

The following Paper was then read by the Author :—

On the Buried Cities in the Shifting Sands of the Great Desert of Gobi.

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AMONG the many objects of interest which attracted our attention during the late Mission to Kashghar, not the least interesting was an inquiry regarding the shifting sands of the Great Desert of Gobi, and the reported existence of ancient cities which had been buried in the sands ages ago, and which are now gradually coming to light.

When Mr. Johnson returned in 1865 to India from his venturesome journey to Khotan, he brought an account of his visit to an ancient city not far from Kiria, and five marches distant from Khotan, which had been buried in the sands for centuries, and from which gold and silver ornaments, and even bricks of tea were dug out.

On the occasion of the first mission to Yarkund in A.D. 1870, we were unable to gather much information, and I observe that in Mr. Shaw's book, 'Travels in High Tartary,' no allusion to the subject is made. Tara Chund, the energetic Sikh merchant whom Mr. Shaw mentions, and who accompanied me on both my expeditions, told me that this exhumed tea was to be found in the Yarkund bazaar; but as our stay in that city in 1870 was of very short duration, and we had no opportunity of moving about and making inquiries for ourselves, we returned to India with very vague ideas on the subject. On my second visit in 1873, I determined to make more searching inquiries, and for this purpose I endeavoured to collate all the information obtainable from published works, as well as from Oriental books, such as Mirza Haidar's 'Tarikhi Rashidi,' a valuable copy of which I picked up in Kashghar. I also consulted many natives of the country, and other authorities. And the first of all authorities unquestionably is Colonel Yule. Not only has this distinguished Geographer, by his laborious researches and translations, thrown a flood of light on the history and Geography of Central Asia, and given to the world an invaluable commentary on the travels of Marco Polo, and other mediæval explorers, but I gladly take this opportunity of recording the deep obligations under which he placed myself and all the members of the Mission to Kashghar by the valuable hints and information he supplied to us from time to time. To him I was indebted for the loan of a copy of Rémusat's 'Histoire de la Ville de Khotan,' a most useful work. Colonel Yule very justly remarks, regarding the great Venetian traveller of the middle ages,

that all the explorers of more modern times have been, it may be said, with hardly a jot of hyperbole, only travelling in his footsteps; most certainly illustrating his Geographical notices.

It is only proper then to place Marco Polo at the head of the list of authorities to whom I shall refer. The 36th and three following chapters refer to the country in which we are at present interested. His chapter on Khotan is provokingly meagre, for there is very great interest attaching to this place. It is supposed by some that this city was the limit of Darius's conquest. I have several Greek and Byzantine coins which were found in the ruins of the city near Kiria.

We know that in early ages it was inhabited by political exiles from India, that the Hindoo religion flourished there; and I have some gold ornaments found there, which are exactly the same as those worn by the Hindoo women of the present day. In Rémusat's History we read how the King of Khotan took an army across the Snowy Mountains and attacked the King of Cashmir, and how peace was made between the two countries, and the result was that certain Rahaus or Ascetics brought the Buddhist religion into the country; and in the 'Tarikhi Rashidi' we read how a Christian Queen, wife of Koshluk, ruled in the land and made proselytes to her religion.

I will not enlarge now on the frequent intercourse in former ages between Khotan and India; but I may, however, here correct an erroneous impression which was conveyed to the Members of the Royal Geographical Society at its last Session. A good deal was said regarding the impenetrable barrier raised by the Himalayas, and Colonel Montgomerie said that the only army which ever crossed went from the Indian side and never returned. But, not to refer to invasions of ancient times mentioned by Rémusat, Mirza Haidar, in his 'Tarikhi Rashidi,' gives graphic descriptions of an expedition under Sultan Saïd and his minister, Mirzir Haidar, from the Yarkund side, which was very successful, and on the road between the Susser Pass and the Karakorum we passed the wall which had been erected by the Rajah of Nubra to help to assist the invasions of the armies of Khotan and Yarkund.

The 37th chapter of Marco Polo relates to Pein, and it is evident that at that time the city called by that name was in existence. From the geographical description given by Colonel Yule in his valuable notes on this chapter, I should say that Pein or Pima must be identical with Kiria. Colonel Yule's remark regarding the looseness of morals in the towns of Central Asia is doubtless correct, but I record the fact that the present ruler of Kashghar professes to

enforce a very strict code of morality. It is peculiar of its kind, but it is supposed to be framed on the Koran, and according to the practice of orthodox Mahommedans, and he would be horrified if he knew that the accommodating rules of the Shias were supposed to prevail in his country. One of his followers once, speaking to me in no measured terms against the Shias, said he would have as much pleasure in slaying a Shia as an infidel, and his language would remind one of the animosity displayed by Catholics and Protestants to each other in days not very long gone by.

As regards Charchan, or Charchand, we got some information from persons who had been there. It is a place of some importance; and was used as a penal settlement by the Chinese, and is now held by a Governor under the Ameer of Kashghar. It contains about 500 houses, situated on the banks of two rivers, which unite on the plain, and flow to Lake Lop. The town is situated at the foot of a mountain to the south, and the river which flows by it is said to come from Tibet.

Captain Trotter has remarked that the exact geographical position of Charchand is not fixed with any degree of certainty; but it is probably about equidistant from Kiria and Kurla, and he gives the marches from Khotan, to Charchand, *via* Kiria:—

Khotan to Kiria	4 marches = 104 miles.
Kiria to Charchand	14 marches = 280 or 300 miles.
Total	<hr/> 384 or 400 miles.

