

Rai Bahadur Lal Singh: Sir Aurel Stein's Surveying Companion

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Rai Bahadur Lal Singh (1860–1938) was one of the few people to travel with Sir Aurel Stein on his expeditions to Central Asia. He was responsible for mapping some of the most remote parts of Central Asia and northwest China, and, at times, for the safeguarding and safe passage of Sir Aurel Stein and his very important collections. He was also my great grandfather and a family legend.

Although he achieved some of the highest honours of his day, there is remarkably little record of him. In Sir Roper Lethbridge's *The Golden Book of India. A Genealogical and Biographical Dictionary of the Ruling Princes, Chiefs, Nobles and Other Personages, Titled or Decorated of the Indian Empire* (1893), his short entry reads 'Lal Singh, Rai Bahadur. The title was conferred on May 25, 1895. Residence: Naini Tal, North-Western Provinces.' This entry does not do justice to this good man and his very significant contribution to our understanding of the geography of Central Asia. It is an honour to record some of his achievements and thus to understand more of the history of this fine and inspiring man.²

Family background

As for many families from the Punjab, it is difficult to trace our family history through official records, because such records seldom exist. We count ourselves fortunate to be able to trace our ancestors back to the early 18th century: to Gulab Roy, father of Diwan Singh (d. 1744), father of Karam Chand (d. 1757), father of Sukha Singh. Sukha Singh (RBL's grandfather) was a landlord of some standing, but lost everything in the Anglo-Sikh Wars (1845–9). His son Jiwan Singh had two sons: Hari Singh and Lal Singh. Lal Singh was born in 1860 in Gujranwala, the Punjab District of northwest India. He and his wife, Har Kaur, had six children (four sons and two daughters), and the family history was passed down through his youngest son, Tara Singh (my grandfather, d. 1973), who told his son, Sukwant Singh (my father, Stephen Sander, b. 1934 in Gujranwala Punjab) all he knew. Tara Singh, had a challenging life as a farmer and in the army, and was keen to remind his own six children, of the significant achievements, strength, honour and integrity of R.B. Lal Singh. According to Tara Singh, R.B. Lal Singh was a secular Sikh and believed in the equality and international consciousness of all people. This in part contributed to a warm and welcoming disposition enhancing R.B. Lal Singh's ability to communicate well with people from all walks of life. R.B. Lal Singh started the tradition of speaking a little prayer before each expedition, a tradition carried out today by our family. In difficult times, RBL was an inspiration to the family, a pillar of strength to the family and a constant source of admiration.³

The most accurate records that the family have relate to visits by this Sikh family to the holy city of Hari Dawar.⁴ (RBL's office was located at Dehra Dun, at the Survey Department of India, just 15 miles away from Hari Dawar.) Rai Bahadur Lal Singh made four visits: (in chronological order) taking his grandmother's (Gulab Devi) ashes on one visit, and his mother's (Un Devi) ashes on another occasion.⁵ In 1903 he took his wife and four children to Hari Dawar for a dip in the Ganges.⁶ On 24 December 1910 he took his daughter-in-law's (Noran Devi)'s⁷ ashes to Hari Dawar, and had a dip in the Ganges.

Rai Bahadur Lal Singh's career

In 1885, Lal Singh joined the army, serving in the cavalry. His British superiors noticed his talents, qualities and physical strength, and promoted him to the Survey of India, to work on the mapping of North West India.⁸ He trained at Rurkee [Roorkee, Rurki], near Dehra Dun, approximately 200 miles northwest of New Delhi, near the foothills of the Himalayas. Dehra Dun was the home of the Survey of India, founded in 1767, and famous among other things for the Great Trigonometrical Survey (GTS), initiated in 1800 by William Lambton (1753–1823). The aim of the GTS was to create the most accurate map possible of the Indian subcontinent. Geometric instruments were used to measure the angle between an established base line and vantage points on mountain tops, and these were then charted. The GTS was originally conceived as a short-term project of a few years' duration, but eventually took over 70 years, covering over 3000km, and involving an army of trained surveyors.⁹

In his early career RBLs was known simply as Lal Singh. Singh, of course, is a fairly common Sikh surname. It harks back to the days of the tenth Sikh Guru, Guru Gobind Singh (1675–1708), who, as part of his vision of a more egalitarian society, removed all surnames that reflected caste and replaced them with just two surnames: Singh (lion) for the men, and Kaur (princess) for women. Lal means 'red' and 'endearing', and Lal Singh was quite a popular name, this being a time when shorter names were associated with greater achievements. Working for the Survey of India, he was working for the British government in India. In the early 1900s he was awarded the title of Rai ('brave') in recognition of his bravery, extraordinary hard work and distinguished service. He was further honoured with the title of Sahib ('master'), a distinction that was seldom made to the native people of India; and in 1895 his highest distinction, even rarer, was the title of Bahadur ('valiant').

By the 1900s Rai Bahadur Lal Singh had about 20 years' experience of survey work 'that extended practically over the whole of the Trans-frontier regions within the range of Indian interests from the Yemen to China proper.'¹⁰ His formal position at the Survey of India was Extra Assistant Superintendent.¹¹

Rai Bahadur Lal Singh may have met Stein at the time of his First Expedition to Central Asia (1900–1) but did not take part in it. In 1903 Stein was appointed Inspector-General of Education and Archaeological Surveyor for the North West Frontier Provinces and Baluchistan, and in 1904 made a survey of these regions. R.B. Lal Singh accompanied him to Mahaban, and charted the area.¹²

In 1905 and 1906 R.B. Lal Singh accompanied Major Charles Dalrymple Bruce (1862–1934)¹³ on his journey from Leh across the Kunlun Mountains and over China to Peking.

