

Lake Issyk-kul: there was now, therefore, only a small strip of from 250 to 300 miles across, between the Thian Shan and Yarkund, remaining to be laid down. When that was done, Central Asia would be brought into the category of known geography. At a former meeting he (Sir Henry) had followed the steps of an anonymous German traveller, who claimed to have explored a part of the region described by Captain Montgomerie. The German traveller alleged that he started from Srinagar, the capital of Kashmir, and reached Kashgar in 24 days. He (Sir Henry Rawlinson) observed that Captain Montgomerie's Moonshee took 66 days to march from Jummoo, a place near Srinagar, to Yarkund, and that number of days corresponding with the period which he (Sir Henry) contended would be occupied in the route which the German stated he accomplished in 24 days. Captain Montgomerie's observations were thus a verification of the exceptions which he (Sir Henry) had taken to the narrative of the supposed German traveller. Very much still remained to be done with regard to the geography of the region; but he thought that the impetus which had now been given to the inquiry would increase, and would produce important results. The plan which had been initiated by Capt. Montgomerie, of employing natives in these preliminary surveys or reconnaissances, was certainly a most desirable one. They might not be able to use delicate scientific instruments with great precision, but they were quite competent for all the purposes of a reconnaissance survey, and they had facilities not possessed by Europeans for penetrating into distant and difficult regions. The Council of the Society had that day performed a very graceful act in awarding, subject to the approval of the General Meeting, a watch of the value of 25 guineas to one of these native explorers, whose journey across the Pamir steppes, from Kashgar to Kokhan, he (Sir Henry Rawlinson) had recently communicated to the Society. If Captain Montgomerie's Moonshee had lived he would have been a very deserving object for a similar recognition. It was by acts such as this that the Society most effectually discharged the functions which the present state of geographical science required of it. It was its duty to extend a helping hand wherever Europeans or natives were ready to make explorations, so that through their means a mass of information might be collected which Mr. Arrowsmith and the practical men of the day would be able to reduce into a form of direct geographical value.

2. *Rough Notes of a Visit to Daba, in Thibet, in August, 1865.* By
Captain ADRIAN BENNETT, Royal Fusiliers.

BEING unsuccessful in the pursuit of the game of Thibet, viz., *ovis ammon*, yäk, and burrel, and being disgusted with the small bag I had made during the fortnight I had been in the country, I determined to go and see Daba, the capital of that part of Thibet in which I was, viz., that portion adjoining the province of British Gurhwal, and which is the only part of Thibet open to Europeans, and then under the surveillance of a Tartar guard furnished by the Zumpun, or headman, of Daba, a Chinese official. I was curious to see a place which was so studiously shut out from European eyes: so much so, that since the year 1810 there is no record of any European ever having been to the place; more especially as my shikary could or would not give me any information as to what it was like, but steadily persisted in saying that no sahib had ever

been there; although, when asked why, he could assign no reason for their not going, unless it was that there was no game in that direction. In 1810, Moorcroft, and another traveller whose name I do not now recollect, penetrated in disguise through Daba to Gartok, which is about 100 miles beyond. Moorcroft was afterwards murdered in Bokhara.

