the effort to penetrate from the east coast, why should not attempts be again made from the west?

The PRESIDENT said he thought Mr. Saunders had hardly sufficiently considered that it was a case of necessity to place some reliance upon native explorers. If they entirely refused to accept the information so obtained, there would be a perfect blank in our maps of many regions. Judging from Asiatic experience, native explorers might be utilised to a very great extent. All the late discoveries in Central Asia had been due to them, and when once educated they became most valuable assistants. Of course, mere traders did not travel for the purpose of obtaining geographical information, and their statements must always be taken *cum grano salis*, and with a great number of grains too. Still, by comparing different results, a certain amount of truth might be acquired. It was exceedingly desirable that some more definite information should be obtained about the African lakes, and it was well worthy the consideration of the Council of the Society whether they should not put their shoulders to the wheel and endeavour to originate or co-operate in some expedition for the purpose of finally solving all the difficult geographical problems connected with the equatorial lakes. Competent persons might easily be found. Mr. Wakefield himself appeared admirably adapted for such an enterprise, if he would undertake it; but even if he would not, it was quite possible that amongst the rising generation some one else might be found to follow in the steps of Burton, Speke, and Grant.

The President then announced that the Council had that day received from the executors of Sir Roderick Murchison the sum of 1000*l.*, the interest of which was to be devoted to the advancement of geography, either by encouraging explorers, or by assisting authors to publish the results of their researches. Sir Roderick had already endeared his name to the Society in a thousand different ways, and they accepted this last offering with the utmost gratitude and respect for his memory.

ADDITIONAL NOTICES.

(Printed by order of Council.)

1. *Report of VICE-ADMIRAL OMMANNEY, C.B., on the International Congress for Geographical Sciences held at Antwerp.*

HAVING been honoured by your selection to officiate as the representative of the Royal Geographical Society at the International Congress for the Advancement of Geographical Science, held at Antwerp in August last, I beg to submit the following report:—

The Congress was held between the 14th and 22nd of August, pursuant to notices and invitations which had been circulated among the scientific Societies of Europe, and the respective Governments were invited to nominate delegates to the Congress.

The initiation for holding this Congress was taken by men of science in