In autumn 1907 R.B. Lal Singh joined Stein's Second Expedition to Central Asia (1906–8), replacing the surveyor Ram Singh who had fallen sick and had to return home.¹⁴

These were difficult expeditions. They covered large distances, in physically demanding conditions. R.B. Lal Singh was an expert surveyor, a man of great stamina and endurance, and had a positive nature that endeared him to his colleagues. These qualities shine through the accounts written by Stein and Bruce. He led by example, and quietly

came to represent the excellence of the local staff of the Survey of India (see below).

In 1909, RBLs was awarded the Back Grant of the Royal Geographical Society, and this was reported in *The Times* newspaper, on 6 April 1909.¹⁵

R.B. Lal Singh joined Stein again on his Third Expedition to Central Asia (1913–16). It was another long and demanding expedition. Stein wrote his report of this expedition with the title *Innermost Asia*¹⁶ and also penned numerous articles. As usual, the data R.B. Lal Singh had collected was taken back to Dehra Dun to be drawn up into the final maps for publication. Stein wrote a *Memoir* on the maps of his three expeditions to Central Asia.¹⁷ A review of the *Memoir* was published in the *Geographical Journal* in 1917, in which the reviewer (Kenneth Mason?) clarified the scope of the expedition and the mapping that was done:¹⁸

A glance at the index map shows the vast extent of ground covered by these journeys. From the Pamirs on the west to the northern headwaters of the Huang-ho of China is nearly 28° of longitude, or roughly 1500 miles as the crow flies. But a better idea of the magnitude of the surveys may be formed by noting that during the actual progress of the second expedition, there were no less than 488 shifts of camp with a marching distance of 8300 miles; while on the third, Sir Aurel himself, in spite of the loss of toes he sustained in 1908, and his riding accident in 1913, covered 7000 miles, and his surveyor, Lal Singh, probably more.'

The reviewer spotted only two errors in the maps, and concluded:

Throughout his journeys, Sir Aurel Stein has been accompanied by surveyors lent by succeeding Surveyor-Generals. These have maintained throughout a very high standard of excellence in their topographical work. It is a great pleasure to read the leader's glowing tributes which he pays to all who worked with him in those inhospitable deserts and mountains.¹⁹

In 1916, R.B. Lal Singh, now in his mid-fifties and approaching retirement, was rewarded for his services to the Survey of India with a grant of land. Stein wrote of his

great satisfaction of learning from this kind old friend [Sir Michael O'Dwyer, Lieutenant-General of the Punjab] that the splendid services which my old surveying companion Rai Bahadur Lal Singh had during a lifetime rendered to the Government were to be recognized by a jāgir or grant of land. It was a reward I had always wished to secure for him ever since my journeys had acquainted me with his indefatigable zeal and energy.²⁰

Hundreds of miles away, in London, the Royal Geographical Society awarded him the Murchison Grant:

for his excellent work as Surveyor to the last Trans-Himalayan Expedition of Sir Aurel Stein. Lal Singh has spent many years in trans-frontier survey, with Sir Aurel Stein in 1904 and back again with Sir Aurel Stein 1907. For these services he was awarded the Back grant by the Society in 1909. Sir Aurel Stein tells me that it was owing mainly to Lal Singh's unremitting exertions on his third expedition in 1913–1916 that the surveys could be extended over many hundred square miles of difficult mountain country in the face of the most trying physical conditions. Whenever practicable Lal Singh travelled by independent routes, and by his work the Indian triangulation was extended along the Kun-lun range beyond Lopnor and across the Lop desert to the Central Tien-shan. We are glad to learn that his services have been

rewarded, on his approaching retirement from the Survey of India, with a grant of irrigated land. I will ask Sir Aurel Stein to receive on behalf of his devoted assistant the Murchison Grant, and to convey with it to him the cordial wishes of the Society for his long life on his well-earned estate.²¹

An exemplar of the Survey of India

Rai Bahadur Lal Singh clearly made an impression on Sir Aurel Stein. Stein is renowned for preferring to travel light, in terms of goods and people, and there cannot be many people who accompanied him on three expeditions. He also made an impression on many others, including Major C.D. Bruce, who, on 28 January 1907, gave a lecture to the Royal Geographical Society, in which he stressed the immense contribution of R.B. Lal Singh. This personal recognition, and the discussion which followed the lecture, all point to a change in attitudes – both towards the nature of exploration and towards the Indian staff at the Survey of India. It was people like R.B. Lal Singh, who, over a lifetime career of surveying, demonstrated by his own example the calibre of the Indian staff at the Survey.