I was at Kyangyung at the time I made up my mind, and the next day pitched my camp at Gilteerung, a few miles nearer, giving out that, as I had entered Thibet by the Chor Hoti Ghaut, I should work round to my left and return by the Niti Ghaut; and not to frighten the jooboo-drivers, my followers, who were all Bhooteas, or inhabitants of the Snow Villages in British Gurhwal and who have the monopoly of trade with Thibet, I went out daily shikaring, sometimes shooting a snow-pheasant, but oftener not. I encamped successively at Shako, Shugla, Tazang, and Surkiya: this last is on the high road from Gurhwal over the Niti Ghaut to Daba, and, being a much better road, is always used by the Bhooteas for their droves of laden sheep, goats, and jooboos. I had now left the hilly country which surrounds the high table-land, and intended to move in the direction of the Suttlej, which I could plainly see from the tops of the hills I had quitted, and therefore pitched my camp, on the 30th July, at Changluor; the road being across an arid plain, where not a blade of grass could be seen, except in the two ravines or nullahs which intersect the road. The road itself was only a number of footpaths, running in the same direction and worn by the feet of the different droves continually passing and repassing, and scarcely traceable on the face of the vast plain except by the absence of stones along the little lines running into and out of each other. The road is marked by heaps of stones placed at certain intervals, perhaps half a mile or a mile apart; otherwise on such a plain it would be easy to miss. I saw numbers of kyang, or wild horses, grazing about the plain as I went along. Marmots are to be found in vast numbers all over the country, and grow to an immense size: I shot one weighing upwards of 40 lbs. On the 31st I arrived at Dembra, and on the 1st of August I encamped at Daba. On the way I had some little difficulty in passing, for a number of Tartars, mounted on their small wiry ponies, came out to meet me when about a mile from their city; but I told them I did not intend to be stopped and was well prepared for any eventualities. They thought better of it, and, after a futile endeavour to get me to sit on a carpet spread for the purpose, they mounted and followed some little distance in rear. I had previously read Dunlop's book, 'Hunting in the Himalayas,' and took care not to waste time by

sitting down and arguing the point with them, but determined to have my own way and proceeded accordingly. Again, when within some 300 yards of the city, they all got in front and salaamed; but I told them I did not wish to enter the town, but just to go up to the foot of the walls of the Llama's fort, so that they might not say a sahib had never been there, and they allowed me to proceed without further molestation, although evidently disgusted, for they all galloped off to their respective places with loud cries,—the Llamas to their lofty dwellings and the townspeople to the town below, where the news soon spread that a sahib had come; for a numerous and motley crowd came pouring out of the gateway towards where I had sat down,—among them numbers of Bhooteas, inhabitants of Niti, Bourpa, Gurmsali, and Pharká, who have places in the city for trading purposes. Through the Pudhan, or headman, of Gurmsali, who was in the crowd, I told them I had no object but curiosity in coming among them; and asked why they had such an objection to see sahibs, as in all the neighbouring countries and states sahibs were always received and treated with the greatest respect? They replied, it was the order of their superiors (Chinese); for themselves, they were glad to see me, and should not care how many sahibs came. I found the Zumpun, or chief man, had gone to Gartok on a visit to his immediate superior, who resides there. When I first saw Daba it was about two miles off. I found a very large ravine opening from the range of hills which bounded the plain on the west; this ravine took a turn to the north just as the road cut it, and the road led down the ravine, which was about 100 feet below; a small stream of water ran down the centre; the ravine was about half a mile wide. Just as I arrived at the edge of the ravine, one of the jooboo-drivers said, "Sahib, there's Daba!" and looking towards the direction he pointed, which was down the ravine, I saw something red, which I took to be a large flag, but, as I approached nearer, found it was the Llama's place, which was all stained with a blood-red colour. It looked a grand and imposing city, towers and battlements all the way along; but I saw, on a nearer approach, that these towers and pinnacles were natural, and had been hollowed by the people, who lived in the chambers, one above the other, to a great height. The ground had evidently during past ages been worn by the action of water into the queer tower-like buildings, and had then been hollowed and inhabited. The ground was like very soft sandstone, and full of little pebbles. The whole side of the ravine, which appeared to go back about half a mile, was thus burrowed; the highest part was the Llama's, and the lower the town. There was only one narrow

