

lawyers are dodgy and unsatisfactory ; musicians cannot fix their attention on any thing but music ; artists are better subjects ; clergymen are perfect in the drawing-room, but not in public ; physicians are good subjects when they have no theory about thought-reading. Von Moltke was the best and M. Dumas the worst subject. Englishmen and Germans are perhaps the best races for subjects ; while uncivilized races, such as Chinamen and Indians, are bad. Mr. Cumberland's opinion on thought-reading without contact is well worth quoting in full : "Some mystically inclined people claim to be able to read thoughts without contact. For my part, I have never yet seen experiments of this kind successfully performed, unless there had been opportunities for observing some phase of physical indication expressed by the subject, or unless the operator was enabled to gather information from suggestions unconsciously let fall by somebody around. I have on several occasions managed to accomplish tests without actual contact, but I have always been sufficiently near to my 'subject' to receive from him — and to act upon accordingly — any impressions that he physically might convey."

The power is doubtless not an uncommon one, and is closely allied to the knack for reading character, which is quite common, and to the usual processes by which we detect lies and suspicious persons, or avoid being imposed upon. Mr. Cumberland believes that the process might be of actual use in detecting criminals, and once succeeded in doing this himself. The operation of muscle-reading is a very fatiguing one, and the thing is apt to be overdone by amateurs. Mr. Cumberland's experiences are important, because they will aid in divesting these psychic tricks of the mysterious character so commonly ascribed to them, and in directing popular thought into more rational and healthy channels.

THE PRISONERS OF THE SOUDAN.

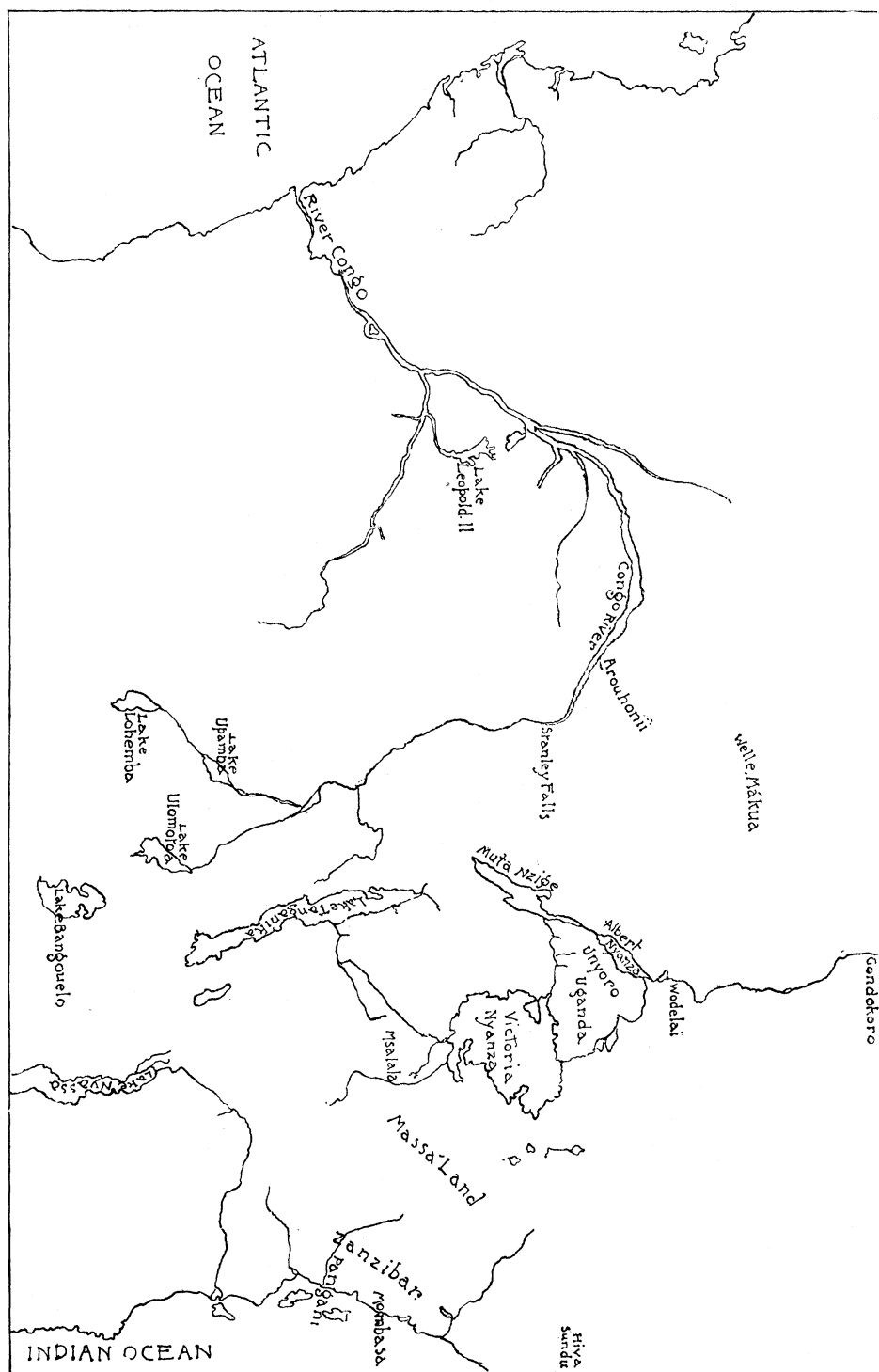
WHEN General Gordon fell at Khartoom, it was reported that an Egyptian army far up the Nile, commanded by Emin Bey, continued faithful to the khedive. Since then only vague rumors have reached us ; and it was generally believed that Emin Bey and his army had long since been overcome by the mahdi, his followers dispersed, and he himself killed. Within the last month, news has been received that Emin Bey is alive, and, though neglected and forgotten by the khedive

