

HIMALAYAN RANGE NAMES

THE Editor has pleasure in publishing a group of contributions to the discussion begun in the *Journal* for September last, and will be glad to receive the opinions of other geographers who know the Karakoram, preparatory to a conference on the subject which will, it is hoped, take place early in the coming summer.

The letters from Sir Sidney Burrard discuss two passages of the Editorial Note, and in particular the sentence "These ideas of Godwin Austen dominated the Survey of India for the next forty years" (*G. J.*, 74, 1929, 276).

Major Mason's note is in reply to Sir Sidney Burrard's "Defence of the existing Nomenclature," in the same number of the *Journal*; and Dr. Longstaff's comments were written on receipt of an advance copy of this note.

The Editor has received several letters on the subject which he may be allowed to summarize thus :

Lt.-Colonel Philip Neame, v.c., d.s.o., is strongly in favour of the names used hitherto by the Survey of India, and against the proposed changes, on the ground that the name of the Karakoram Pass is one of the few geographical names known almost universally to the inhabitants of all this mountain region. He would therefore retain the old, historical, and well-known name of Karakoram alone, to be applied to both the mountain region and the Main Range.

Mr. H. S. Montgomerie writes that he is in agreement with Sir Sidney Burrard's article, and maintains that the earlier surveyors described K_2 as essentially a rock peak with bare black surfaces too steep for the snow to lie, as against Major Mason's description, from a different aspect, as "spotlessly white" and the range as the whitest and iciest outside the polar regions. On the early use of the name he quotes from a private letter written by his father, Colonel T. S. Montgomerie, on 22 September 1856: "I took a run into Thibet and have seen the mountains of the Karakorum range that separate the valley of the Indus from Yarkand and those places."

Sir Martin Conway, on the other hand, writes that the Karakoram range "has nothing to do with the pass of that name, still less with the ancient capital of the Mongols. Muztagh is a better name for the K_2 range: but what will you call the range north of the Hispar and that south of the Baltoro?"

THE HIMALAYAN RANGES AND GODWIN AUSTEN'S MAP

Extracts from letters written by Sir Sidney Burrard to the Editor G.J.

From letter of 27 September 1929

There were one or two points in your article on the Indian Border, *G. J.*, September, p. 274, which were not quite fair to the Survey of India.

You are quite mistaken in thinking that the ideas of Godwin Austen have dominated the survey for fifty years or that our maps are dependent on geology. I have never seen that map in any Indian drawing-office, I have never heard it

quoted, and have never used it myself. The reason that the successive maps of Tibet from Walker's downwards all resemble one another is that they are all based on the same topographical data, the later maps having additional data. All our maps of Tibet are purely topographical; geology does not enter; there have been no geological surveys, and if there had been, we never use geology in topographical maps.

In all branches of knowledge generalization is necessary and difficult. Geographers are obliged to generalize, and to produce diagrammatic maps of complicated mountain systems. These diagrams are required as index maps, and for bird's-eye views. If we plot all the known peaks above 16,000 feet, the points on our charts arrange themselves in curvilinear alignments. I am no advocate of "ranges"; as a geologist Hayden was opposed to long ranges, because the eastern part of the Himalayan range was of a different age from the western. But Hayden, like myself, could not but see that the high points of Tibet insisted on grouping themselves in curvilinear arrangements, and a "range" is merely an abbreviation for curvilinear arrangement.

We have to keep quite separate the question of the continuity of ranges from east to west, and the continuity of their names throughout their lengths. As to the continuity of ranges the topographical data lead to the idea that the plateau of Tibet is traversed from west to east by long continuous ranges. If a range does sink into the plateau here and there, it seems to reappear on the same alignment a little farther on. Between the ranges the plateau seems to consist of level strips. There has been no topographical survey; but there have been scattered surveys from east to west and from north to south, and they all confirm the view of parallel ranges.