Major C.D. Bruce introduced the expedition, saying that:

... its object was not the exploration of any one tract or country in detail, but, in the first place, the acquisition of whatever knowledge, geographical and otherwise, it was possible to collect of the regions through which we passed, and, in the second, the making of a more or less detailed route-survey, day by day, mile by mile, from Leh to Peking. The second, and by far the more arduous of the two objects, was only carried through thanks to the wonderful determination and pluck of our Indian surveyor, a Sikh, Lal Sing [sic] by name, lent by the Survey of India. To carry on such work as Lal Sing [sic] did daily, with frequent night observations at altitudes over 16,000 feet in Northern Tibet so late in the year as the middle of October, moving nearly every day for nine months on end, is a feat which any man, even with the reputation which those who work for the Survey of India enjoy, may, I think you will agree, well be proud of.²²

Bruce gave a lengthy description of one particularly dangerous part of the journey through the Kunlun Mountains which illustrated the brutal conditions of the area, and the hardships faced by those who worked on the trans-frontier surveys:

From the northern edge of the plain the actual passage of the Kuen Lun mountains commences. This passage occupied us five days, and we covered just over 30 miles in transit. It was 2 p.m. by the time we had climbed the first pass out of the Gu Gut plain, and much too late at that season of the year to commence such a descent as that which lay before us. This pass was not that made use of by Deasy, as, our guide being most uncertain about any possible passes, we had ourselves pushed ahead, and Captain Layard, Lall Sing [sic], and myself climbed a pass the caravans were afterwards unable to negotiate. Upon the north side the snow lay 18 inches to 2 feet deep, and there a wind raged which was, even for Tibet, more cruel than usual. After rejoining the caravan, the view which met our eyes as we gazed through the falling snow northwards into and over the Kuen Lun, was one neither my companions nor myself are ever likely to forget. Below and on three sides of us, stretching apparently without end, lay the wildest and most forbidding jumble of mountain ranges, peaks, and gorges imaginable. Of all shapes – crossing and recrossing in every direction, needle-pointed, flat, or rugged

and broken, they had only one common feature, and that lay in their apparently inaccessible nature. There was, however, no time to waste, whatever doubts for the moment crept through our minds, it was imperative to go on, so we commenced the first descent down a slope like the side of a house, full of holes and boulders, and over the knees of the animals in snow. For the next four days we struggled down a succession of watercourses and narrow gorges one after another, making sorry progress at times, but always in the right direction. The main gorge, known to the people of Polu at its northern end as the Zubéshie gorge, was more like a gigantic railway cutting winding through solid rock than anything else, the sides frequently sheer for hundreds of feet on either side, the bottom just sufficiently wide for a frozen brook a few yards in breadth. Into these gorges the sun rarely penetrates, and at night, when the moon is overhead, few more weird and desolate scenes can be imagined.²³

Bruce's appreciation of Lal Singh, and of the staff of the Survey of India generally, was echoed in the discussion that followed Bruce's lecture.²⁴ It was time to recognise the high standards and personal commitment of the local people who worked for the Survey of India. Furthermore, survey work in Africa was not going so well, and this served to highlight the exceptional quality of staff and training in the Survey of India. On this point, Sir Thomas Holdich (1843–1929, formerly associated with the Survey, but now retired) responded to the lecture as follows:

... There is, however, another point to which Major Bruce has made allusion to which I should like to call your attention. He has recognized, in a most generous way, the admirable assistance obtained from one of the native surveyors, who was attached to his party from the Survey of India. Now this, I am glad to say, is nothing new, for I think every explorer who has been assisted by these surveyors lately has invariably borne the same evidence to the excellence of their work. But at this time it is with new interest that we regard this matter, for we are approaching a new phase of geographical exploration. The old age of pioneer work has passed away, and we must now, when we set to work to wander through new countries (as Major Bruce has done), make use of more or less trained agency to assist our observations as simple travellers. With the enormous field that still lies before us in various parts of the world, I conceive that we shall never arrive at the solution of the great problem of mapping the world successfully without some such agency as this. Well, it happens that the Colonial Committee have lately issued a Report on Surveys in another part of the world, i.e. in British Africa. It is a most admirable report, and will be, I am certain, of immense interest to all those of you interested in that country. In that report they have described the success which has, so far, attended efforts to train the natives of Africa as the natives of India have been trained in Survey duties. Taking it on the whole, I regret to say that the reports are not altogether favourable. With the single exception of Lagos, I do not think there is any one report which might lead one to hope that in future great success will attend these efforts; but I would like to warn those who are interested in the matter, that it is far too soon to arrive at any conclusion on the subject. If you will for an instant consider what the process is by which men, such as those to whom Major Bruce has alluded, arrive at the skill which they attain as surveyors, you will, I think, agree with me that it is a long process, and a laborious process, to attain such an amount of technical knowledge as they acquire. In the first place, in India, the men whom we get for this duty are drafted from all sources, both civil and military; and you must remember that from the very beginning they are well-educated men. We do not deal with quite such raw material as they find in

Africa. The African schools have not yet arrived at the position of turning out men whose education you may consider as thoroughly sound when they are selected for survey training. In India, having got the men specially selected, in the first instance, they are again subjected to a process which we might call a process of natural selection, until finally, after some years' experience, they are drafted into the Survey Department for a further five or six years' severe training before they can take the field for such work as Major Bruce has described. All this, as you will easily recognize, is a matter of time and patience and infinite trouble; but I have every conviction that they will eventually find in Africa men quite equal in intelligence to any that we find in Asiatic fields; and I firmly believe that if they are to solve the gigantic problem of mapping the continent of Africa rapidly and cheaply, it will be through native agency; but only after the application of infinite toil and patience in training shall we succeed in getting the men we want.²⁵