Marco Polo describes the whole province as sandy, with bad and bitter water; but here and there the water is sweet. This agrees with the information we obtained, which was that, between Charchand and Lop, there are oases where wandering tribes of Sokpos, or Kalmaks, roam about with their flocks and herds. I was informed that the present Governor of Khotan rode across from Kurla direct in fifteen days, a distance of about 700 miles.

The stories told by Marco Polo, in his 39th chapter, about shifting sands and strange noises and demons, have been repeated by other travellers down to the present time. Colonel Prejevalsky, in pp. 193 and 194 of his interesting 'Travels,' gives his testimony to the superstitions of the Desert; and I find, on reference to my diary, that the same stories were recounted to me in Kashghar, and I shall be able to show that there is some truth in the report of treasures being exposed to view. I give the following from Colonel Prejevalsky's words:—

"The sands of Kugupchi are a succession of hillocks, 40, 50, rarely 100 feet high, lying side by side, and composed of yellow

sand. The upper stratum of this sand, when disturbed by the wind blowing on either side of the hills, forms loose drifts, which have the appearance of snowdrifts.

“The effect of these bare yellow hillocks is most dreary and depressing when you are among them, and can see nothing but the sky and the sand; not a plant, not an animal is visible, with the single exception of the yellowish-grey lizards (*Phrynocephalus* sp.), which trail their bodies over the loose soil, and mark it with the patterns of their tracks. A dull heaviness oppresses the senses in this inanimate sea of sand. No sounds are heard, not even the chirping of the grasshopper; the silence of the tomb surrounds you. No wonder that the local Mongols relate some marvellous stories about these frightful deserts. They tell you that this was the scene of the principal exploits of two heroes—Gissar Khan and Chinghiz Khan. Here these warriors fought against the Chinese, and slew countless numbers, whose bodies God caused the wind to cover with sand from the Desert. To this day the Mongols relate, with superstitious awe, how cries and groans may be heard in the sands of Kugupchi, which proceed from the spirits of the departed; and that every now and then the winds, which stir up the sand, expose to view different treasures, such as silver dishes, which, although conspicuous above the surface, may not be taken away, because death would immediately overtake the bold man who ventured to touch them.”

When I was at Peking last spring I had the good fortune to meet Dr. Bretschneider, physician to the Russian Legation, an accomplished Chinese scholar, whose Notes on Chinese mediæval travellers to the west contain valuable information. One of these travellers, Kin Ch'ang-chun, thus writes of his journey across the Great Desert in A.D. 1221:—“Whoever crosses that place in the daytime and in clear weather (i.e. exposed to the sun), will die from fatigue, and his horses also. Only when starting in the evening, and travelling the whole night, is it possible to reach water and grass on the next day by noon. After a short rest, we started in the afternoon. On our road we saw more than a hundred sand-hills, which seemed to swim like big ships in the midst of the waves. The next day, between 8 and 10 o'clock in the morning, we reached a town. We did not get tired travelling at night-time, only were afraid of being charmed by goblins in the dark. To prevent the charms, we rubbed the heads of our horses with blood. When the master saw this operation, he smiled, and said goblins flee away when they meet a good man, as it is written in the books. It does not suit a Taoist to entertain such thoughts.”

One thing strikes me as remarkable, that though, as I suppose, Marco Polo visited Khotan, and passed along the road to Lop, he nowhere mentions the report of buried cities being in existence. Mirza Haidar, writing two centuries afterwards, alludes to them; and we learn from Chinese authorities that they were known to have been buried many centuries before Marco Polo's time.

Before passing to other authorities, I may make a remark on one of Colonel Yule's Notes on this chapter. He speaks of the cities of Lop and Kank. But this Kank is, I think, probably the Katak mentioned by Mirza Haidar. The word in Persian is written كك, and it depends on the diacritical points in the middle letter whether it is كك (Katak) or كك (Kank). In the copy of the 'Tarikhi Rashidi' I have it is Katak, and this is the version adopted by Dr. Bellew.

Mirza Haidar gives an account of the destruction of this city of Katak. According to him, the fate of the city had long been foreseen in the gradual advance of the sand; and the Priest of the city repeatedly warned his audience, in the Friday sermons, of the impending calamity; and, finally, seeing the danger imminent, he informed his congregation of a Divine order to quit the city, and flee from the coming wrath of God. He then formally bid them farewell from the pulpit, and forthwith took his departure from the doomed abode. He left the city, it would seem, in a violent sand-storm, and hurried away with his family, and such effects as he could carry with them. After he had gone some way, one of his companions (the muezzin, or crier to prayer of the mosque) returned to fetch something left behind, and took the opportunity to mount the minaret, and, for the last time, chaunt the evening call to prayer from its tower. In descending, he found the sand had accumulated so high up the doorway that it was impossible to open it. He consequently had to reascend the tower, and throw himself from it on the sand, and then effect his escape. He rejoined the Sheikh at midnight; and his report was so alarming, that they all arose and renewed their flight, saying, "Distance is safety from the wrath of God."

