

*John Light; Benjamin Moran, Esq.; Edward Sewell, Esq.; Edward Frederick Teschemacher, Esq.; Arthur Wells, Esq.; and Lieutenant William Wiseman, R.N.*

ACCESSIONS TO THE LIBRARY FROM 28TH MARCH TO 11TH APRIL.—  
 'Facts and Dates.' By Rev. A. Mackay. 1870. Donor the author.  
 'Slavery in Turkey.' By F. Millingen. 1870. Donor the author.  
 'Guide to Florida.' By D. G. Brinton. 1869. By purchase. 'The Future of England.' By J. Ruskin. 1869. Donor the author.  
 'Denominational Statistics of England and Wales.' By E. G. Ravenstein. 1870. 'Terraces of Norway, by Professor Kjerulf.' By Marshall Hall. 1870. Donor the author. 'Report of the Upper Yangtze.' Shanghai. 1869. Donor A. Michie, Esq.

ACCESSIONS TO MAP-ROOM SINCE THE LAST MEETING OF MARCH 28TH.—  
 Tracing of the River Limpopo. By Mr. St. Vincent W. Erskine: showing his route. On 2 sheets. Presented by the author. Map of the Alatau District and Issyk-Kul Lake, Turkistan. By Semenov. Presented by Mr. E. D. Morgan. A map showing routes from the Punjab to Eastern Turkistan. By T. D. Forsyth, C.B. A tracing of the River Jurúa (a tributary of the Amazons), S. America. Presented by W. Chandless, Esq., M.A. On two sheets.

The first paper read was—

1. *Report of the Trans-Himalayan Explorations made during 1868.* By MAJOR T. G. MONTGOMERIE, R.E., G. T. Survey of India.

Early in 1868 preparations were made for sending an exploring expedition beyond the eastern watershed of the Upper Indus River.

The explorations of the Pundits, during 1867, had supplied tolerably certain information as to various Tibetan districts lying between Rudok and the Thok-Jalung gold-field, and between the latter and the Tadam Monastery, on the great Lhasa road; more vague information had also been received as to an upper road running from Thok-Jalung through various gold-fields to the great Tengri-noor, or Nam-tso-Chimbo Lake, and thence to Lhasa. Having the above information to go upon, Major Montgomerie decided upon sending the exploring party to Rudok, and thence through the districts of Rawung and Tingche, to the north of the great Aling-Gangri group of peaks, which were discovered last year. From Thok-Jalung the exploration was to be carried, if possible, along the upper road to the Tengri-noor Lake and thence to Lhasa; failing that, to take the route through Majin and Shellifuk towards the Tadam Monastery. The Chief Pundit required a rest after his last expedition, and the third Pundit was consequently selected for the work.

This Pundit assumed the character of a Bisahiri, and, taking a few loads of merchandize, started in April with a party of real Bisahiris (or men of Koonoo), whom he had induced to accompany him. He made his way from Spiti, through the upper part of Chumurti and Ladak, to Demchok on the Upper Indus. Here the third Pundit measured the velocity of the Indus by throwing a piece of wood into it, and then noting how long it took to float down 300 paces. The velocity turned out to be  $2\frac{3}{8}$  miles per hour, with a depth of 5 feet, and a breadth of about 270 feet in the month of July. From Demchok he went northwards through Churkang and Rooksum (or Rokjung), to Rudok.

Rudok had hitherto never been actually visited by any European; for although Captain H. Strachey reached a point about 12 miles to the east of the Fort, and Captain Austen another point about the same distance to the north, they were neither of them able to advance any farther, and could never get an actual view of the place itself, owing to the jealousy of the Jongpon who resides there, and governs this most north-westerly district of Tibet. Though there was but little doubt that the position assigned to Rudok was nearly correct, it was hardly satisfactory not to have a trustworthy account of the place; and the third Pundit was ordered to get all information about it, and to take observations for its latitude and height, and this he succeeded in doing.

He found that the Fort was built on a low rocky hill, rising about 250 feet above the flat ground at its base, having the Buddhist monasteries of Sharjo, Lakhang, Marpo, and Nubradan close up to it on the east, south, and west, with about 150 scattered houses along the foot of the hill.