As to continuity of names across the plateau, every one would like to find Tibetan names. No one wants to extend the name Karakoram east of the Karakoram region: it would be a mistake. The *Map of Tibet*, 1914, which you quote, had a very unfortunate error, which was not noticed by the scrutineer; the drawing-office was short-handed, and this mistake crept in. The draughtsman entered the name Karakoram too far east. This was a mere slip; there was nothing intentional about it. I have never heard any surveyor advocate the extension of the name Karakoram east of the Shyok basin. The name has not been limited in area with the same definite precision as a state boundary. But just as the name of this range is automatically changed to Hindu Kush, as it proceeds westwards into Afghanistan, so we may hope that it will one day take on a Tibetan name as it proceeds eastwards.

With regard to your remark about the Ladakh and Kailas ranges extending eastwards to 92° , there is no doubt that these two ranges are very long alignments of elevated points. The apparent breaks in their continuity are mentioned on pp. 93 and 95, Part II (Burrard and Hayden's sketch). These breaks are probably only dips of the alignment below the high level of the plateau. The difficulties of naming these long ranges, when there are no Tibetan names, were painfully present to Hayden and myself in 1907. Our critics may say, "How absurd to extend the names Ladakh and Kailas through so many degrees of longitude!" The names affixed to these two ranges were given in 1852-53 by Cunningham, a careful, scientific and erudite explorer; we followed Cunningham, and in the absence of Tibetan names we continued

Cunningham's names throughout the eastern prolongations of his range-alignments. In taking this step and in avoiding inventions of new names, we were only actuated by the wish to leave the whole question open for final consideration when the time had become ripe. We thus saved our successors from the complications of having new names started which might prove unsuitable. I may say that in 1907 we consulted every known authority about these ranges, and we received the universal advice: "the time is not ripe; leave the question alone."

The ranges of Tibet seem to open like a fan, and to be squeezed together at the north-western end. But the same elevated alignments seem to persist even when squeezed and pushed north-west.

From letter of 5 October 1929

Thank you very much for sending me Godwin Austen's papers and map. They are forty-six years old, and though they may have marked a step of progress in 1883, they are now out of date, owing to the explorations in recent times of Ryder, Wood, Kishen Singh, and others. When Godwin Austen wrote these papers he had been absent for twenty years from North-Western Tibet, and had become engrossed in the geology of the Eastern Himalayas in Assam. As you kindly invite me to make further remarks upon your paper, I gladly accept.

You say on p. 276 that the geological structure is indicated by long lines in red overprinted on the map. But these lines of red are not geology: they are merely lines of high elevation. Some of these lines are borrowed from Markham and Saunders, who were not geologists. Godwin Austen himself calls these lines "elevation lines." Although he tries in his letterpress to find a relationship between these lines and the known geology, a modern geologist would, I am sure, say he was premature, as so little geology was known. In the sentence you mention on his page 611, he is only referring to the main Himalayan mass, south of Tibet. The geologists had learnt something in 1883 of the Himalayas, but after years of association with Hayden and Holland and Oldham and Middlemiss, I feel sure that they would have repudiated any assumption of a knowledge of geology in Tibet.

On p. 277 you say that the Karakoram range has been carried away east of Mount Everest because geologists identify rocks. The geologists have never explored the Karakoram and its extensions in Tibet; and geographers would never continue a name on geological grounds only. Except for one map, upon which the name Karakoram was misplaced by a draughtsman's slip, this name has never been extended into Tibet.

In Hayden's and my 'Sketch of Himalayan Geography' we drew the ranges by plotting all the high peaks (please see Chart V of Part I, on which all peaks higher than 24,000 feet were plotted). We continued this process down to 19,000 and 18,000 feet. In Tibet, where heights had not been observed, we had to rely upon the reports of explorers concerning the perpetual snow upon peaks.

It is true that the Ladakh range is a long one. The evidence of its length is discussed in Part II, pp. 92, 93, of 'Himalayan Geography.' We stuck to the name Ladakh because it was the only name that had been used by our predecessors, and we disliked inventing new names.