Such is the story told by a pious Mahommedan regarding the evil consequences of rejecting Islam. But a similar tale is told by the Chinese of another town, at or near Pima, which was destroyed in a somewhat similar manner in the sixth century A.D., in consequence of the neglect of the worship of Buddha. On that occasion, it is said, that there was a violent hurricane for six days, and on the seventh a shower of sand fell and buried at once the whole city.

From the inquiries made by Dr. Bellew, and others of our Mission, it appears that the large town of Lop, mentioned by Marco Polo, exists no longer; but there are numbers of encampments and settlements on the banks of the marshy lakes and their connecting channels, perhaps there are as many as a thousand houses or camps. These are inhabited by families who emigrated there about 160 years ago. They are looked upon with contempt by true believers as only half Mussulmans. The aborigines are described as very wild people—black men with long matted hair, who shun the society of mankind, and wear clothes made of the bark of a tree. The stuff is called “luff,” and is the fibre of a plant called “toka chigha,” which grows plentifully all over the sandy wastes bordering on the marshes of Lop.

Regarding the present condition of the ancient cities of Lop and Katak, I will here give an extract from the Report of the Yarkand Mission. It is the statement of a Kirghiz of Kakshal, who had travelled over Ila and Kansuh during nearly thirty years, and was in Peking at the time that city was taken by the allied French and English armies in 1860. He had resided as a shepherd for three years at Lop itself. He says (page 46): “There are, besides, two other countries of the Kalmak also called Kok Nor. One is five days’ journey north of Orúmchí, and the other is beyond Lop, five days south of Kúchá. This last is continuous with Cháchan on the east of Khutan, and in it are the ruins of several ancient cities, of which nobody knows anything. The principal of these is called Kok Nor. ‘Kok Nor’ means ‘blue lake,’ and these several countries are so called because they have such sheets of water in different parts of their surface. But these ruins of Kok Nor I myself have seen. They are on the Desert to the east of the Katak ruins, and three days’ journey from Lop in a south-west direction, along the course of the Khotan River. The walls are seen rising above the reeds in which the city is concealed. I have not been inside the city, but I have seen its walls distinctly from the sandy ridges in the vicinity. I was afraid to go amongst the ruins because of the bogs around and the venomous insects and snakes in the reed. I was camped about them for several days with a party of Lop shepherds, who were here pasturing their cattle. Besides, it is a notorious fact that people who do go amongst the ruins almost always die, because they cannot resist the temptation to steal the gold and precious things stored there. You may doubt it, but everybody here knows what I say is true, and there are hundreds of Kalmaks

who have gone to the temple in the midst of these ruins to worship the god there. There is a temple in the centre of the ruins, and in it is the figure of a man. It is of the natural size; the features are those of a Kalmak, and the whole figure is of a bright yellow colour. Ranged on shelves all round the figure are precious stones and pearls of great size and brilliancy, and innumerable yámbes or ingots of gold and silver. Nobody has power to take away anything from here. This is all well known to the people of Lop. And they tell of a Kalmak who once went to worship the god, and after finishing his salutation and adorations, secreted two yámbes of gold in his fob and went away. He had not gone very far when he was overpowered by a deep sleep, and lay down on the roadside to have it out. On awaking he discovered that his stolen treasure was gone, though the fob of his debil, or frock, was as he had closed it. So he went back to the temple to get others, but, to his astonishment, found the very two he had taken returned to the exact spot from which he had removed them. He was so frightened, that he prostrated himself before the god, and, confessing his fault, begged forgiveness. The figure looked benignly on him, and smiled; and he heard a voice warn him against such sacrilege in future. He returned to Lop and kept his story a secret for a long time, till a Lamma discovered and exposed him, and he was so ashamed that he left the country."

Now, to come to the manner in which the shifting sands of the Desert have overwhelmed cities and fertile country, I may give my own experience. When I was in Yarkand, in November, 1873, I saw black bricks of tea, old and musty, exposed for sale in the bazaar, and was told that they had come from Khotan. This stimulated my curiosity, and I made inquiry of our friend the Dadkhwah Mahamad Yunus and of our escort, who professed ignorance, alleging that they were almost as strange to the country as the English were to India in the early days of the East India Company. Still, the subject was not lost sight of; and one day, as we were riding over the desert country between Yarkand and Yungi Hissar, I was told that, at a distance of two days' journey, there was a very ancient city buried in the Great Desert. On arriving at Kashghar I endeavoured, but without success (of which more hereafter), to visit Khotan. I received permission, however, to visit the Kum Shahedan, or Oordum Padshah, shrine of the martyrs; and when spending a rather dreary month of expectation at Yungi Hissar, whilst the party I had despatched to Wakhan were occupied in their most interesting exploration, Dr. Bellew and I determined to make a little voyage of discovery on our own account.