To which Captain Deasy²⁶ added:

He has alluded in a very brief manner to the difficulties of the journey, and glossed them over in the course of a few words. But I can assure you that the difficulties which he has had to encounter, especially in that part [the route to Polu], have been exceedingly severe; indeed, far harder than you would think from listening to Major Bruce this evening. I am very glad to have heard the remarks which Sir Thomas Holdich has made concerning the assistance which I think nearly every British traveller in Central Asia has had from the Survey Department of India. Sub-surveyors, all of whom are highly trained, are always ready to volunteer to accompany any British officer, or Britisher, into no matter what parts of Central Asia. When the history of the exploration of Central Asia comes to be written, I sincerely hope we shall find adequate credit given to the Indian Government, and more especially the Survey Department of India, for all the valuable help and assistance they have given to geographical research and science in Central Asia.²⁷

Stein's appreciation of Rai Bahadur Lal Singh

There can be no doubt of Sir Aurel Stein's high regard for Rai Bahadur Lal Singh. There was clearly an appreciation of his professional and technical capabilities. Stein himself had studied cartography as part of his military training in Budapest,²⁸ and liked to think in terms of 'archaeological reconnaissance'. But this was not the only thing they had in common. They were roughly the same age (Lal Singh was born in 1860, Stein in 1862) and they seem to have shared an appreciation of certain human qualities: of independence, self-reliance, resilience and a respect for and understanding of the physical world around them. While it is clear that they enjoyed the company of others (and that others enjoyed their company), they also welcomed a certain amount of solitude away from others.²⁹

Stein had very fond memories of working with Rai Bahadur Lal Singh, and it would seem that the sentiments were mutual. On 11 August 1930, when Stein set out from Srinagar on his his Fourth Expedition to Central Asia, he wrote in his notes: 'Started from Macphersons at 3 p.m. down Chinar Bagh Canal, after farewell to dear old Lal Singh whose visits had been daily.'³⁰

The legacy of Rai Bahadur Lal Singh

In terms of his career, roughly a hundred years have passed since RBLS accompanied Stein on his first three expeditions

to Central Asia. There is no doubt that RBLS made a very significant contribution to the mapping of Central Asia in his own time, but how is it evaluated today? For this, we must turn to the geographers. In 1993, Karl E. Ryavec, in his paper 'The present-day value of maps illustrating the archaeological surveys of Sir Aurel Stein in Xinjiang and Gansu' concluded that

Due to the need for accurate maps of what was to the West at this time a remote and largely unsurveyed region the British Indian Government despatched professional surveyors to accompany Stein, and provided cartographers at the Survey of India office at Dehra Dun to compile maps to illustrate the results of each expedition upon its return. The maps thus contain a wealth of information on the historical, cultural and physical geography of a vast region of Central Asia. It is in part because of this interdisciplinary nature of Stein's maps that they are still the main authority on many geographical aspects of a unique region of Central Asia that in the past was an important meeting place of the ancient civilisations of India, China and the West.³¹

The legacy of Rai Bahadur Lal Singh has also lived on in his family. I have already mentioned that he had an almost legendary presence for my father's generation. But he was not merely an inspiring (and awe-inspiring) grandfather in a personal sense; his memory was also invoked when his grandson, Bhai Mehtab Singh (my uncle), was applying for the post of Assistant Sub-Inspector of Police, Lahore. Stein wrote in support of his application:

... I do not know the applicant in person but I can fully bear out the statement as to the exceptional merits of his grandfather the late Rai Bahadur Lal Singh of the Survey of India. R.B. Lal Singh accompanied me on two long and fruitful expeditions into Central Asia and China, carried out under the orders of the Government of India for Archaeological and Geographical explorations. He was deputed with me for this purpose and rendered most efficient and devoted service during the years 1907-08 and again during the years 1913-15.

I remember that most faithful travel companion as one of the most hardworking and efficient servants of Government with whom I worked during my long career in India. The exceptional merits of R.S. Lal Singh were recognised by Government by the grant of a Jagir at the special recommendation of the late Sir Michael O'Dwyer, then Lieutenant Governor of the Punjab, who had become acquainted through me with [the] very valuable services of this fine and very loyal Sikh gentleman and who long continued to take an interest in him.

I am not in a position to judge of Mehtab Singh's qualification for the post he aims at; but, I believe, that in view of the great services rendered by R.B. Lal Singh both to Government and to scientific exploration, the applicant deserves of special consideration.³²

Appendix: Recipients of the Back Grant and Murchison Grant, 1882-1982

Both of these grants are awarded by the Royal Geographical Society (R.G.S.). The Back Grant was set up with the bequest of £600 to the Society from Sir George Back (1796-1878), and is awarded for 'applied or scientific geographical studies which make an outstanding contribution to the development of national or international public policy.' The Murchison Grant was set up with the bequest of £1000 to the Society from Sir Robert Murchison (1792-1871) and is awarded for

'publications judged to contribute most to geographical science in preceding recent years.' The awards were first given in 1882. [For further details, see Back's obituary in the *Proceedings of the Royal Geographical Society*, New Series, vol. 1, no. 1 (Jan 1879), pp. 70-71; and Clements R. Markham, 'The fifty years' work of the Royal Geographical Society', *Journal of the Royal Geographical Society of London*, vol. 50 (1880), pp. 1-255. This list of recipients during the first 100 years of these grants has been prepared by Sarah Strong, Archivist at the R.G.S., to show the eminent recipients of the first hundred years of Back and Murchison Grants.]