THE PROPOSED NOMENCLATURE OF THE KARAKORAM-HIMALAYA

MAJOR KENNETH MASON, M.C., R.E., Survey of India

SIR SIDNEY BURRARD has written a defence of the existing nomenclature of the Mountains of the Karakoram. I quite agree that it served its purpose in 1880, when little was known of the geography, though I maintain that *Muztagh* would even then have been better than *Karakoram* for the main range. As my report and suggestions have been quoted by Sir Sidney, I feel it desirable to explain in some detail my proposals. His 'Sketch of the Geography and Geology of the Himalayan Mountains and Tibet' has always been my Bible; but it was written over twenty years ago, and it must be to some extent out of date to-day, since our knowledge of the Himalaya has advanced. In it he first sorted order out of chaos, where there were sufficient data to go upon. I have read it over and over again, and in a humble way have tried to carry out his ideas.

My main contention now is that *Karakoram* is definitely unsuitable for the alignment as shown on our pre-war maps, that *Karakoram* has been used far more for the region than for the range, and that it is now definitely inconvenient to use it for both. Sir Sidney says in his Geography: "Colonel Montgomerie . . . named the whole Karakoram region K and its peaks K₁, K₂, K₃," etc. Wood describes his explorations on the Depsang and by the Karakoram pass as in *the Eastern Karakoram*; De Filippi uses 'Karakoram and Western Himalaya' for the title of his book on the Duke of the Abruzzi's explorations in the Baltoro area; for an area between these two, the Workmans use the term *Western Karakoram*; the Vissers include the glaciers west of the Hunza river among their *Karakoram* glaciers. Sir Sidney Burrard himself says: "Are there two Karakoram ranges parallel to one another? . . . No second Karakoram range has been shown upon the frontispiece to Part I; its existence as a separate crustal fold is conjectural. . . . Even the great Karakoram peaks themselves seem to follow two alignments. . . . Of the Karakoram peaks north-east of K₂ we have no knowledge." That was in 1906.

I maintain that the whole area has been called *Karakoram* or *Karakoram-Himalaya*. Burrard hinted at other Karakoram alignments both to the south and to the north of the range of the great peaks. It is Longstaff who says that the southern range, called by Burrard *the Kailas*, is more akin to the main Karakoram range than to the Kailas mountain many miles away to the south-east (*G. J.*, vol. 69, 1927, p. 329). He confirms Burrard's suggestion, and says: "Yes: there is a second alignment of Karakoram peaks south of the northern one." I have merely filled in Burrard's admitted blank in our knowledge about the Karakoram peaks north-east of K₂. Do these not lie on the Aghil-Karakoram range?

Sir Martin Conway's map of the Hispar, Biafo, and Baltoro glaciers, published by the Society in 1894, was headed "The Karakoram Himalayas." A. C. Ferber in the *Geographical Journal*, December 1907, described his "Explorations of the Muztagh pass in the Karakoram Himalayas." The title of Sir F. De Filippi's lecture to the Royal Geographical Society on 21 November 1910 was "The Expedition of H.R.H. the Duke of the Abruzzi to the Karakoram Himalayas."

The title to my own map in the *Geographical Journal*, vol. 69, is "Karakoram Himalaya." Here is a tradition extending over forty years.

It is Sir Sidney Burrard who emphasizes the geological aspect, for what is primary structure but geology? And what does he mean when he says in his *Geography*: "until geologists prove our assumptions to be wrong"? (see also *op. cit.*, p. 71). I contend that geographically there are a series of ranges more or less parallel to each other and in a definite geographical regional block, geographical in the sense that an island or a country is a geographical feature. The southern range is unconnected either geographically or geologically with the Kailas. For this regional block, a large part of which has been known rather vaguely as *Karakoram* or *Karakoram-Himalayas* for a number of years, I propose the name *Karakoram-Himalaya*. Many people consider the whole series of ranges of Northern India, and between the Indian plains on the one hand and Tibet or China on the other, as the *Himalaya*, and look on the Karakoram as part of the Himalayan ranges. Is it so much more incongruous to show the source of the Yarkand river in a Himalayan region than to show the source of the Indus in a Tibetan one, or the Hindu Kailas across Buddhist Ladakh or Muhammadan Baltistan? Burrard says it is distressing to see a Sanskrit name applied to a Mongol region. We have become used to the name in Southern Tibet, which is inhabited by Mongolians, while the area where I propose to use it is uninhabited by any one.

