explore the vast continent of Africa. His opinion was that Christianity would never really flourish in any land until it was led by the native blood.

Mr. Francis Galton asked what commercial use was made of the Niger and its two branches? How many European ships ascended the stream Did any ascend the Chadda? And what was the amount of exports?

Bishop Crowther, in reply, said at Egga, the limit of Trotter's Expedition, 360 miles up, about 46 tons of ivory were collected last year. When Mr. Macgregor Laird attempted to open up trade on the Upper Niger in 1857, only five casks of Shea-butter were collected, but during the past year 2000 casks were brought down. Between 5000 and 6000 casks of oil were also exported. Instead of the small steamers carrying 80 or 100 casks, large vessels were now being built to carry from 400 to 600 casks. There were about six steamers engaged in the trade, and they made five or six trips

every year.

Mr. EMIL Brass asked if Bishop Crowther had met with any traces of the dwarf race first met with by Dr. Schweinfurth, and afterwards by Dr. Bastian, on the Gaboon.

Bishop CROWTHER said he had met with very small individuals in different

tribes, but not with any race of dwarfs.

The President said he cordially joined in the vote of thanks which had been proposed by the Dean of Lichfield. He did so with the greater readiness because he entirely agreed with him that no true progress would be made by Christianity in heathen lands which was not led by the native mind itself. The object should be to educate a minority, and teach them, by means of a European language, the truths of Christianity. Such teaching would then percolate through the native mind and take the vernacular form of expression, and in this way alone could Christianity spread among the tribes.

The following Paper was then read by the Author:

2. Progress of the Victoria Nyanza Expedition of the Church Missionary Society. By Edward Hutchinson, Esq.

THE Society having decided that its approach to the Victoria Nyanza should be by the East Coast, it was determined that intermediate stations should be formed, and that parties should go contemporaneously to King Rumanika at Karagwe, and King Mtesa at Uganda. The points agreed upon for intermediate stations were Mpwapwa and Meninga. Attention was turned to the possibility of utilising one of the Eastern Africa Rivers.

The information furnished by Mr. Stanley as to the Wami River seemed to be supported by the views of Captain Speke; and the survey made under Sir Bartle Frere in 1872 of a portion of the stream determined the Committee to attempt this river, and also the Kingani, the bead-waters of both rivers being not very far from Mpwapwa. A suitable boat was accordingly built, and both the Wami and Kingani were explored.

The following extracts from the Journal of Lieutenant Smith and Mr. Mackay satisfied us that the Wami is never likely to fulfil the part assigned to it by Mr. Stanley.

"Mackay and I left Zanzibar in the Daisy on the 12th, taking with us Bombay and a crew of fourteen men. Anchoring at Saadani for the night, and taking in a supply of coal previously sent across, we started in the morning for the Wami, which lies about 4 miles to the southward. Entering the river, we found plenty of water—6 to 7 feet—and had a current of  $2\frac{1}{2}$  miles to contend against, which, in the narrows and bends, increased to 3 and  $3\frac{1}{2}$  miles.

"The river is very tortuous, doubling oftentimes back on itself, so that you find the hills, which were in your front one minute are seen over the stern in the next. This tortuous character attaches to the river as far up as we went—about 60 miles—and renders the navigation difficult, owing to the sharp bends and curves which are met with at every 100 yards.

"As we ascended the river the country became more open and hilly, and apparently better populated, although no village of any size was seen on its banks. Fowls, goats, and sheep, were not plentiful, and high prices were

charged accordingly. Indian corn and sugar-cane were cultivated.

"As far as we could learn from the aged natives, no trade by boats had ever been carried on. They all pointed to its tortuous course as a reason for preferring the road to the river. We found that, after toiling all day, and covering perhaps 20 miles of water, we had only advanced two hours of actual distance from point to point.

"After five days we had reached a point only 15 miles by land from Saadani; I therefore decided to return, as I saw no prospect of our being able to

utilise the river.

"1. The current is too rapid for our rate of speed. 2. The river is so tortuous, that a land-journey could be performed in half the time. 3. It was falling so rapidly that, had we succeeded in getting up, it would have been doubtful whether we should have sufficient water to return.

"The river, in my judgment, is useless for purposes of trade, and I very much question that it has ever been used as a means of conveying goods to the coast."

Having left the Wami, the party were accompanied by Vice-Consul Holmwood, and an attempt to explore the Kingani was then made. This river, too, as a navigable stream, is worthless. Consul Holmwood's report is full of interest, and the following extracts may be acceptable—

"The Rufu, or Kingani, is, as a navigable river, at present simply worthless. Its course is so tortuous that, in ascending 48 geographical miles from point to point, 115 miles of water are traversed, the distance by road to the

same position not being more than 70 miles.