Riding for three hours in a north-east direction from the Fort of Yungi Hissar, through a well-cultivated country, to the village of Saigoon, we suddenly were plunged into an arm of the Great Desert. Our route then lay over hilly ground and wide plains. Here and there we saw small wells, covered over with huts to protect them from sand-storms. The water in all was very brackish. At one well there was a tank and kind of hospice, where the man in charge, following the usual custom, came out with a large loaf of black bread on a trencher and offered us tea. At 5 P.M., after a ride of 35 miles, we came to the shrine of Huzrat Begum, the wife of Hussan Boghra Khan, who was killed and buried here just after the defeat of her husband's army, in the middle of the eleventh century. Here we found a regular hospice, with an inner courtyard, and four or five rooms for the better class of pilgrims. Outside were numerous rooms, in a spacious courtyard for common folk, and a separate cluster of houses for the servants of the shrine. The shaikh, or head of the establishment, is Shah Muksood, an old man of eighty-seven, very hale and jovial-looking. He said he had never been beyond the nearest village in his life, and therefore could never have tasted a drop of sweet water. We learned that there was a buried city, or more probably only a fort, not far off, which belonged to Tokta Rashid, an Uighur chief, and had been destroyed by Arslan Khan more than 800 years ago. Starting next morning with spades and pickaxes, we determined to see what remains of former civilisation could be dug up; and, after a weary search, found broken pieces of pottery, bits of copper, broken glass and china, and two coins, one of which is partly decipherable, and appears to belong to an early period. The discovery of glass is remarkable, as scarcely any is used nowadays there, and the art of making it seems to be unknown in Kashghar.

We then rode in a northerly direction to Oordum Padshah. At first the road slopes down to a wide hollow, which drains to the south-east, and there rises up the ridge which we had crossed the day before higher up to the north-west. On the way to this, we passed a number of shallow wells and superficial cisterns on the sides of the road. In all the water was so brackish that most of our Indian cattle refused to drink it. "From the top of the ridge of clay and gravel, which here forms a high and broad bank"—I am quoting the description given by my *compagnon de voyage*, Dr. Bellew—"we got a good view of the Desert away to the east, for the ridge soon breaks up and subsides in that direction to the level of the plain. The plain in that direction presents a vast undulating surface, drained by shallow and very wide water-runs,

in which is a thin growth of reeds and rough bushes, but no sign of running water. But to the north it presents a perfect sea of loose sand, advancing in regular wave-lines from north-west to south-east. The sand-dunes are mostly from 10 to 20 feet high, but some are seen like little hills, full 100 feet high, and in some spots higher. They cover the plain, of which the hard clay is seen between their rows, with numberless chains of two or three or more together in a line, and follow in successive rows one behind the other, just like the marks left by wave-ripples on a sandy beach, only on a large scale. Towards the south-east these sand-dunes all present a steep bank in the shape of a crescent, the horns of which slope forwards and downwards in points to the ground. The horns start from the high central part of the body of the crescent, which, in the opposite direction, tails off in a long slant down to the plain. These dunes cover the whole country towards the north and north-west as far as the eye can reach; but towards the east they cease at 4 or 5 miles to the right of our road, and beyond that distance is seen the undulating surface of the Desert.

“ From the ridge up to the shrine itself, and next day for some miles further, our path wound amongst and over these sand-dunes. At about 4 miles from the ridge we passed a deserted post-stage, half submerged under the advancing sands. One of the priests of Mazar Hazrat Begum, who was with us as a guide, told us it was called Langar Bulghar Akhund, and said that it was built eighty years ago on an, at that time, open space in the sands, but had been abandoned since thirty years, owing to the encroaching sands having swallowed up its court and risen over its roof. We got down to examine the place, and found the woodwork, and fire-places, and shelves in two rooms, and also a part of the roof in a perfectly fresh and well-preserved state, as if but just vacated. About half the building was buried under a dune, the sand of which stood above the rest of it to a height of 6 or 8 feet; and on each side in rear were much larger dunes, whose regular crescentic form was perfect, and uninjured by any obstruction. At one side of the two rooms still uncovered, and which faced to the south-east, was another room filled to the door with sand, which seemed to have crushed in the roof.

“ At Oordum Padshah, where we halted a day, we found some tenements actually occupied whilst in course of submergence; showing that the process is usually a very gradual one, until the symmetry of the dune is so broken by the obstructing object that its loose materials subside by a sudden dissolution of its component particles, and thus overwhelm the obstruction. In this particular

instance a chain of three crescentic dunes side by side had advanced in a line across the plain, till one of the outer crescents had struck the walls of the court of the tenement, and, growing up, had in time overtopped, and then overflowed and filled its area by its downfall; whilst the other two crescents at its side, continuing their unobstructed course, maintained their proper form uninjured. The same cause which propelled them gradually forward, also operated to drive the remainder of the broken dune forward, and it would in course of time not only bury the whole tenement, but would ultimately pass beyond it, and resume its original form on the open space farther on, in line with the other two crescents of the chain; thus leaving the tenement more or less uncovered, till it was again submerged by the next following row of similar sand-dunes.

“ These sand-dunes are formed by the action of the periodical north and north-west winds, which here blow over the plain persistently during the spring months. And the reason of their progress is this—that once formed, the wind drives forward the loose particles on its surface, so that those on the sides, where there is least resistance, project forwards in the form of long horns, whilst those in the centre ride over each other till they produce the high curved bank between them; and on being propelled still farther, they topple over the bank out of the influence of the wind, but subject still to that of their gravity, which carries them down the steep slope till they reach the ground. And this action continued for a length of time is the cause of the gradual and symmetrical advance of the dunes. The rate of their progress it is impossible to determine, as it depends entirely on the varying force of the propelling power, the slope of the land, and the obstructions on its surface. But the phenomenon as we saw it actually in course of operation explains the manner in which the cities of Lop, and Katāk, and others of this territory, have become overwhelmed in a flood of sand. And it confirms the veracity of the statements made by the shepherds who roam the deserts, to the effect that in these old ruined sites the houses now and then appear for awhile from under the sand, and again for awhile disappear under it. The idea that the process of burial is very gradual, is suggested by the remarks made by Mirza Haidar, and of the probability of this we had a remarkable illustration in the tenement mentioned above, as still occupied at Oordum Padshah, though the court up to its verandah was already full of sand from the dune which had broken over its walls. Had the court in this case been on the opposite side, and the house been the first to pass under the

advancing sand, as we saw at the Langhar Bulghar Akhund, it is easy to perceive how, on toppling over the front walls (if it did not suddenly by its weight crush in the roof) it would shut up the inmates in a living tomb.