Recipients of the Back Grant

H.E. O'Neill (1882), L'Abbé Petitot (1883), Emil Boss (1884), W.O. Hodgkinson (1885), Sgt. David L. Brainard (1886), Sarat Chandra Das (1887), No award (1888), F.C. Selous (1889), No award (1890), W.J. Steines (1891), Rev. James Sibree (1892), No award (1893), Capt. H.J. Snow (1894), Capt. C.A. Larsen (1895), J. Burr Tyrell (1896), Lieut. C. Ryder (1897), George P. Tate (1898), Capt. P. Molesworth Sykes (1899), Robert Codrington (1900), Capt. William Colbeck (& ?Bernacchi) (1901), Lieut. Georg Carl Amdrup (1902), Dr W.G. Smith (1903), M. Aurel Stein (1904), Capt. C. Maud (1905), Maj. R.G.T. Bright, C.M.G. (1906), C.E. Moss (1907), Lieut. G.F.A. Mulock (1908), **Rai Sahib Lal Singh** (1909), Hanns Vischer (1910), Dr Arthur Neve (1911), L.A. Wallace (1912), William S. Barclay (1913), I.N. Dracopoli (1914), C.W. Hobley (1915), Frank Wild (1916), Rev. Walter Weston (1917), Capt. R.A. Bartlett (1918), Ven. Archdeacon Stuck (1919), J.M. Wordie (1920), Marion Newbigin (1921), Khan Bahadur Sher Jang (1922), B. Glanvill Corney (1923), M.C. Lester (1924), Capt. Joseph-Elzéar Bernier (1925), Khan Sahib Afraz Gul Khan (1926), George Binney (1927), Capt. A.H. MacCarthy (1928), Ph. C. Visser (1929), Mrs Gordon-Gallien (1939), Col. Rowe (1931), H. Clutterbuck (1932), Freya Stark (1933), Dr D.N. Wadia (1934), Wilfred Thesiger (1935), Muhammad Ayub Khan (1936), Thomas Hay (1937), L.R. Wager (1938), Lieut.-Cmmdr R.E.D. Ryder, R.N. (1939), Gerald Seligman (1940), Alfred Stephenson (1941), Sgn-Cmmdr G. Murray Levick, R.N. (1942), Award postponed (1943), Award postponed (1944), Award postponed (1945), \ Both years awarded in 1947 to (1946), / Lieut.-Col. Andrew Croft, D.S.O. (1947), A.J. Marshall (1948), Brian Roberts (1949), R.G. Goodchild (1950), J.N. Jennings (1951), Dr H.F.P. Herdman (1952), G. de Q. Robin (1953), Cmmdr G.S. Ritchie, D.S.O., R.N. (1954), Capt. O.C.S. Robinson, G.M., R.D., R.C.N. (1955), Richard Hamilton, O.B.E. (1956), Dr R.J. Harrison Church (1957), Chief Engineer Bertrand Imbert (1958), David Stratton (1959), A.T. Grove (1960), Dr Eric H. Brown (1961), B.W. Sparks (1962), T.J. Chandler (1963), Dr Keith M. Clayton (1964), Lieut.-Cmmdr J.B. Dixon, R.N. (1965), Dr S. Evans (1966), Prof. Sigurdur Thorarinnson (1967), Dr J.D. Woods (1968), A.J. Lee (1969), Dr Nic C. Flemming (1970), Dr Claudio Vita-Finzi (1971), Dr D.R. Harris (1972), Prof. J. Leonard (1973), Capt. D.W. Haslam, O.B.E., R.N. (1974), Prof. H.C. Brookfield (1975), Dr Keith J. Miller (1976), Prof. Ronald Cooke (1977), Dr Andrew Warren (1978), Prof. J.B. Sissons (1979), Prof. Kenneth Gregory (1980), Dr Bruce Atkinson (1981), Dr Edward Derbyshire (1982).

Recipients of the Murchison Grant

Rev. Thomas Wakefield (1882), William Deans Cowan (1883), W.W. McNair (1884), Pandit Krishna (1885), F. and A. Jardine (1886), George Bourne (1887), J. McCarthy (1888), F.S. Arnott (1889), Signor Vittorio Sella (1890), William Ogilvie (1891), Robert M.W. Swan (1892), R.W. Senior (1893), Capt. Joseph Wiggins (1894), Einvind Astrup (1895), Sir Henry Thuillier (1896), Lieut. S. Vandeleur (1897), H. Warrington Smyth (1898), Albert Armitage (1899), Dr. Henri Arctowski (1900), Henry Coles (1901), Stanley Gardiner (1902), Capt. Gunnar Isachsen (1903), Capt. William Colbeck (1904), William Wallace (1905), Maj. H.R. Davies (1906), Capt. G.E. Smith (1907), Col. Delmé-Radcliffe (1908), Capt. C.G. Rawling (1909), Dr Karl Skottsberg (1910), Dr Wilfred Grenfell (1911), Capt. W.C. Macfie, R.E. (1912), Maj. H.D. Pearson (1913), Cmmdr H.L.L. Pennell (1914), Capt. J.K. Davis (1915), Lieut.-Col. Whitlock (1916), **Rai Bahadur Lal Singh** (1917), C.A.