entrance or gateway into the city, cliffs on each side; but from where I stood I could see into it. There appeared narrow and crooked streets, and some of the lower parts of the cliffs which had been hollowed appeared like shops and were whitewashed. There was not a brick or stone in the place, and all the dwellings had been dug from below. Gaps had been cut in the outer walls for windows, but there was no woodwork: indeed, there is no wood in the country except brushwood. I ascertained that the Bhooteas did not go further than this place; here they deposited their flour, rice, &c., and receive in exchange salt, borax, and pushea. They have no coinage or weights; their trade is all carried on by barter. The rate of exchange was two measures of salt for three of flour or rice; the salt is very bad and dirty, but, even so, is invaluable to the Bhooteas and villagers who dwell on the slopes of the Himalayas as far as Almorah. The Thibetans employ their own cattle to bring the salt, &c., from the interior of the country. After I returned to my tent I was visited by a deputation of the chief men, who brought me a present of four large wild-goose eggs; and they received in return a piece of honeydew tobacco, with which they were greatly pleased, as they never get anything to smoke but the wretched stuff brought them by the Bhooteas. They informed me the eggs were brought a long way, from the salt lakes, where the birds congregate in immense numbers. They also gave me to understand that now a sahib had come, there would be no objection to others coming at a future time, providing they went no further into their country. I never saw such a barren country: they cannot grow anything in it. It freezes every night throughout the year, and the wind is always blowing—the coldest I ever experienced. I was surprised at the almost total absence of snow; for, excepting on the highest ranges of hills, there was none to be seen. Farther north in Lahoul, Spiti, and Chini, where I had travelled, and at an elevation of only 12,000 or 13,000 feet, the snow lies for nine months in the year; while here, where the table-land is over 16,000 feet high, there was none. And again, in crossing the Padree Pass, near Budrawar, which is only 10,000 feet, and the Rotung Pass, between Kooloo and Lahoul, which is 13,000 feet, I experienced great difficulty from the snow, and where for many miles it lies all the year round: while here, in crossing the Chor Hoti Pass, 18,300, and the Niti Pass, 16,800 feet high, there was scarcely any snow to be seen. Daba is only nine or ten miles from the banks of the Sutlej, which is here crossed by an iron bridge, and, beyond, a plain of about sixty miles separates the Sutlej from the Indus. Both rivers take their rise here: the former from some lakes, and the latter from the hills

beyond. I wanted to cross the Sutlej, but was informed there was neither bridge nor ferry, but that after three months a ferry would be established. This was all false; for I afterwards met an officer at Nynce Tal who is employed in the survey, and who informed me that, on one occasion, he and his party had crossed the Sutlej by stealth over the iron bridge, but were obliged to return in consequence of the serious illness of a brother officer. I left the next day, according to agreement, and returned through the Niti Ghaut by the western hills, shooting on my way. I saw there the real pintailed grouse, feathered to the toes and with two long feathers in the tail, and secured some as specimens; I also picked up numerous fossils and shells. I had collected ferns along the hills from Simla to Niti, and found some—the *Asplenium alternans*—at Niti, at an elevation of 11,000 or 12,000 feet. I arrived at Niti, after a stay of one month in Thibet.

3. *The Western Shores of Volcano Bay, Yesso.* By Commander C. S. FORBES, R.N., F.R.S.S.

THE author left Hakodadi on the 30th of August, 1865, for the purpose of exploring the western shores of Volcano Bay, the expedition consisting of three Europeans, one Chinese, and five Japanese, all well mounted. The ascent of the high mountainous land commenced at a distance of five miles from the town. It is a wild country of forest, uninhabited, except by a few charcoal-burners. The first village they reached on the shores of the bay was named Osarcibé; but the shores are studded with villages and hamlets inhabited by fishermen, who were then employed in gathering kelp, which is exported to China as an article of food: the fishermen are a vigorous and industrious race, and manage their boats with great dexterity. On Sept. 1, the party started in a boat for Cape Yesou, to examine the volcano of Ushiuuyama, the highest in the neighbourhood, namely, about 1900 feet. The Japanese Government has sulphur-works on the slopes of the mountain. The bottom of the crater was found to be about half a mile in width north to south, and three-quarters of a mile in length from east to west; steam was ascending in many places, and several geysers were roaring in different directions. Many of the hot-springs are intermittent; and none of them approximate to the perfection of form and eruption which characterises some of the larger geysers in Iceland. On Sept. 2, the party saw a settlement of Ainos, the aborigines of Yesso. They came out at once to welcome their visitors. Their mode of salutation is somewhat peculiar: they first rub their