The third Pundit remained a couple of days at Rudok, and in his assumed character as a Bisahiri, he and his party excited no suspicion, though they were summoned before the Jongpon.

Leaving Rudok on the 22nd of July the party marched back to Rooksum, and then turning eastward by a new road, advanced through the districts of Rawung and Tingche to Dak-korkor, a large standing camp, where an annual fair is held. Several small lakes and a large salt lake called Rawung-Chaka, or Phondok-cho, were passed on the way. These lakes supply salt to Bisahir, Spiti, &c. During the last three marches to Dak-korkor no water of any kind was met with, and the party were forced to carry a supply in skins. In this arid part of the country the soil was of a dazzling white, a peculiarity which extended as far as the Pundit could see.

The Pundit, whilst marching from Rudok to Thok-Jalung, saw no high peaks to the north or east, evidence which all tends to

prove the existence of a large plain in that direction, the term *Chang-thang* meaning moreover the Great Plain. According to modern maps this plain extends a great way east, nearly up to the end of the Great Wall of China near the city of *Sewchoo*, to which place the Chief Pundit appears to have got a rough route when in *Lhasa*. In his first journal he referred to a place, which he called *Jiling*, about one month's journey north of *Lhasa*. This turns out from farther inquiries made by Major *Montgomerie* to be the same as *Siling*. The Chief Pundit says that the *Lhasa* people call it *Jiling*, but he heard others calling it *Siling*, and from what he says it is evidently identical with *Siling* or *Sining* in North Latitude  $37^{\circ}$ , East Longitude  $102^{\circ}$ , which *Astley* describes as "a great and populous city, built at the vast wall of China, through the gate of which the merchants from India enter *Katay* or *China*."

Lord *Strangford*, who took great interest in the travels of the Pundit, and was able to identify nearly all the places mentioned by him, was greatly puzzled by the Pundit's description of *Jiling*, given in his first journal, where it is said to be in *Tartary* and to produce gold lace, silks, carpets, and other products of a tolerably civilized country. At first the Pundit understood that it was a month's or two months' journey to the north of *Lhasa*, but from farther inquiries during his second expedition, he made out that it was considerably to the east of north, and having this hint, there was no great difficulty in identifying it with the large town of *Sining* on the borders of *China* proper, the only place from which such civilized products were likely to reach *Lhasa* from the northwards.

The *Dak-korkor* Camp, which the third Pundit reached, lies about 20 miles to the north of the *Aling Gangri* peaks, on the right bank of the *Aling-ohu* River, and not very far from the *Thok-Nianmo* gold-field. He arrived just as the annual fair was commencing: about 150 tents were already pitched, and both the *Jongpon* and *Sarpon* were present; but in spite of their presence a band of mounted robbers came down upon the camp and threatened to loot it. These robbers seem to be numerous all over *Tibet*. This particular band was said to come from the great *Namtso* Lake district. The men actually began to rob, but the *Jongpon* told them to stop, and he would make each tent contribute something as black mail. The *Jongpon* then made out a list of those assembled, and ordered each tent to contribute a *parcha* (of about 5 lbs.) of tea, and each trader to give from 1 to 2 rupees according to their means. This arrangement was agreed to, and the proceeds, having been collected, were handed over by the *Jongpon* to the robbers, who took their departure.

The third Pundit, starting again from Dak-korkor, continued his march eastward down the Aling-chu River till it fell into the Hagong-cho, a large brackish lake which appeared to have no exit for discharging superfluous water, though the Aling-chu River which feeds it was found to be 150 paces in width, with a rapid stream just before it fell into the lake. The shores of the lake had marks which showed that it had once been more extensive. Continuing his journey the Pundit passed the Chak-caka salt lake, from which the greater part of the Tibetan salt, which goes down to Almorah, Nepal, &c., is extracted. The next place of importance seen was Thok-Sarlung, which at one time had been the chief gold-field of the district, but had been in a great measure abandoned on the discovery of the Thok-Jalung gold-field. The Pundit passed a great excavation, some 30 to 40 feet deep, and 200 feet in width, and two miles in length, from which the gold had been extracted. He heard of another gold-field to the west, but his route took him direct to the Thok-Jalung gold-field, which he found in much the same state as when visited by the Chief Pundit. The Pundit and his party excited no particular notice, and they were consequently able to march on, after halting a day to rest.