and his English rulers, is still fighting under the Egyptian flag against the followers of the mahdi.

About ten years ago, Emin Bey, then Dr. Schwitzler of Silesia in Austria, went to Egypt and entered the service of the khedive. He soon acquired the confidence of General Gordon, his commanding officer, and was rapidly promoted, and sent on several important missions into the southern part of Egypt. As a reward for his ability and success, he was made Emin Bey. When General Gordon was sent to the Soudan, Emin Bey was given command of the upper Nile, with headquarters at Lado, near Gondokoro. Here he was stationed when General Gordon was sent the second time to the Soudan. General Gordon was soon after besieged in Khartoom by the mahdi, and his communication both with upper and lower Egypt cut off. Emin Bey gradually retreated with his soldiers and their families up the Nile, fighting as he retired, and defeating the mahdi in several battles, until he made a permanent settlement at Wadelai, on the Nile (not far from Lake Albert), at the extreme southern limit of Egypt. His people are negroes from Nubia and the Soudan. For the last two or three years they have supported themselves by the cultivation of the land. "All the stations are busily employed in agricultural work, and at each one considerable cotton plantations are doing well ; this is all the more important for us, as it enables us, to a certain extent, to cover our nakedness. I have also introduced the shoemaker's art, and we now make our own soap," writes Emin Bey.

Emin Bey has but two Europeans with him, — Dr. Junker and Captain Cassati. Dr. Junker is a Russian scientist, and, like his friend and former companion, Dr. Schweinfurth, is a distinguished botanist. Eight or ten years ago he went to Africa, and continued the explorations commenced by Dr. Schweinfurth in the valley of the Bahr-el-Gazel, the western branch of the Nile. He also explored the head waters of the Wellé, — one of the largest tributaries of the Kongo, — and afterwards traced the course of another large river, which Dr. Junker himself believed to be the Arouhuimi. The troops of the mahdi overran the country, and Dr. Junker was forced to retire. By great good luck he succeeded in joining Emin Bey, and has remained with him. The other European with Emin Bey is Gaetano Cassati, formerly a captain in the Italian army. He left Italy in 1879, with several other Italians, and landed upon the east coast of Africa. They spent several years in that part of Africa which the Italians have explored, until his companions were killed and he made a prisoner. He finally escaped, and made his way to Emin Bey at Gondokoro.

SKETCH-MAP, SHOWING PROPOSED ROUTES FOR REACHING EMIN BEY.