I do not think Sir Sidney quarrels with my proposed alignment of the Muztagh-Karakoram. On the frontispiece to Part I of his *Geography*, he shows the alignment as I propose, having drawn it by joining up the summits of the ice mountains; and here it does not go through the Karakoram pass. It is only on the old maps themselves (through the misapprehension of Moorcroft in the first instance) that the name Karakoram has been bent away along the watershed to the Karakoram pass from the range through the Saser pass; or perhaps it would be more correct to say: The name Karakoram has been bent from the watershed at the Karakoram pass on to the range of the great peaks. In his book Burrard stresses over and over again that a range is not necessarily a watershed, and that the great peaks of the Himalaya do not lie on spurs from the main watershed range. Nor do the great Saser peaks lie on a spur of the insignificant watershed west of the Karakoram pass. The Karakoram pass cannot be considered as the "entrance door" from Yarkand into the Karakoram region as suggested by Sir Sidney Burrard. Hayward was given the name *Karakoram* north of this, not south. The Karakoram pass is excessively easy and essentially an "inside door," rarely closed. If there is an outside door, it is on the Kun Lun on the north, and at the Saser pass on the south. These are the two doors to the true "black," angry, windy, desolate, devil-inhabited region, littered with dead bones.

I used the translation of Karakoram, *Black gravel*, that Sir Sidney Burrard gave in his book, and it is the one generally accepted. Colonel Wood says that *Koram* means a *boulder* or *rock*. I have also been told that the word can mean *boulders* or *scree*. But the actual meaning does not amount to much. "Black ground covered by large blocks of stone fallen from mountains" is surely hardly more appropriate than "Black Gravel" for "the whitest, iciest range of mountains outside Polar regions." It is however suitable for the whole region,

for on both sides of the central ice mountains, the ranges of the Aghil-Karakoram and the Kailas-Karakoram are continually bombarding the valleys with rock.

The theory that *Kara*, "black," may be appropriate as an epithet for an "angry white" mountain is ingenious. But the Turki and the Ladakhi are more material than that. The Sa-Ser is Yellow Ground which is in the Shyok valley; the Kadpa-ngonpo La is the Blue Drift pass, and close to it is a blue scar on the hillside. The Dizma La is the Many-coloured pass because of the variegated