“That this actually did occur at Katāk in many instances is evidenced by the skeletons and desiccated bodies which are still occasionally seen in unearthened houses, with their apparel and furniture intact and uninjured, as is told with such apparent truth by the shepherds who roam that spot at the present day. The shrine of Oordum Padshah is itself buried in the sand, and poles tufted with yaks' tails mark the spot of the grave. But the monastery, and some almshouses around, are built on small clear spaces on the plain, which appear here and there amongst the heaps of sand, and form as it were lanes, running in the direction of the march of the sand-dunes. Some of the larger dunes, at the distance of 300 or 400 yards off, lie obliquely upon the monastery; but as they seem to advance here at a very slow rate—twelve years having passed since the dune broke into the court of the tenement mentioned without having yet completely filled its area, which is only 10 or 12 paces wide—the confident faith of the venerable sheikh who presides over it may prove justified. ‘The blessed shrine has survived the vicissitudes of eight centuries,’ he said, in reply to our forebodings of the danger threatening its existence; ‘and, please God, it will survive to the end of the world.’”

I was very anxious after this to visit Khotan and examine the ruins which have been exposed to view, but was unable to carry out my project. I, however, sent one of the Pundits, of whom so much has been heard, to travel in that direction, and I employed other trustworthy men to visit the locality. The verbal reports they brought back, each independent of the other, confirmed all I had heard before.

The inquiries of the Pundit referred chiefly to the routes through Khotan to India, and, unfortunately, he did not direct his attention particularly to these cities. But he brought me two figures, which were found in the buried city near Kiria, the one being an image of Buddha, and the other a clay figure of Hunooman, the monkey-god. These had only just been found, and it was fortunate that they soon fell into his hands, for the pious zeal of a Mahomedan iconoclast would have consigned them to speedy destruction. Another man, Ram Chund, whom I had deputed to visit Khotan, brought me some gold finger-rings and nose-rings, such as are worn in the present day by Hindoo women; also some coins, of

which the most remarkable are an iron one,* apparently of Hermæus, the last Greek king of Bactria in the first century B.C., and several gold coins of the reign of Constans II., and Pogonatus, Justinus, Antimachus, and Theodosius. According to Ram Chund, the buried cities proper are at a distance many marches east of Khotan; a discovery of buried ruins has, however, lately been made quite close to Ilchi, the chief city of Khotan, at a distance of 4 miles to the north-west. A cultivator, working in the fields, was watering his crop, and found the water disappear in a hole which absorbed it entirely. On digging to examine the hole, he found a gold ornament representing the figure of a cow. News of this reached the ears of the Governor of Khotan, who ordered excavations to be made, and gold ornaments and coins were found. In the month of April, 1874, about the time when Ram Chund was there, a gold ornament weighing about 16 lbs. was found. It was in the shape of a small vase, and had a chain attached to it. Rumour declared it to be a neck-ornament of the great Afrasiab, and the finder was declared to have hit upon the spot where Afrasiab's treasure was buried. This, of course, is all pure conjecture, and Afrasiab, who was father-in-law to Cambyzes II., occupies in all Central Asian legends the place taken by Alexander the Great in Asiatic legendary history, or King Arthur in English tales. I hope the time is not far distant when a complete exploration of these interesting ruins will bring to light many more treasures; and it is not only in the neighbourhood of Khotan that these inquiries have to be made.

According to information we picked up from travellers, and confirmed by Syad Yakub Khan, there is a ruined city called Tukht-i-Turan, close to the city of Kuchar, on a hill of bare rock; the ruins are of earth of a deep yellow colour, quite unlike anything on the hill; there are besides a large number of caves, excavated for residence. The city is said to have existed previous to the first Chinese occupation, and to have been consumed by fire owing to the refusal of its ruler to adopt the Mahomedan faith. About 16 tash, or 60 miles, to the north of Kuchar a large idol is said to exist, which is cut out of the rock. It is 40 to 50 feet high, has 10 heads and 70 hands, and is carved with the tongue outside the mouth. The mountain behind the idol is exceedingly difficult of

* Probably the iron coin of Hermæus may prove to be the oldest, but it has not yet been completely deciphered. The Antimachus is about 140 B.C. and the Menander 126 B.C. The little figure of Buddha is pronounced by competent authorities to be about the 10th century, so that the submergence of this city in the sand may be dated about 800 years ago.

ascent; game abounds, but, owing to the protection of the idol, cannot be killed. Some very remarkable ruins are said to exist not far from Mural Bashi. Syad Yakub Khan gave us a description of them, but unfortunately not till after Captain Biddulph had visited the vicinity without being aware of the prize almost in his grasp.