"Beyond the tidal limit the stream is everywhere rendered dangerous by sunken snags and fallen trees. The river, though deep, soon narrows to about 20 or 25 yards in most places, making it very difficult for any but a short boat, and one having high steam-power, to get round the numerous sharp bends, where the current often increases to a rapid. Still more hazardous is the descent; indeed, with six oars and both screws working, the Daisy was more than once taken out of all control by the current, and dashed against the banks, or on some obstacle in mid-channel; in one instance the huge limb of a tree going through her sides, and the water filling the engine-compartment instantly.

"By such accidents, which would always be incidental to navigation in this river, we were delayed several days, and greater inconvenience and loss of time were occasioned thereby than would be incurred in the ordinary

accidents of land-travel.

"The river, moreover, is only open for navigation from about 1st of June till the end of August; for though in most years it might be ascended in December or January—the rains in Usagara coming on about that time—yet to be caught in a flood would be most dangerous, as not only is the body of water irresistible, but large trees are swept down before it, and in many places the bed is subject to be suddenly shifted.

"At the beginning of September the river subsides to a fordable stream, except where deep still holes have formed, or when an occasional freshet comes

down during the lesser rains.

"The Lungerengere is a deep but narrow feeder of the Kingani. Confined by steep banks, it is a torrent during the rains, but rapidly subsides, and when we reached it the stream was from 12 feet to 20 feet broad, with a depth of about 2 feet. This influent, however, is unnavigable at all times, even by canoes. Its chief interest lies in the great extent of its course and violence of its floods. It dries up in September.

"Such is the general description of the Kingani and Lungerengere Rivers. That of the adjacent country and its inhabitants may, possibly, prove more interesting to your Society, and will best be illustrated by a brief sketch of our trip, and particularly of the people we came in contact with.

"Up to the ferry of Meituwambiji, on the Ukami road, the people dwelling on both banks are Swahili, or slaves cultivating the plantations of proprietors resident at Bagamoyo, and mostly professing Mohammedanism. Shortly beyond this, Wazaramo villages commence. The first signs of these were small groups of women and children on the banks, attended by a few more than half-naked savages, each carrying a bow and two poisoned arrows ready in hand, with a leathern quiver of the same at his back. These warriors generally knelt in the tall grass, or behind a bush, until the women reported that there was no danger. They have the head hideously thatched with a mixture of black clay and oil, with beads or drops of the same at the ends of the rat-tailed-shaped points of hair which fringe it; their legs and arms are encircled with heavy brass and copper rings, a few ornaments of beads or white shells adorning their ears and necks. Both bows and arrows are most workmanlike in make and finish. The poison extends for about 4 inches below the barb; when fresh it is of a bright-red colour. They told me it is prepared from the giant euphorbia, and that their medicine men provide them with a perfect antidote for it; but I failed to learn the nature or to procure a specimen of this compound.

"Many of the children are got up in the same way as the men, carrying, however, miniature bows and arrows, the latter tipped with hard-wood points,

and the shaft stained red where the poison should be.

"But this warlike appearance seems only a keeping up of the customs of a generation now rapidly passing away. On closer acquaintance, these fiercelooking persons were found to be generally of a timid disposition, and by no means prone to an indiscriminate use of their weapons. Whenever a herd of hippopotami in the channel rendered it necessary to sound the steam-whistle, or the donkey-engine was turned on, they instantly fled for the nearest cover, or carefully got the women and children between themselves and the supposed danger, and rarely showed again unless the boat stayed a time for wood or provisions, when they were the last to draw near.

"Beyond Mafizi there are few people, except at the junction of the Lungerengere, near which are many villages. Here the population becomes mixed in race, as also in their language. In each village there were Wakutu, Wakami, and Wazaramo. This country is full of game; everywhere, a few miles from the villages, are to be seen giraffe, brindled 'gou, water-buck, hartebeeste, &c. On a fine park-like plain, on the banks of the Lungerengere, we saw four or five herds of giraffe feeding within a few hundred yards of us,

besides water-buck and other game, and in the evening a large herd of 'gnu going to drink at the river. We were also told of an elephant-forest one day distant, and among the low hills, a few miles beyond the giraffe-plain, rhinoceros and buffalo are said to be plentiful. This country was populous and thriving a few years since, before the incursion of the Maviti; now the only traces we found of former prosperity were the charred remains of numerous villages, strewn with fragments of household utensils, and indications of large plantations now rapidly lapsing to jungle.

"I may mention the fish of the Kingani as being very numerous and of fine quality. Wherever the banks are low, they are lined with weirs and

fish-traps of most skilful construction.

"During our journey we happily had no trouble with the natives. There were a few requests to know who we were, who, in defiance of all custom, passed without stopping to see the chief, or get permission to enter the country, and a mild hint sometimes was given about hongo, but was not noticed. We were, however, well provisioned, and to a great extent independent of the country, otherwise we should have been compelled to pay prices that would have been equivalent to giving hongo.