At the request of Emin Bey, Dr. Junker with a small caravan left Wadelai for Cairo for the purpose of obtaining aid. Cut off from all communication down the Nile, he was compelled to proceed to Cairo *via* Zanzibar and the Indian Ocean. His route was south through Unyoro and Uganda to Lake Victoria, from there round the western shore of the lake to the English mission, and then east to Zanzibar. Kabrega, the ruler of Unyoro, has befriended Emin Bey, supplying him with food and stores. Moranga, the chief of Uganda, is hostile to Europeans, and may be remembered as the murderer of Bishop Hannington only a year ago. When Moranga heard that Kabrega had assisted Emin Bey, and had received Dr. Junker as his friend, he marched against Kabrega, and defeated him. Dr. Junker with great difficulty escaped, and reached the English mission of Msalla.

On the 8th of October a letter was received from Dr. Junker, dated at Msalla, Aug. 10, in which he pleads for deliverance for Kabrega, succor for Emin Bey, and the reconquest of the Soudan. If Kabrega is not delivered and the Soudan reconquered, the prestige of Europe in central Africa, will, he says, be lost; and if Emin Bey falls, it will be to the eternal shame of Egypt and England. These are the objects of his mission to Europe. He signs his letter, "Your affectionate friend, *disparu et enfin retrouvé*."

As it took Dr. Junker more than six months to reach the English mission, a distance of only three hundred and fifty miles, he must have had much difficulty in passing through Uganda. He left the mission as soon as his caravan was ready, and reached Zanzibar the 20th of December, and expected to arrive at Cairo on the 10th of January, 1887. Thus far, no attempts have been made, either by the English government or the khedive, to relieve Emin Bey; but an expedition under Dr. Fischer, a German naturalist who had spent many years on the coast, was sent out by geological societies of Germany, aided by the German government. It started from Pangani, on the eastern coast of Africa, about fifty or sixty miles north of Zanzibar, in August, 1885. It reached Victoria Nyanza, but, being unable to proceed any farther, returned to Zanzibar last June.

In the early part of the present year, Dr. Oscar Lenz was sent out by the Austrian government to try to reach Emin Bey by the western coast of Africa. He steamed up the river Kongo to Stanley Falls, and left there on the 4th of April, intending to sail up the Kongo to Nyangwé, where Stanley launched his boat in 1877 on his expedition across the Dark Continent. From there

Dr. Lenz hoped to cross to Lake Tanganyika, thence by Lake Muta Nziga and the Albert Nyanza to Wadelai. This part of Africa is occupied by Mohammedans, traders in slaves and ivory, who bitterly oppose all explorations that might interfere with the slave-trade. They have recently seized the station of the Kongo Free State at Stanley Falls, and driven the Europeans down the river. It is therefore doubtful whether Dr. Lenz will succeed in passing through this country.

Dr. Joseph Thomson, an Englishman who has spent several years in eastern equatorial Africa, and who commanded the Royal geographical society's expedition through Massai Land to Lake Victoria during 1883 and 1884, offers to head a party to relieve Emin Bey. He proposes to start from Mombassa (a port on the Indian Ocean, 4° north latitude, and 120 miles north of Zanzibar), passing north of Kilimanjaro (a high mountain covered with eternal snows, which Dr. Thomson vainly attempted to ascend, but which has been recently ascended by Mr. H. H. Johnston), through the country of the Massai to Kwa Sundu, on the north-eastern shore of Lake Victoria, thence through Uganda to Wadelai.

Though this route is north of the one taken by Dr. Fischer, yet the general character of the country is the same, and it is inhabited by the tribes of the Massai, a most warlike race. Dr. Thomson succeeded in crossing this territory in 1883, but the people are now more hostile to Europeans, exacting heavier tolls and higher prices for provisions, and frequently robbing and murdering travellers who attempt to pass through. To show the great change in the treatment of Europeans by the negroes, it is only necessary to contrast the account given by Mr. Stanley of Uganda in 1875 and that given by the *London Times* of December, 1886. Mr. Stanley says, "From the time the voyager touches Uganda ground, he is as safe and free from care as though he were in the most civilized state in Europe. He and his are in the hands of Mtesa, emperor of Uganda." The *London Times* says Munga, king of Uganda, "dares to torture and massacre the converts of its missionaries, and an English bishop, without fear or even reproach."

Travelling in central Africa is made by very slow stages. Dr. Thomson did not reach Lake Victoria until one year after his arrival at Zanzibar, and then he had travelled only two-thirds of the way to Wadelai, and that the least difficult part.