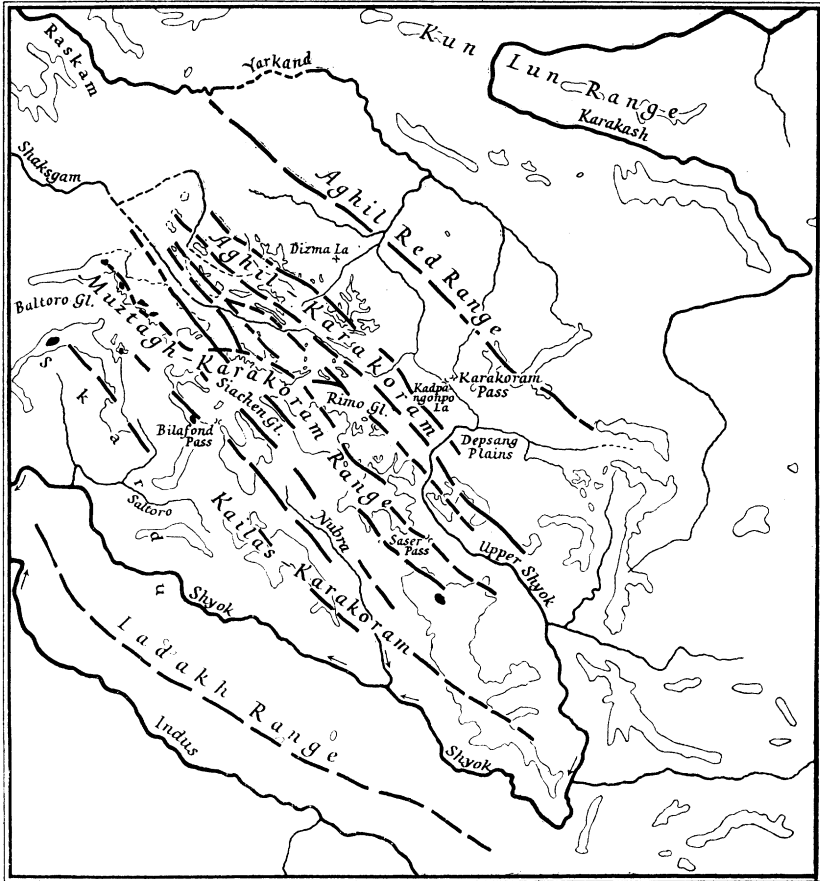


Diagram of proposed range-names in the Karakoram, reproduced with addition of a few pass and glacier names from the original diagram G.J., Sept. 1929, p. 275.

rocks, and the Marpo La is the Red pass because of the red rocks of the Aghil. These names were given us by our men. Aq-su is *white water* from *white snow*. The Muztagh is the abode of divinities, and divinities are white. The ancestor of the Mir of Hunza married a divinity of the peak, Dumani, the Mother of Mist. Nanda Devi and Nanga Parbat are goddesses, not evil spirits. Devils are black, and they live in forests, and deserts, and seas, and oceans.

I base my desire for a revision of the nomenclature on the ineffectiveness, inconvenience, and inaccuracy of the old. I do not suggest that the word Karakoram, which has so many traditions, should be abolished, but rather extended to include the whole area of mountains which all the great travellers of the past have called by that name. Longstaff suggested either the Karakoram, the Karakorams, or the Karakoram-Himalaya for this mountain complex (*G. J.*, vol. 69, p. 330). I have suggested the last, as this seems to me distinctive. It would still include the line of the great peaks. Muztagh, too, has its traditions, and under my proposals, would come back into its own, instead of being banned to obscurity as it was in 1880. The main range would become the Muztagh-Karakoram; it would still be the main Karakoram range, but not the Central Asian watershed. The combination of the two words prevents it being confused with other Muztaghs or other Karakorams which are also numerous; the combination of the two names is unique.

I have said that Muztagh has its own traditions. It was used by Henry Strachey in his 'Physical Geography of Western Tibet'; he saw the distant mountains from the south in 1848. It was shown on the planetable of Godwin Austen in 1861; he first surveyed the range from the south. Hayward, on the north, was given the name for the ice mountains to the south, Sir Francis Younghusband, who first *saw* the range from the north, called it the *Muztagh Mountains*. I have heard the name used in Hunza for the ice mountains to the east, though Turki is not the native tongue of Hunza. The traders of the Karakoram pass have spoken to me of the ice mountains to the west as the Muztagh. Is this not sufficient tradition to sanction its use?