Reid (1918), Dr W.M. Strong (1919), M.A. Czaplicka (1920), Comdt J. Maury (1921), Charles Camsell (1922), Capt. A.G. Stigand (1923), J.H. Reynolds (1924), Eric Teichman (1925), Frank Debenham (1926), Capt. C.J. Morris (1927), John Mathieson (1928), C.S. Elton (1929), Col. H. Wood, R.E. (1939), L.M. Nesbit (1931), Dr K.S. Sandford (1932), Dr Noel Humphreys (1933), John Rymill (1934), R.P. Bishop (1935), Michael Leahy (1936), Martin Lindsay (1937), Ronald Kaulback (1938), Robert Bentham (1939), Peter Mott (1940), C.T. Madigan (1941), Dr S.W. Wooldridge & Flight-Lieut. David Linton (1942), Award postponed (1943), Award postponed (1944), Lieut.-Col. W.E. Browne, M.B.E. (1945), Lieut.-Col. C.A. Hart (1946), Gordon Manley (1947), R.W. Steel (1948), Lieut.-Col. E.H. Thompson, C.B.E., R.E. (1949), Sgn-Cmmdr E.W. Bingham, R.N. (1950), Dr George Salt (1951), W.D.C. Wiggins (1952), G.B. Stigant (1953), G.R. Crone (1954), Dr H.C.K. Henderson (1955), Dr Alice Garnett (1956), Dr G.L.C. Bertram (1957), Prof. E.G. Bowen (1958), Prof. S.P. Chatterjee (1959), Prof. J. Wreford Watson (1960), Prof. K.M. Buchanan (1961), Prof. S.H. Beaver (1962), Prof. A. Austin Miller (1963), Prof. K.C. Edwards (1964), Dr J.C. Swallow (1965), Prof. S.G. Davis (1966), Prof. E.W. Gilbert (1967), C.T. Smith (1968), Prof. J.T. Coppock (1969), I.R. Bishop (1970), Prof. J.W. House (1971), Prof. Emeritus W. Gordon East (1972), Prof. W.B. Fisher (1973), Prof. H.H. Lamb (1974), Prof. Akin L. Mabogunje (1975), Prof. Emeritus W.G. Hoskins C.B.E., F.B.A. (1976), Harold Fullard (1977), Prof. Kenneth Walton (1978), Prof. Eila Campbell (1979), Clive Jermy (1980), Prof. C. Kidson (1981), Dr R.J. Bennett (1982).

Notes

- 1 Written by Daniel Lal Sander great grandson of R.B. Lal Singh in conjunction with Sukwant Singh (Stephen Sander) grandson of R.B. Lal Singh.
- 2 This paper began as a family history project. I would like to thank Helen Wang and her colleague Paramdip Khara, at the British Museum, for their help and for the invitation to contribute to this volume, and Sarah Strong at the Royal Geographical Society for providing the Appendix.
- 3 After Partition in 1947, Rai Bahadur Lal Singh's family home became part of Pakistan. As Sikhs, his family had to flee from their home village of Nurpur, northwest of Gujranwala District. Sukwant Singh (my father) moved to the USA and Canada, where, after humble beginnings as a schoolteacher, he developed a successful real estate business, Hollyburn Properties Ltd.
- 4 Hari Dawar was a Hindu holy city, to which Sikhs also made pilgrimage, and records of visits and of the deceased were kept here. Subsequently, Sikhs took family ashes to Kiratpur in Anandpur.
- 5 His mother, Un Devi. He brought these ashes with his brother, Hari Singh.
- 6 His wife, Har Kaur, and children Bulwant Singh, Sant Singh, Maya Devi and Shiv Devi.
- 7 Noran Devi was the first wife of his eldest son, Bulwant Singh. She died prematurely.
- 8 Tara Singh remembers he would bring his horse home with him when on leave.
- 9 Royal Geographical Society website, <http://www.unlockingthearchives.rgs.org/glossary/default.aspx?word=great+trigonometrical+survey&x=40&y=4> (accessed January 2012).
- 10 M.A. Stein, 'Note on Maps Illustrating Dr. Stein's Explorations in Chinese Turkestan and Kansu', *The Geographical Journal*, vol. 37, no. 3 (Mar 1911), pp. 275-80, quote from p. 276.
- 11 M.A. Stein, 'Note on a Map of the Turfan Basin', *The Geographical Journal*, vol. 82, no. 3 (Sept 1933), pp. 236-46.
- 12 M.A. Stein, Report of the *Archaeological Survey Work in the North-West Frontier Province and Baluchistan*, January 1904-March 1905. Peshawar. See also Rienjang's paper in this volume.
- 13 Charles Dalrymple Bruce (1862-1934) served in India and China.
- 14 Annabel Walker, Aurel Stein, *Pioneer of the Silk Road*, John Murray, London, 1995, p. 175.
- 15 *The Times*, 6 April 1909, 10a.
- 16 M.A. Stein, *Innermost Asia: Detailed Report of Explorations in Central Asia, Kansu and Eastern Iran*, Oxford: Clarendon Press. [Reprinted 1981, New Delhi: Cosmo Publications]. For a bibliography of Stein's work see H. Wang and J. Perkins (eds), *Handbook to the Collections of Sir Aurel Stein in the UK*, London, 2008, Appendix 4.