From Thok-Jalung they passed through the Majin country, partly undulating, and partly quite level, but all about the same altitude, viz., 15,000 to 16,000 feet above the sea. The drainage sloped towards the east, and nothing but comparatively low rounded hills were visible in that direction; whilst on the west the party skirted a large plain of a yellowish colour, said to be drained by the Upper Indus.

The party passed numerous lakes producing salt and borax, and after nine days' journey in a south-easterly direction, found themselves at Kinglo, a large camp on the banks of a river called the Chu-sangpo, which is so large that it cannot be forded during the summer. This river flows eastward and falls into the lake called Nala-Ring-cho, or Cho-Sildu, said to be about the same size as the Mansarowar Lake; it has a small island in the centre. The lake is reported to receive a large stream from the south, another from the east, and a third from the north. Though receiving so many streams (one of which, as noted above, is a large one), the lake is nevertheless said to have no exit. From Kinglo the Pundit wished to march on to Lhasa by the northern route past the Tengri-noor Lake, but the Chief of Majin (Kinglo) would not permit it, and the party were consequently obliged to take a south-westerly route to the Mansarowar Lake. They followed the course of the Sangpo-chu nearly to its source, crossing one very high range

called Nakchail, and another called Riego, and finally descending to the Mansarowar Lake. The Nagohail and Riego ranges are evidently off-shoots of the Kailas peak. The Nagohail peaks appeared to be very high both on the east and west.

Throughout his march, the Pundit was at an elevation of over 15,000 feet, and yet an encampment was met with nearly every day. Thieves were numerous, and threatened the party several times; but on seeing that the Pundit's party were armed, they invariably went off again, not liking the look of an English gun. The party arrived at Mansarowar in safety; and the Pundit decided upon waiting for the Ladak Kafilā, which was known to be on its way to Lhasa. Whilst there, the Pundit made a careful traverse of the Mansarowar Lake, with bearings to the peaks north and south. A map of the lake will be given hereafter. Though the water was sweet, no exit was seen: at one point on the west the ground near the Ju Monastery was low, and looked as if water had perhaps at one time flowed through, towards the Rakas Tal Lake, though it is now too much above the lake to admit of it.

The Pundit was unable to join the Ladak Kafilā; but made his way by himself along the great road to Shigatze, where he was stopped. This he found was by an order of the Gartok Garpon, sent after him by the couriers. He was unable to advance farther. Whilst marching between the Mansarowar and Shigatze he was able to take bearings to various peaks north and south of the road, which no doubt will add considerably to our knowledge of the mountains on either side of that route; but as the Pundit has only just returned, there is no time to give any further account of his route and adventures in the present report.

Another explorer was employed to the east, who made a route-survey of 1,190 miles in length, advancing by one route 640 miles, and returning by another 550 miles in length. A small portion of this man's route was quite new, as he managed to penetrate behind or north of the great Mont Everest peak. His progress in that direction was checked by the obduracy of the Lhasa officials on the Tingri-maidan. As far as it goes, this portion of the route is, however, interesting; insomuch as it gives another determination of the Himalayan watershed, and throws a little more light on that part of the mountains which lies behind or north of the great peaks seen from the Hindustan side.

The remainder of the route is in a great part new; but some of the former explorations went over portions of the same ground, and the positions of several places have been entered on published maps from various information, though hitherto without any regular

connection. These new routes will supply the necessary connection, and, when combined with former explorations, will add much towards the elucidation of the Eastern Himalayas. A map will be prepared on this basis, but no reference can, for obvious reasons, be made to names, &c., whilst the work is in progress, the explorers having been somewhat impeded by the publicity given to the results of former expeditions.

The more detailed Report, with Map, alluded to by Major Montgomerie, will be printed in the 'Journal.'