If we look on the southern range and the northern range as in the Karakoram region, why should we not call them the Kailas-Karakoram, and the Aghil-Karakoram? With the Kailas range, some such distinction seems necessary. If we mean this southern alignment, and merely call it the Kailas range, we have a vision of the range near the sacred mountain of Kailas, disconnected and far away to the south-east. There is another Kailas, a well-known mountain opposite Chini on the Sutlej, some miles north-east of Simla. This is on the Great Himalaya range, and to distinguish it from the one in Kumaun, it is called either the Lesser Kailas, or more generally the Kanawar Kailas. I have not invented this. To denote the Kailas range of the Karakoram region, is it not natural to call it the Karakoram-Kailas or the Kailas-Karakoram? Sir Sidney Burrard himself uses regional names for the Great Himalaya. He refers to the Punjab Himalaya; he means the Great Himalaya in the Punjab. He writes of the Nepal Himalaya; he means the Great Himalaya in Nepal. By Kailas-Karakoram or Karakoram-Kailas, I mean that section of the Kailas that lies in the Karakoram region. When we are talking solely of the Karakoram region, we may abbreviate them perhaps as the Kailas, the Muztagh, and the Aghil.

On crossing the Muztagh range, conditions change. It is cumbersome to speak of "the conditions of the country on the far side of the main range of the Karakoram." Nor would it be accurate to say "Trans-Karakoram conditions," for that would exclude the typical Karakoram country between the main range and the Yarkand river in Raskam, since it is uncertain whether we refer to the region or the range. But if we say "Trans-Muztagh conditions," it is obvious

that we mean the conditions beyond the main axis of the ice mountains. I have explained these changed conditions on page 74 of my report.

Sir Sidney Burrard seems to me to argue the question from General Walker's point of view in 1880. He gives the dates "of the principal events in the history of Karakoram Maps" as follows: Before 1820, 1853-1854, 1855-1865, 1866-1869, 1868-1872, 1876-1878 and 1879. I am not belittling these years, nor the great men who made these years great. But what about the years after 1880? What about 1887 and 1889 (Younghusband); 1891 (Cockerill and Conway); 1909 (Abruzzi, De Filippi and Longstaff); 1913 (the Workmans and Grant Peterkin); 1914 (De Filippi and Wood)? Surely it is the detailed exploration of these years that really counts to-day. Sir Sidney's dates stop short of the discovery of the Aghil range, of the Shaksgam river, and of the correct alignment of the range north of the great glaciers, the Baltoro, the Hispar, and the Siachen. Hayward's map shows the tributaries of the Yarkand river flowing north from the main range of "hairy caterpillars," and shows them on a very small scale. Godwin Austen's planetable of 1861 showed a dotted line from east to west with the inscription, "supposed course of the Hunza river, but which may have a long branch farther north." Hayward was given the name Karakoram north of the Karakoram pass, and the name Mustagh for the ice mountains. Godwin Austen has himself told me that his instructions were that he was not to "waste time in surveying barren country above 15,000 feet." One has only to read Colonel Wood's postscript at the end of his 'Explorations in the Eastern Karakoram and the Upper Yarkand Valley,' to realize the effects of this instruction and to get some idea of the roughness of the material that the old geographers had to go upon. Consider Johnson's topography of the upper Karakash and of the vicinity of the Karakoram pass, together with the comments of Colonel Wood. Look at the old Rimo Glacier and compare it with the one surveyed by De Filippi. Are they the same? See the glacier tributaries of the Siachen and of the Siachen itself, and compare them with Longstaff's exploration and his prophecies, so admirably fulfilled this year by the discoveries of the Vissers. Look at the geographical insignificance of the Nubra-Shyok watershed on the old atlas map, and compare it with what we know now from the explorations of Neve, Longstaff, Gompertz, and the Vissers. To-day I have received a letter from Khan Sahib Afraz Gul Khan, in which he details the exploration of the Shyok side of the Nubra-Shyok watershed. The old map was little more than guess-work, sketched from a long distance on a small scale. Remember that when Longstaff crossed the Bilafond pass as late as 1909, he thought at first that he had crossed the Central Asian watershed! This was after the publication of Sir Sidney Burrard's book. I am not casting discredit on the old surveyors: they did all that they were asked to do; but the accumulation of geographical knowledge is a gradual process, and early ideas must surely be modified when later facts are known.