"Your Committee will, I feel assured, be glad to learn that the special work in connection with the slave-trade suppression, for which Dr. Kirk despatched me to the coast, was much facilitated by the opportunity afforded by the visit to the Kingani of the Daisy, a passage in which you had so kindly

offered me when preparing yourself to conduct the exploration.

"Before concluding, I will endeavour briefly to sketch the character and customs of the population through which we passed—points on which I know

you are desirous of obtaining information.

"I am by no means able to confirm all that is said against the Wazaramo; on the contrary, I am led to think that, for Africans, these people are unusually industrious and domestic in their habits, and, in regard to morality, far in advance of what is generally found in Africa.

"The women, though made to do out-door work, are treated, as well as spoken of, in a becoming manner, and every one is perfectly clean; the huts being beautifully kept inside, and the open space in the centre of each hamlet well swept, and often having a bench for the elders, around whom it was

customary for the young men to congregate during leisure hours.

"The Wazaramo appear to have no religion, unless a lively faith in evil spirits and witchcraft can be so termed. Miniature huts, containing charms against the secret dangers of the seen and unseen world, guard the entrances to every village, and incantations for securing success are performed before every important undertaking. A specific from the medicine-man also protects every hut and patch of cultivation, and there is no doubt of its efficacy against thieves among themselves, when all believe in its power. The people, however, are practical agriculturists. Against the depredations of the hippopotamus and pig they erect strong barriers and dig deep pits; and in one of the latter we temporarily lost Mr. Mackay, who, stepping on shore for the purpose of chosing a tree for fuel, suddenly disappeared. Fortunately, the escaped with nothing more than a severe shock; but many of the traps are as dangerous as they are deceptive in appearance.

"Mohammedanism has begun to make way among the people, and, should the country become opened, is certain to rapidly spread. Already in most villages there are a few idle fellows who strut about with shaven heads, and, making use of Arabic salutations, trying with poor success to imitate the grave bearing of some true believer whom they may have been associated with during a journey, or have met at a coast town. They are, however, looked upon as something superior by their fellow-villagers, whom they behold

with pity and contempt, although quite unable to teach the new doctrine. If, however, this part of Africa should be visited by coast traders, the arrival of educated Arabs would soon bring about the conversion to Mohammedanism of this hitherto exclusive country.

"Slavery in Uzaramo is only known in its least objectionable form. Captives in war, runaways from foreign masters, and even strangers permitted to reside and cultivate land, are called slaves; but, except for committing a crime, are not subject to be sold; and their status in no way differs from that of free men, except that they are for the first year or two on trial, and generally cultivate land assigned to them by the chief, somewhat stronger feudal liabilities being probably entailed thereby. If, after probation, they are approved by the inhabitants, and considered by the elders as an addition to the tribe, they readily obtain wives, and their children become free Wazaramo."

Abandoning the hope of utilising either of these rivers, the Mission party started in four divisions from Mpwapwa. The first started on the 14th of July. These were intended to commence the station at Mpwapwa. The remaining divisions started at the end of August and on the 14th of September. Leaving Bagamoyo they struck almost due west, making for the Wami, which they crossed by a capital suspension bridge. The river was 65 feet broad, and 5 feet 8 inches deep in mid-stream. A little below this point one of the party at a subsequent time came upon some rapids in the Wami, which would be an effectual bar to navigation. After crossing the Wami, the route of Mr. Roger Price was followed, and Mpwapwa was reached after about thirty-six days' march. Here a site was selected, and a commencement was made for the erection of a house. Two of the party remained here, and the rest passed on.

Before reaching Mpwapwa there was an alarm of the Masai, but they retired. Acting upon the discretion left to the leader of the party, it appears to have been resolved to make as soon as possible direct for the Lake, and ascend the Kitangule River by means of the steam-launch which was being carried with the party.

At Mukondoku the party turned to the north, and followed pretty nearly the route of Mr. Stanley's march to the southern end of the Lake.

At Mukondoku they received friendly messages from Mirambo, who appeared to be fighting some one, but would not interfere with any white man. None of the party make any reference to the fighting and bloodshed described by Mr. Stanley.

They reached Mgongo Tembo (lat. 4°.44, long. 33°.58) on December 2nd; and Nguru (lat. 4°.11, long. 33°.20) on December 10th. Here a large number of desertions took place, and Lieutenant Smith, the leader of the party, was compelled to march down to Unyanyembe to obtain quarters and cloth. Here he

was detained for a whole month, but rejoined the party at Nguru; and they altogether started for the Lake towards the end of December.