- 17 M.A. Stein, *Memoir on Maps of Chinese Turkistan and Kansu, from the Surveys Made during Sir Aurel Stein's Explorations, 1900-1, 1906-8, 1913-15* (with appendices by Major K. Mason and J. de Graaff Hunter), Trigonometrical Survey Office, Dehra Dun, 1923.
- 18 The Surveys of Sir Aurel Stein: Review (by K.M.), *Memoir on Maps of Chinese Turkistan and Kansu, from the Surveys Made during Sir Aurel Stein's Explorations, 1900-1, 1906-8, 1913-15* by Aurel Stein, *The Geographical Journal*, vol. 64, no. 2 (Aug 1924), pp. 165-8.
- 19 *Ibid.*, quote from p.168.
- 20 M.A. Stein, 'A third journey of exploration in Central Asia, 1913-16 (continued)', *The Geographical Journal*, vol. 48, no. 3 (Sept 1916), pp. 193-225, quote from p. 224.
- 21 'The Monthly Record', *The Geographical Journal*, vol. 49, no. 5 (May 1917), pp. 381-8; 'Meetings: Royal Geographical Society: Session 1916-1917', *The Geographical Journal*, vol. 50, no. 1 (July 1917), pp. 77-82, quote from p. 80.
- 22 C.D. Bruce, 'A journey across Asia from Leh to Peking', *The Geographical Journal*, vol. 29, no. 6 (June 1907), pp. 597-623, quote from p. 598. This article is illustrated with several photographs, including one of RBLS with the caption 'Surveyor Lall Sing and Rai Sahib at work on the top of Lanak La, 17,750 feet'.
- 23 *Ibid.*, pp. 604-6.
- 24 T. Holdich, Col. Bower, Capt. Deasy, N. Malcom and Major Bruce, 'A journey across Asia from Leh to Peking: Discussion, The *Geographical Journal*, vol. 29, no. 6 (June 1907), pp. 623-6, quote from pp. 623-4.
- 25 *Ibid.*, pp. 623-4.
- 26 Major Henry Hugh Peter Deasy (1866-1947).
- 27 *Ibid.*, p. 625.
- 28 Éva Apor, 'Sir Aurel Stein and his Hungarian background', in H. Wang (ed.) *Sir Aurel Stein. Proceedings of the British Museum Study Day*, BM Research Publication 142, 2004, pp. 1-4, esp. p. 3.
- 29 See the paper by Sarah Strong and Helen Wang in this volume.
- 30 Stein's notes from his Fourth Expedition, Bodleian Library: M.S. Stein. 224, p. 127.
- 31 K.E. Ryavec, 'The present-day value of maps illustrating the archaeological surveys of Sir Aurel Stein in Xinjiang and Gansu', *Journal of the Royal Asiatic Society*, 3rd series, vol. 3, no. 2 (July 1993), pp. 233-43, quote from p. 233.
- 32 Letter from M.A. Stein to the Deputy Inspector General of Police, Lahore Circle, 2 July 1940, copy of letter in the author's possession.



Figure 1 Group at Ulugh-mazar. Ibrahim Beg, Chiang, Stein, Jasvant Singh, Lal Singh, Ram Singh, March 1908 (British Library, Photo 392/27 (376))

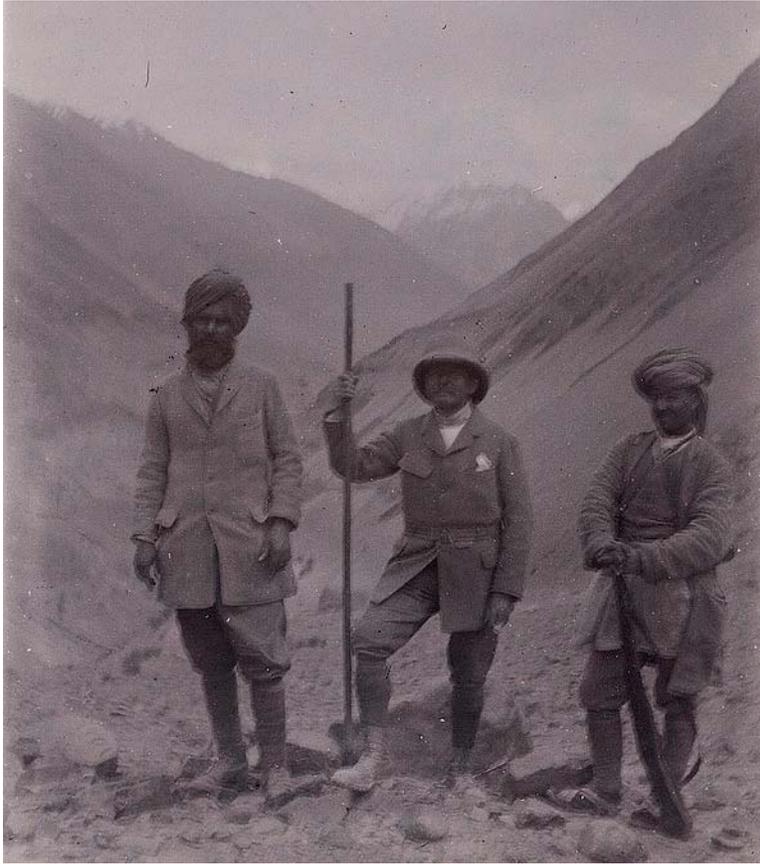


Figure 2 Group of Lal Singh, Stein and Afrazgul, at Rech, 5 September 1913 (British Library, Photo 392/28 (153))