Not far from the present city of Kashghar is the Kohna Shahr, or old city, which was destroyed many centuries ago, yet the walls, though only built of sun-dried bricks, are standing, with the holes in which the rafters were inserted as clearly defined as if they had been only just used. They reminded me of the holes to be seen in the rocks on the Danube just before approaching the Iron Gates. As all, or nearly so, of the edifices in Central Asia are built of sun-dried bricks, it may seem remarkable that such structures should survive through so many ages, but the extreme dryness of the climate accounts for this. When I was staying at Yungi Hissar, I visited the tomb of Hussan Boghra Khan. It is recounted on his tomb how he had earned the crown of martyrdom by falling in battle against the infidel King of Khotan, whose fort, which stood close by, he had destroyed. I went to see the fort, and found not only part of the woodwork in good order, but even the matting which is put under the earthwork of the eaves of the roof was still visible. According to the date on the tomb, this fort must have been destroyed upwards of 800 years ago.

An interesting question may now be asked: Where do these sands come from? It is a remarkable fact, well supported by the evidence of our senses, as well as by the reports of the inhabitants of the country, that all these sand-hills move in one direction, i.e. from north-west to south-east. If I were speaking of a tract of country east of the Great Desert of Gobi, the answer of course would be plain; but I am speaking of the extreme west corner of the Desert, and, moreover, I will endeavour to describe a still more remarkable circumstance. As we left Kum Shahidan on our return journey we took a westerly direction, and after crossing a sea of sand-hills for some miles came to cultivated ground, which we again exchanged for sand. Judging from what we saw, our theory was that these sands are all gradually moving on, and the parts we saw cultivated will in time be overwhelmed, and other parts now covered will be laid bare. But, following this course for some miles, we should have come to the Tian Shan Range. Does all this sand come from that range? One idea started was that the sand comes from the great deserts in Russian Siberia, over the Tian Shan Mountains. Another idea is that it is raised in the

Desert of Gobi, and is carried by a current of air round the basin of Kashgharia.

The idea of the sand coming from the range which immediately bounds the Desert cannot be maintained, I think. For the sand is blown always in one direction, and the particles are very much heavier than the very fine impalpable dust which fills the atmosphere with a haze as dense as a London fog, and which is doubtless raised by the various gusts of wind from the mountains on all sides. The dusty haze falls all over the land, but is not sufficiently thick to bury buildings.

The theory that the sand is brought from a desert in Russia is also, I think, untenable. It would have to pass over Issyk Kul and other lakes and cultivated land, which we know are not thus covered with sand. It would, in fact, have to mount high in the heavens, like a flock of geese, till it crossed the lofty Alai or Tian Shan Mountains, and then alight on the Desert of Gobi, sand being thus attracted to sand.

The third theory, of a circular current of air, seems more probable. I have seen, on a small scale, something of the same appearance on the elevated plateau, crossing from the Chang-chen-mo Valley to the head of the Karakash River, on the large soda or alkali plain, which is, in fact, the dried-up bed of an old lake, and is surrounded by low hills. When I was encamped in a ravine, about 5 miles from this plain, I observed about 2 P.M. that a dense cloud of white mist rose from the plain. A local dust-storm of a very disagreeable character seemed to be going on. But it did not spread, and next morning when we crossed the soda plain all was quiet. Towards afternoon, however, a storm, similar to what we had witnessed the day previously, came on, and I believe such storms are of daily occurrence, except perhaps in winter. Some of my party, in crossing the plain, came across the remains of the animals and some camp articles, too, partially buried, which, it was said, had been lost or left by Adolphe Schlagintweit in 1857. Now, what I saw there on a small scale may be going on, on a much grander scale, in the large basin of the Desert of Gobi. I may mention here that, in crossing from San Francisco to New York, I observed that the plateau between the Nevada Range and Rocky Mountains is very similar in its features to parts of Central Asia, and especially to the high regions between the Karakorum and Yarkand.

I have said that an attempt made by me to pay a visit to Khotan was unsuccessful, and this leads me to notice the remarks of a writer in the July number of the 'Quarterly Review,' who

gives his opinion that had the surveillance and restraint to which, under the guise of attentions, the Mission was subjected been resisted successfully at the beginning, and had not time been unaccountably lost, a much more extensive exploration of this interesting country might have been made. This able reviewer had probably not travelled in Asiatic countries, or he may have forgotten his knowledge of Asiatic character, and has not weighed sufficiently carefully the responsibilities which fetter those who have the conduct of such an expedition as I had the honour to command. But as the opinions he has thus expressed have been shared by others, who, with an imperfect knowledge of the whole circumstances of our position, have chafed at the loss of apparently easy opportunities for adding to our stock of knowledge, I may here say a few words which will perhaps throw some light on the matter, and explain what the reviewer considers to be unaccountable negligence on my part. However friendly an Asiatic may be, he is proverbially suspicious of the actions of all foreigners. Mr. Shaw, to whom, as the Quarterly Reviewer justly remarks, is due the honour of the first successful advance into that long closed country, as is duly related in his 'High Tartary, Yarkand, and Kashghar,' an interesting record of his adventures and of difficulties overcome by a happy mixture of boldness and diplomacy with patience and good humour, gives instances of the disappointments to which he was subjected, and he has often recounted to me the manner in which he was tantalised with expectations of immediate liberty of action, but always to be disappointed at the moment of fruition. During his first visit to Yarkand and Kashghar he was kept a prisoner inside the four walls of his house or in his tent, and never entered the city at all. This was, however, a circumstance in no way to be wondered at; but when he revisited the country as the Political Agent deputed by the Indian Government, and after the return of our Mission, when he might be sure of enjoying the fruit of newly established relations with the Ameer, I fully expected that he would travel about the country and accomplish what we had left undone. But it is a fact that Mr. Shaw did not even enter the city of Kashghar, although he resided for several months within a few miles of the city. He has never been inside it or beyond Yungi Shahr, the old Chinese quarter now occupied by the Ameer, and 5 miles distant from the city. The reason he gave me for this was that though he doubtless might have insisted on going there, he abstained from doing so out of deference to the known or supposed feelings of the Ameer; and if in such a small matter he considered it polite to abstain from exercising an