Sir Sidney Burrard quotes me as saying: "It is first of all Moorcroft's misapprehension and then a misunderstanding of Hayward's intention, and of the observations of Montgomerie, that led European geographers to use the term *Karakoram range* as it is at present applied." I meant to stress the word *geographers* as opposed to active surveyors rather than the word *European*. Is it heresy to suspect that General Walker and consequently Sir Clements Mark-

ham, those great geographers, may conceivably have been mistaken in interpreting the views of Moorcroft, Hayward, and Montgomerie, all of whom were dead before the name Karakoram first appeared as a single range upon the map? Surely in view of this scanty knowledge of their time they must not be considered infallible. Neither had seen the country to which they were allotting the name Karakoram. I must risk being further misunderstood to substantiate the remark that has been quoted. Moorcroft's misapprehension was that *the watershed* between the Indus and the Tarim basins lay on a great range. It does not. But the map drawn in the drawing-office showed it to be a great range. Burrard says: "On almost all maps the water-partings are made the most conspicuous ranges." This watershed range, which passed through the Karakoram pass, was the primary cause of the name Karakoram being given to the water-parting, and afterwards adopted for the range. Hayward explored part of the Yarkand valley, but did not reach the source, nor discover that there were two ranges (the Aghil and Muztagh). He heard the name Muztagh for the ice mountains and called the only range he knew of, *Muztagh or Karakoram*, his first preference being Muztagh. Montgomerie, who only saw the summits of the peaks from the distant south, called the whole region "K" (=Karakoram). But he either accepted Hayward's nomenclature, *Muztagh or Karakoram*, or preferred that order himself. Godwin Austen, who first surveyed part of the main range, always alluded to the range as the *Muztagh*. As late as 1924 he corrected me when I referred to it as the Karakoram.

Sir Sidney Burrard remarks: "But while Montgomerie and General Walker at Dehra Dun were rejecting Muztagh, they were hesitating to adopt Karakoram." There is no question that Montgomerie and Walker were closely associated in many enterprises and were the closest friends. But is there any evidence that Montgomerie was rejecting Muztagh? Is it not possible that there was a little friendly obstinacy on the part of both? General Walker alone had the power to select either name for the map. As his subordinate, Montgomerie may have gone to the extent of conceding the Karakoram alternative, but he did not reject Muztagh. Is it only a coincidence that Hayward died in 1870, and that no name was given to the range in 1872, though parts of it were surveyed by Godwin Austen in 1861? Is it a coincidence that the name Karakoram appears first on a triangulation chart, covering all the area enclosed by the "K" peaks of Montgomerie? Is it a coincidence that it appears first for the Muztagh range alone on the maps of 1880, two years after the death of Montgomerie? I firmly believe that Hayward, Montgomerie, and Godwin Austen, the surveyors, were in favour of *Muztagh*; while General Walker and consequently Sir Clements Markham, the geographers, accepted *Karakoram*.

Sir Sidney Burrard writes throughout his criticism as though the *inhabitants* use the name Karakoram. There are no inhabitants. On both sides of the main ice-range there are traditions of two passes, both the Muztagh. Colonel Wood writes: "The name (Karakoram) is applied by the traders to the pass alone and not to the mountains. Dr. Thompson, who in 1848 was the first European to reach the pass, found the same in his day, and Hayward, in 1869, repeats the same information." Wood found the same in 1914, and I the same in 1926. It is we Britishers who have applied the name both to a region and to a watershed range, which is not a primary structure. There is no question of the Mongols

having applied the name Karakoram to the range, though they may have done so to the pass.

I have tried to make my position clear, that I criticized our sagacity, not that of our great predecessors. Would they be impressed with our sagacity if we retained a faulty nomenclature merely on principles of conservatism? Did they retain the elephants and dragons shown by their predecessors on the maps of Asia? Sir Sidney Burrard concludes that the growth of traditions "has been due to the continued co-operation of successive generations of men." Surely the succeeding generations are entitled to build on the foundations of the past.