It is understood that Stanley has been summoned to Europe to take command of an expedition fitted out by the Egyptian government, un-

der the advice of England, for the relief of Emin Bey. The Belgian papers state that his route will be up the Kongo to Arouhuimi (the tributary referred to above), which empties into the Kongo near the equator, some distance below Stanley Falls. Mr. Stanley, on his last visit to the Kongo, sailed up this river for some distance, and believed it to be the outlet of the Wellé. From the head of navigation on the Arouhuimi, the route is east to Wadelai. Only about two hundred miles are said to be unexplored. The country is inhabited by peaceful negroes, food is easily obtained, and difficulties are less than by the other route.

A cable from England states that Mr. Stanley will sail for Zanzibar, and go directly to Albert Nyanza, through Massai Land; but we may well doubt this information, for although Mr. Stanley, in crossing the Dark Continent, went by Victoria Nyanza, he took a route south of the one now proposed; and he is much better acquainted with the Kongo route. It is possible that Mr. Stanley may sail to Zanzibar, remain there long enough to procure kroomen and porters, and sail with them to the Kongo, and thence up that river to the Arouhuimi.

The need of Emin Bey for relief appears from his letter, dated, Dec. 31, 1885, received in England Oct. 28. This letter brings the only news received¹ from him in three years. He writes that he almost despairs of receiving succor from the north, for he has heard nothing from Cairo or England since April, 1883; that he is without stores and clothing; and that his ammunition is nearly exhausted. With the enthusiasm of a scientific man, he adds that he has worked with ardor at the formation of a grand collection, chiefly zoölogical, including skulls of the different tribes of negroes and of the chimpanzee, skeletons of various animals and two of the Akka of different sexes; and he will endeavor to complete it during his sojourn there. He promises to keep his post as long as possible, trusting, that, if Egypt still governs the Soudan, she must send relief in time. If the Soudan has been abandoned, he will move southward with his troops, until he is relieved by the government or has placed his people in safety. "With the exception of the human skulls, I have saved all my collection, and will not abandon them until the last. Formerly I received two or three times a year letters and newspapers. Alas! it is so no longer. I strive by every means to sustain my own courage and that

of my people. God has certainly protected and sustained me hitherto, and I have confidence, that, with his help, all will go well in the future."

He adds, "I have secured for — a collection of shells from Lake Albert, which I will send by the missionaries at Uganda, and which I hope will reach him safely. — EMIN BEY."

STANDARD TIME AND MEASURES.

AT the recent annual meeting of the American metrological society, letters were read from W. F. Allen, secretary of the general time convention, and from Sandford Fleming of Ottawa, Canada, from which, as they contain considerable information, we quote somewhat liberally below.

Mr. Allen stated that he is at present engaged in quite an extensive correspondence with a view to bringing about the adoption of standard time by those cities which still adhere to local time. This movement has already resulted in success in two instances. In Belfast, Me., eastern time was adopted on Dec. 15, 1886, the clocks being set twenty-four minutes slow; and in Pittsburg, Penn., where an ordinance was passed adopting eastern standard time from Jan. 1, 1887, when the clocks were set twenty minutes fast. It is probable that the legislature of Maine will pass a law at its coming session making eastern time the standard for the state. Correspondence with the superintendents of public schools in a number of the cities of Ohio has developed the fact that a strong feeling in favor of the adoption of standard time exists in that state, from which favorable action is likely to come in the near future. The twenty-four o'clock scale is in use upon the Canadian Pacific railway west of Winnipeg, upon the Manitoba and north-western railway, and upon the Idaho division of the Union Pacific railway. It is proposed to adopt it soon on all the divisions of the Union Pacific railway. Under instructions from the general time convention, Mr. Allen is preparing, and will shortly issue, a circular asking the views of the leading railway officials on the subject of the general adoption of this scale for employees' time-tables and advertisements.

Mr. Fleming bore especially on the benefits to be derived from the twenty-four hour system, which has been put in practice on at least two thousand miles of railway. For the past six months the railway stretching from Lake Superior through Canada to the Pacific coast has been operated on the twenty-four hour system. "The towns and villages along the line," writes Mr. Fleming, "have with great unanimity accepted the change, and

¹ Since this article was written, we have read another letter from Emin Bey, dated July 7, 1886, and then his province was in complete safety and order. These letters show that the necessities of life are not wanting; but how long he can maintain himself depends upon the strength of the Mohammedan army under the new mahdi on the north, and of the army of the negroes from Uganda on the south.