been translated by Rémusat and others seemed to show were Aryans. He therefore looked with the greatest possible interest and pleasure to the time when some of these remains would be accessible to the examination of scholars. The traditions of the people in the district seemed to point to some of the remains being of the period of Arslan Khan. He supposed that meant that they belonged to the dynasty of the so-called Kara-Khanids, all of whose kings were styled Arslan Khan, or Lion Khan. Professor Grigoriev had written a very interesting paper on this subject, in which he had thrown considerable light on the old chiefs who reigned at Kashghar from the ninth to the eleventh century. The Russian authorities connect these princes with the Karluk Turks. One fact, which was new and rather startling to him, in the Paper was the evidence of the presence of Buddhism in the district so early as the beginning of the Christian era. Professor Lerch of St. Petersburg, who had written an admirable topographical paper on the Jaxartes, had told him that he had found a Buddhist tomb of perhaps the sixth century in the country to the west of Uzskand, while the earlier of the Chinese Buddhist pilgrims who passed this way carry us back to the fifth century. But the presence of Bactrian and Indo-Scythic coins in this district, with Buddhist statuettes, carries back the story much further. In connection with these buried cities which Sir Douglas Forsyth had described, it was impossible not to think of the destruction of the cities by sand to the west of the Oxus, on the old channel of that river. A good deal further north, in the region occupied by the Ostiaks and the Samoieda, there are also underground remains, which the people point to as the habitations of their ancestors, and which they say are constantly marked by curious sounds, as of animals travelling underneath. In an old Arabic account of the ninth century, mention is made of the presence of griffins in this district; and some years ago, in the old treasury of St. Denis, a horn was discovered which had been presented to one of the kings of France by Harun al Raschid as the horn of a griffin; but it turned out to be simply a fossil horn of a rhinoceros. In conclusion, he expressed a hope that some portion of the Society's funds and energy would be directed to the publication of other matter than mere travels, and that they would assist to make accessible more of the work that was done in Russia. No greater work could be done than a translation of the Russian edition of Ritter's 'Asia.' The collection illustrating ethnology in England might also be greatly enlarged, and made worthy of our wide commerce and interests if Geographers would remember that we have a very fine national collection, partially exhibited in the British Museum and partially at 103, Victoria Street, whose indefatigable curator was unsurpassed for knowledge in Europe. He hoped that travellers who brought home objects illustrating savage life would take them there, rather than allow them to be lost or broken in private houses.

Sir H. RAWLINSON stated that it was probable that, very shortly, some further interesting information would be obtained with regard to the district described by Sir Douglas Forsyth, as during the conference at Brussels he was assured by Baron Richthofen that Colonel Prejevalsky was on the point of leaving Kulja for Kara-shahar with the intention of proceeding direct to Lake Lob, where he expected to spend Christmas Day. In the letters which Prejevalsky had written from Kulja he announced that he was satisfied that in Lake Lob was to be found a flourishing Russian colony. He stated that he had obtained authentic information that about one hundred years ago a number of Russians escaped from Siberia, and established themselves on an island in Lake Lob. They formed a flourishing colony there, and their numbers had been augmented by other refugees. One of the great objects of his present journey would be to open up communication with those people, who possibly might be the same as those to whom Sir Douglas Forsyth had referred. He (Sir H. Rawlinson) had listened with

great interest to the paper, and cordially agreed with most of the views there advanced. He might be able to make a few verbal criticisms, but he by no means claimed to have inherited the mantle of Mr. Crawford, who had been called "The Objector General," and would only therefore take exception to the word "Katak," which he believed to be a wrong reading. He had consulted four copies of the *Tarikhi Rashidi*, and Quatremère had consulted others, and in all of these MSS. the word was *Kanak*. Whether the name, however, of this particular ruined site was *Katak* or *Kanak*, it was a very interesting fact that there were old buried cities in that region exhibiting marks of Indian influence. At the same time he did not think it had been sufficiently considered that the Aryan inhabitants of India came originally from the country described by Sir D. Forsyth, and were rather recent visitors to India. No doubt *Khotan* was one of the very earliest settlements of the Aryan race and one of their main points of civilisation. Its real name was *Koustana*, and it was probably pressure from the Turanian races from the north-east that drove the Aryans from *Koustana* down upon India, where they found an aboriginal population, neither Aryan nor Turanian, whom they gradually displaced. Therefore, when marks of Indian influence were found in Central Asia, he did not consider that such marks were derived from India, but were rather the relics of the old race who had descended upon India; for he was not aware that there had ever been any ethnic reaction from India to the northward. He would also recall Sir Douglas Forsyth's attention to the city of *Pein*, which Marco Polo alluded to. That place was not entirely unknown to Geography, for independently of the Chinese pilgrims of the seventh century, who described it under the name of *Pi-mo*, the city of *Pein* was also distinctly laid down in a Turkish map of Central Asia, printed in Constantinople (in the *Jehân-namâ*) about 250 or 300 years ago. He had never been able, it is true, to learn where the author had obtained his information. A Turk at Constantinople would hardly have laid down a city as a sister capital to *Yarkand* and *Kashghar* upon the authority of Marco Polo, of whose existence he could hardly have heard, yet no other Moslem Geographer had mentioned *Pein*. Sir Douglas Forsyth's paper was a most excellent and valuable one, and had drawn attention to a very interesting and important subject, not only as regards the Geography, but also the Ethnology of Central Asia.