Figure 3 Altmish-bulak. Lal Singh taking midday observation, 24 February 1914. British Library, Photo 392/28 (427) [detail]



Figure 4 Halt at Buk [Buk-tokhai], Etsingol. Lal Singh] and Isa Bai, 13 June 1914. British Library, Photo 392/28 (530)



Figure 5 Group (with Lal Singh) at Khitai Madrasa [Kara-khoja], 27 January 1915 (British Library, Photo 392/29 (243))



Figure 6 Camels with Lal Singh in centre, Yolchi-moinak, 19 July 1915 (British Library, Photo 392/29 (303))



Figure 7 Camels with Afrazgul, Lal Singh, Stein and Jasant Singh at Yolchi-moinak, 19 July 1915 (British Library, Photo 392/29 (311))

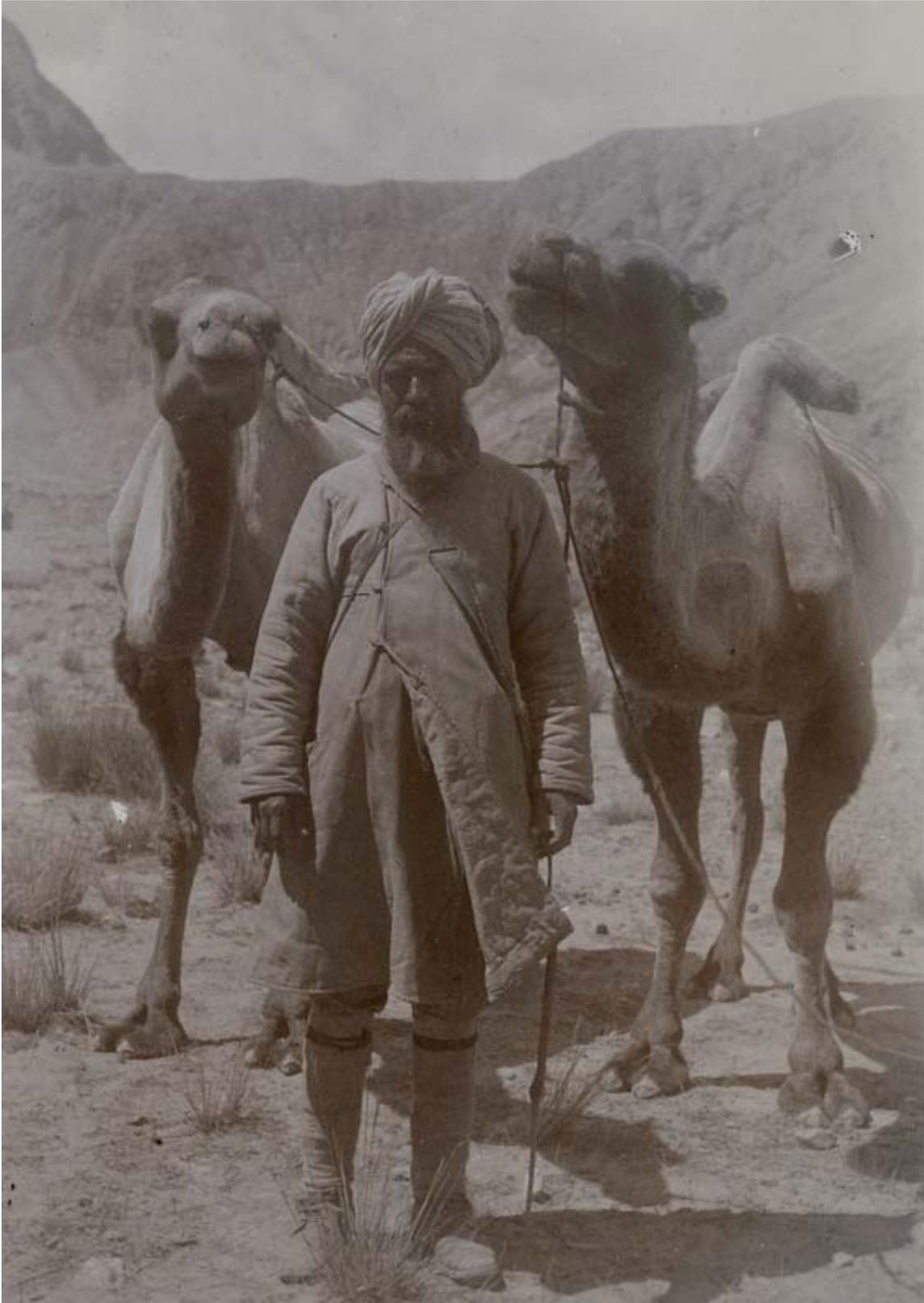


Figure 8 Lal Singh with camels, Yolchi-moinak, 19 July 1915 (British Library, Photo 392/28 (805))