HIMALAYAN NOMENCLATURE

DR. T. G. LONGSTAFF

IN approaching this most difficult subject we must be clear as to the precise context in which the nomenclature is to be used. Burrard and Hayden's standard work adopts a system which appears to me admirable for what I would call a large-scale description essentially physical and geological in outlook; and I should be very sorry to see any of this nomenclature changed. But the traveller, the mountaineer, the mere topographer, must use smaller units than we find dealt with in the classical 'Sketch of the Geography and Geology of the Himalaya Mountains and Tibet.'

Any system must be arbitrary: for example, when standing on any height between Gilgit and Hunza I have found it extremely difficult to visualize where the Karakoram ends and the Hindu Kush begins! Yet it is definitely convenient to use two different names, though we recognize that our system is a purely artificial one. Another example which is also familiar to me is the exceedingly well-defined group of peaks bounded on the north by the Saser Pass and on all other sides by the upper Shyok and Nubra rivers; I have only penetrated it once, but I have been completely round it; it forms a topographical unit if ever there was one, and yet it fits in schematically with both the Karakoram and the Kailas systems of Burrard and Hayden: I mean that this north-to-south topographical unit fits in with two immense east-to-west geological or geophysical units. The latter system is excellent for the purpose of systematic description, but most unpractical for the explorer or topographer studying the actual mountain complex on the ground. He can only speak of the "Nubra-Shyok Group" or of the "Nubra Peaks" because their approach is only feasible from the Nubra Valley, just as in the Alps we speak of "the Zermatt Peaks," or of the "Bergamasque Alps." With much diffidence I ask for the removal of the label "Kailas Range" from the peaks along the north bank of the Indus about Skardu, for to the onlooker they are indivisibly only the southern axis of the Karakoram. They may be tectonically a continuation of that axis of elevation marked by holy Kailas of Tibet, but both ranges I know, and each is so different from the other, and Kailas is so far from Skardu!

I see no alternative but to make use of two systems of names; what I would

call the "schematic" and the "topographical." Let us stick to Karakoram, rejecting Muztagh altogether for the reasons adduced by Sir Sidney Burrard, and particularize by using well-known topographical labels for splitting up the main axes of elevation. The "Saltoro group," the "Baltoro Peaks," the "Western Karakoram," the "Eastern Karakoram," are all ready to our hands for the differentiation of units of this great system, which is already so extensive that I would deprecate adding the Aghil range to the complex and would preserve its separate designation on historic grounds: at the same time registering my belief that the Karakoram Pass belongs physically to the Aghils rather than to the Karakoram system. But we cannot change the name of the Karakoram Pass.

Burrard's names "Ladakh Range" and "Zaskar Range" are good examples of the sort of topographical compromises I advocate. The Himalaya itself is better known than the northern systems and its nomenclature is less open to argument. We use the title as we use "the Alps," and distinguish the Himalaya "of Garhwal," or "of Bhutan," or the "Nanda Devi group" as the case may be. But the case of the Karakoram is admittedly more difficult. We might agree for convenience to make use of river valleys, which are hereabouts generally important lines of human communication, and define its western boundary as the Gilgit River, separating Karakoram from Hindu Kush; its southern boundary as the Indus-Shyok, instead of labelling the southernmost range as a continuation of Tibetan Kailas; the northern limit as the Shaksgam and Shingshal rivers, separating Karakoram from Aghil, for surely the face of the country is very different on the two sides of this great river trench. On the east the most *natural* limit seems to me to be the upper Shyok Valley, though having route-hunted east of this with Captain D. G. Oliver in 1909 I must admit that our knowledge is so defective that on this side we cannot speak with any certainty and our decision must be merely an arbitrary one and, worse than that, perhaps only temporary! But there is a very obvious change in the character of the ranges on the two sides of the upper Shyok, and as we penetrated eastwards conditions became definitely Tibetan in character and completely different from the Eastern Karakoram, in which I had travelled for the previous three months.