COLONEL H. YULE did not consider that the identification of the remains as Hindoo necessarily proved identity of race with the inhabitants of India. It simply proved the extension of the Hindoo religion to that country at a very early date; and this former great extent of Hindoo influence was a circumstance that had struck him forcibly in listening to the present Paper. There was some reason to suppose that the cities which were destroyed near Lake *Lob* were also subject to the influence of Hindoo religion. The Chinese traveller *Hwen-Tsang*, in the seventh century, mentioned one of them under the name of *Navapa*, which appeared to be a Sanskrit name, and might easily have been modified popularly into *Lob* or *Lop*, the name given by Marco Polo to a city in this region, and mentioned by other writers. Sir Douglas Forsyth spoke as if he felt confident that the mountains to the north of India had been habitually passed in ancient times; but it was probable that the intercourse always mainly was by the circuitous but easier route across the *Pamir*, which had been the great pass from Western to Eastern Asia through all history. Hindoo influence was found almost as far west as the *Caspian*. Some of the old Arab historians or geographers stated that the name of the great city of *Bokhara* signified a place of instruction, and he himself had a strong impression that it was nothing but the Buddhist *Vihâra*, a monastery or temple, and that that centre of Mohammedan bigotry was, in fact, originally a settlement of Buddhist monks among

the marshes of the Zarafshan. This Hindoo influence then was found spreading to Lake Lob, and eventually to China, and west to the Caspian, and east to the Islands of the Moluccas. It had also spread, though in a commercial rather than a religious form, down the coast of Africa to about the 20th degree of south latitude. Another point that struck him in looking at the map now displayed was the prodigious progress that had been made in our knowledge of Central Asia since he first entered the service. At that time none of the country from the Sutlej to the extreme north of Turkestan was decently mapped. Nearly all that appeared then in our maps of this vast tract was little better than more or less judicious conjecture, founded on literary materials that did not exclude Marco Polo, hardly even Ptolemy; with some very scanty and fragmentary aid from the Jesuit observations of last century; but at present only a small part, chiefly the central portion near the banks of the River Tarim, remained unexplored.

The PRESIDENT regretted that the lateness of the hour prevented a continuation of the discussion of so suggestive a subject. To himself the paper had been one of intense interest, both ethnographically and historically. He had long been in the habit of believing that physical laws very much governed the distribution of races, and it now appeared that the sand-dunes of Central Asia swept down from the north-west to the south-east, just as the Russians had been doing for the last two hundred years. Was there any natural law that determined this? In conclusion, he expressed the acknowledgments of the Meeting to Sir Douglas Forsyth, and the proceedings then terminated.

Second Meeting, 27th November, 1876.

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

ELECTIONS.—*Prof. Cavaliere Enrico H. Giglioli*; } *Hon. Correspond.*
Eugene Schuyler (Secretary to the United States } *Members.*
 Legation, Constantinople).

John Alstone, Esq.; *Thomas B. Arnott, Esq.*; *E. T. Atkinson, Esq.* (Indian Civil Service); *Arthur Edmund Ball, Esq.*; *Frederick H. Balfour, Esq.*; *Thomas Bell, Esq.*; *W. M. Bickerstaff, Esq.*, J.P.; *A. Bowden, Esq.*; *William Bowman, Esq.*, F.R.S.; *William John Chetwode Crawley, Esq.*, LL.B., F.G.S., &c.; *Augustus Champion De Crespigny, Esq.*; *P. Dekeyser, Esq.*; *Ernest A. Floyer, Esq.*; *Lord Garvagh*; *George Green, Esq.*; *Arthur Gunn, Esq.*; *Abdul Hakk Karnalkar*; *Navg.-Lieut. George C. Hammond, R.N.*; *John Hassard, Esq.*; *Edward Herries, Esq.*, C.B.; *Major Bertie Hobart, R.A.*; *Capt. Edward O. Hollist, R.A.*; *Charles C. Howard, Esq.*; *Thomas Manson Rymer Jones, Esq.*, C.E.; *Mathew Kane, Esq.*, M.D.; *James Laming, Esq.*; *Rev. Henry Lansdell*; *Hon. John Hamilton Lawrence*; *Edwin B. Lethbridge, Esq.*; *Alex. Founes Luttrell, Esq.* (Lieut. Gren. Gds.); *George de L. Macdonna, Esq.*; *Robert Allan McLean, Esq.*; *N. H. Nahishima, Esq.*; *Edwin H.*