Mr. R. B. SHAW said he could confirm the description given by the Pundits as to the whiteness of the plains of Tibet. It was one of the most remarkable features of the plateau which he crossed between Chang Chenmo and the Kuen-lun. The plain, in one part, was entirely covered with what looked like snow, with an underlying sheet resembling ice, but which was in reality soda, with some kind of crystallised salt beneath. This plain was from 10 to 12 miles across, and formed very difficult walking. There could be no doubt that the country eastward of Ladak abounded in gold. He had seen a great number of old washing-places on the Indus, where certain tribes of natives obtained a livelihood out of the gold-washings. The Indus flowed down from the regions visited by the Pundit, and therefore it was natural to suppose that it derived its gold from those regions. The great obstacle to Europeans in attempting to get into that district were the gangs of thieves who were encouraged by the Chinese authorities. The officials looked upon the black mail levied upon travellers as quite part of their dues. The thieves were generally armed with two swords, but they had a great dread of European fire-arms. He was told by some natives that, on one occasion, all their flocks of sheep, laden with goods, were seized by robbers. In great trouble they were returning to their own side of the hills, when they met an English officer on a shooting expedition, with two or three servants armed with rifles. The next night, although the sufferers had taken no further steps to recover their property, they found it all returned to them by the robbers through fear of the rifles. With regard to Lake Manasarowar, he had been told by a native that the water there was different from any other water, because it formed itself into mountains like the land. This, no doubt, implied that it had waves.

Sir H. RAWLINSON said, the essential point in the late discoveries by the Pundits was, that they seemed to afford a proof, or, at least, a strong presumption of the truth of the theory that, from Rudok to the northward, there were no mountains. It was originally stated by Moorcroft, and, subsequently, by other Tibetan travellers, that it was notorious in the country that there was in ancient times an Imperial road leading by Rudok outside the mountains to Khotan, in which case there could be no barrier at all. He himself believed that, when once the traveller crossed the Indus, and the inner or northern crest of mountains, he was fairly on the plateau of Tartary, and that the land descended gradually to the Great Desert, so that wheeled carriages might traverse it without crossing over any pass at all. If such were the case—and the evidence, which was constantly accumulating, pointed to that result—it became infinitely important to complete the Hindustan road, which was planned by the Indian Government some years ago. It had already been carried through the most difficult parts of the Himalayas, only about 50 miles still remaining uncompleted. At present it was of no commercial use, because its terminus was in an uninhabited mountain-region; but, if it were continued to Shipki, trade would soon avail itself of it, as there would then be a good road practicable

for wheeled carriages not only across the Himalayas and on to the Tibetan plateau, but, as he believed, passing by Rudok outside the Kuen-lun and the other great ranges, and conducting fairly into the centre of Central Asia. He believed the establishment of this great line of commerce to be quite practicable to the science and enterprise of the present day. It was true that from Rudok to Tartary the route would lie along the Chinese frontier, which was at present very jealously guarded; but it was not to be supposed that Chinese exclusiveness would continue for ever. If the Cashmere authorities on the one side, and the Central Asian authorities of Eastern Turkistan on the other, were in unison, and ready to facilitate the commerce between England and Central Asia, it would not be possible for Chinese jealousy to keep the Indian trade out of that route. His attention having of late been drawn to the early condition of Tibet and Central Asia, he had fortunately happened to light upon a MS. work in Persian which was almost unknown in England, but which had been much used by continental geographers—the *Tarikh-i-Rashidi*. It was a perfect mine of geographical information with regard to Tibet and Eastern Turkistan some three or four hundred years ago. The author was a prince of the country, and had the supreme command there for several years, being a cousin of the Emperor Baber, and being entrusted with the command of the army which marched from Kashgar and Yarkend to Cashmere, and subjugated all the intermediate districts. He had investigated the geography of the whole region with great care, and had made many most interesting journeys, one being from Little Tibet by the Karakorum Pass, and the mountain districts of Raskam and Tagh-dum-bâsh to the sources of the Oxus, and so on to Wakhan and Badakhshan. He hoped shortly to be able to translate for the 'Journal' of the Society some chapters of this work, which would be found full of interest, and exceedingly valuable.