They reached Kagéi (Kagehyi of Stanley) on the Lake, after thirtyone days' journey. The following extract from the Journal of one of the party announces their arrival:—

" Kagéi, January 29th, 1877.

"I am now able to announce our arrival at the Victoria Nyanza, after a rather tedious journey of thirty-one days from Nguru, the distance being about 125 miles. We had expected to have accomplished this stage in fourteen or sixteen days, but, owing to the many delays which we experienced from our pagazi, stopping at villages from various causes, sometimes sickness, but more frequently whim, we could not get on; and were obliged to submit, or they would leave us in a worse plight by running away from us. The whole distance travelled over is studded with villages, nicely situated and surrounded by green hedge-rows of euphorbia; altogether, the country is a fine open one, with much cattle and well-cultivated, every village having a considerable breadth of land sown with Indian corn or millet, and everywhere water is abundant. I should say it would by proper management become a very rich country; but the great drawback is the absence of any king or ruler recognised over the entire country. Kings there are in abundance, for every village we passed had one, but there is no central authority.

"We are now at a place where Stanley had his camp, and where one of his men died and is buried—the grave marked by a stone, inscribed 'P. B., 1875, Stanley's Ex.' As yet I cannot say if it will suit our purposes of boat-building, &c., because, having arrived only this day, we have not as yet examined the country about us as regards the timber. From what I have been able to see, there does not appear to be very much in this neighbourhood, and the king of this place, in conjunction with Songoro, the slave-trader, is building a dhow on the island of Ukerewe, opposite to us. This has been in progress for the last three years, and is not yet finished: this is the same vessel referred to by Stanley last year."

Of the two who were left behind at Mpwapwa one has been compelled to return home for a temporary recruit, and the other, Mr. Mackay, was busily engaged in the construction of a rough road from Saadani and Mpwapwa.

Dr. Mann said Nyangwe, which lay on the frontier of the nuknown land, was first brought to the notice of Europeans by the fact that Livingstone

remained there some time. A little while after, Cameron was at the same place. Since then news had arrived that a German explorer, Dr. Pogge, had been in the neighbourhood. Livingstone was convinced that the river there found its way to the Mediterranean by way of the Nile; Cameron was as firmly convinced that it was the Congo; the German traveller believed it to be connected with the Ogowé; and now this evening a fourth supposition was advanced, that it was one of the feeders of the Niger. Livingstone's opinion might be regarded as one of the things of the past; and there were, therefore, three alternatives remaining open for choice. If, however, the Church Missionary Society once got as firm a grasp of Ujiji as they evidently had of the district between Zanzibar and Mpwapwa, the mystery of the destination of the river at Nyangwe would soon be solved. There was also, in the face of the energetic explorations that were in progress on the great rivers, certainly a strong chance that it might yet be reached by the ascent of one of the Atlantic rivers.

The PRESIDENT said he was quite sure the Meeting must wish all success to the praiseworthy efforts of the Church Missionary Society, for both Geography and Commerce would be benefited by their labours. He believed that in a very few years the map of Africa to the west of the Tanganyika would be as complete as that between the great Lake and the East Coast. The Geographical Society was not likely to lose heart in their exertions to attain such a desirable end.

Fourteenth Meeting, 25th June, 1877.

SIR RUTHERFORD ALCOCK, K.C.B., PRESIDENT, in the Chair.

Elections.—The Marchese Bianchi (Mem. Ital. Geogr. Soc.); Donald Currie, Esq., c.m.g.; Raikes Currie, Esq.; Captain George Edward Grover, R.E.; Charles Gardiner, Esq.; John Ambrose Ridgway, Esq.; W. H. Tietkens, Esq. (Govt. Surv. S. Australia).

DONATIONS TO LIBRARY, 11TH TO 25TH JUNE, 1877.—China, von Ferdinand von Richthofen, vol. i. (Author). The Encyclopædia Britannica, 9th edit., vol. vi. (Messrs, A. and C. Black). Projet de création d'une Colonie Agricole Belge dans l'Afrique Centrale, par E. Reuter (Author). Notice Nécrologique sur M. le M' de Compiègne, par C. Guillemine (The Khedivial Geographical Society). Report on the trade of Kiukiang for 1875, by H. Kopsch (Author). Descriptive Notes on Papuan plants, Nos. 4 and 5, and Fragmenta Phytographiæ Australiæ, No. LXXXVI., by Baron F. von Mueller (Author). Die Stammverwandtschaft der meisten Sprachen der alten und australischen Welt, von D. E. D. Europæus (Author). The Arctic Expedition of 1875-76; a Reply to its critics, by Admiral Richards (Author). The Eastern Question in its Anglo-Indian aspect, by Rev. J. Long (Author). Records of the Geological Survey of India, x., pt. 2 (Dr. Oldham, for the Indian Government). U.S. Geological Survey of Territories, List of elevations,