Mr. T. SAUNDERS said, when it was known that the plain across which the Pundit had travelled was from 15,000 to 16,000 feet high, the question naturally arose, How did it drop down on the north, to 4000 feet at Khotan? It appeared to him that a continuous slope, from the Gangdisri Mountains on the south, to the plain of Khotan or Gobi on the north, would be more remarkable than a sudden descent from another range of mountains forming the northern edge of the plateau, and in continuation of the range actually known to skirt the plateau between the Chang Chenmo plains and Khotan. The Pundits heard that at a little distance from the scene of their labours there was a river flowing northward and eastward into China. Now, if the plain gradually sloped down, the water would find its way down that slope, and not to the eastward. At present geographers were entirely indebted to the Tibetan surveyors for an acquaintance with the ground between the Pundits' tracks and the Abbé Huc's. Huc and Gabet, in their account of their journey to Lhasa, distinctly spoke of the very elevated and difficult region which they had to ascend, in order to get to the plateau of Tibet on their way from Peking to Lhasa. He therefore preferred, in the present state of geographical knowledge, to represent the northward edge of the plateau of Tibet as an escarpment descending rapidly to its base, than as a continuous slope. The Himalayas might be regarded as extending from the Gorge of the Indus on one side to the Gorge of the Sanpo on the other, and between these two gorges there was only one instance of a great river rising on the northern base of the Himalayas, and penetrating through the whole range,—namely that of the Sutlej. Eastward of the Sanpo, the waters, instead of flowing east and west through the mountains, ran north and south all the way to the plains of China, and, instead of the great plains of the western part of the plateau of Tibet, there was a succession of ranges and gorges so cutting up the country that, instead of passing directly from Batang to Lhasa, the traveller was obliged to go a long distance to the northward in order to turn those diff-

culties, and so pass down in a south-westerly direction to Lhasa. He believed there was a continuation of the Himalayas in a circuit of mountains enclosing the whole of Central Asia,—the Himalayas on the south, the Pamir on the west, the Altai on the north, and the Inshan and Yung Ling on the east.

Dr. CAMPBELL, referring to the fact that one of the Pundits had examined the pass of Muktinath leading into Nepal, and had found that the ascent to it from the north was very easy, with cultivation on both sides; and that the summit of it was not above 13,000 feet, said that this threw great light on an important event which occurred at the end of the last century, and which people could hardly understand. A Chinese army equipped at Peking had invaded Nepal, and penetrated to within 20 miles of Kathmandu. As all the passes we knew of into Tibet are at least 16,000 feet, and very difficult, we concluded that the feat was marvellous. With the knowledge of this very easy pass of the Pundit's we can more readily comprehend an invasion from the north, although this one is still a very surprising one. Dr. Campbell remarked that while we took so much pains to explore the passes of the Himalaya from the south, we should do our utmost to gain a knowledge of the approaches from the north along the whole extent of our frontier.

Sir H. RAWLINSON said, in the work to which he had alluded, the general mountain system of Central Asia was laid down very much in the way Mr. Saunders had described it. The author stated that there was but one great mountain system of Central Asia; it commenced on the north in the great chain of the Thian Shan, or "Celestial Mountains," which came from Mogulstan, and passed along to the north of Eastern Turkistan. The range then circled round to the west, passing between Kashgar and Khokan, and forming the Pamir. Further on it turned to the south-east and became the Himalayas,—the plateau of Tibet being regarded as a part of the chain; the mountains were also said to stretch to the eastward as far as China, but the termination in that direction was unknown. Rudok was regarded as the limit on the northern side of this chain, thereby showing that there could not be a further interior creat. With regard to the line of rivers, it should be remembered that from the Pamir eastward all the rivers of Central Asia ran to the east, the slope of the country being from west to east.

Mr. SAUNDERS said he believed the plains at the northern base of the Kuen-lun separated the Plateau of Tibet from another plateau equally remarkable and quite as distinctly defined. What the Himalayas were to the southern edge of the great mass of Central Asia, the Altai were to the northern edge, and what the Kuen-lun was to the inner slope of the great mass of Tibet, the Thian Shan was to the inner slope of the great mass of the Altai. He believed that the interval between the Thian Shan and the Altai was as much a plateau as that of Tibet, but no doubt very different in its character.

The PRESIDENT said the differences of opinion manifested in the discussion showed how little was really known by European geographers with regard to this region. Some time ago, Mr. Gladstone complimented the Society by saying, "Gentlemen, you have done so much that you are like Alexander, you have no more worlds to conquer;" but if he had been present that evening he would have learnt how vast was the region yet to be explored.

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The following paper was then read:—

2. *Account of an Attempt by a Native Envoy to reach the Catholic Missionaries of Tibet.* By Captain J. GREGORY.

A native chief was sent on the mission here narrated, in con-