

There is another old minaret in the town itself, beside the mosque now in use: it also has fine brickwork and a Cufic inscription, bearing the titles and name of “. . . el Mu'izz, Jalâl ed Daula, Sharaf el Mulk, Abu Dulaf, Sirhân (or Surkhâb) ibn 'Imâd ed Daula,” and the date. The personage mentioned has not yet been identified, and unfortunately the date, which is doubtless one in the twelfth century, could not be photographed, as access to the roof of the mosque was not allowed.

The other old monuments are a dome, which the inhabitants declare once to have been the centre of the bazaar and sort of town hall, and the disused mosque which stands beside the old minaret, but is of a later date. Some very old brickwork would probably be found in the *anbars* or deep underground reservoirs for water built with prodigious flights of steps far below the soil in all the Saveh district.

## THE DESIGNATION OF HIMALAYAN PEAKS

A SKETCH OF THE GEOGRAPHY AND GEOLOGY OF THE HIMALAYA Mountains and Tibet. By Colonel S. G. BURRARD and H. H. (later Sir HENRY) HAYDEN. Revised by Colonel Sir SIDNEY BURRARD and A. M. HERON. Second (1932-33) Edition. *Delhi: Government of India 1933-34*. Part I. The High Peaks of Asia. 12 × 9 inches; iv + 68 pages. 5s. 9d. Part II. The Principal Mountain Ranges of Asia. 12 × 9½ inches; iv + 69-140 pages. 5s. 3d. Part III. The Glaciers and Rivers of the Himalaya and Tibet. 12½ × 9½ inches; vi + 141-276 + xxvi pages. 15s. *Illustrations and Maps*

NO official publication, we believe, has ever been more highly valued and continuously studied than Burrard and Hayden's 'Sketch of the Geography and Geology of the Himalaya Mountains and Tibet,' published by order of the Government of India in four parts in the years 1907-08. The work originated in a proposal made by the Survey of India to the Board of Scientific Advice in May 1906: "The number of travellers in the Himalaya and Tibet is increasing and a wider interest is being evinced in the geography of these regions. It is therefore proposed to compile a paper summarizing the geographical position at the present time."

That time was nearly thirty years ago; the number of travellers in the Himalaya and Tibet has gone on increasing; every expedition has increased the demand for the book; and a second edition was required, both to incorporate their discoveries and to supply the needs of their successors. Meanwhile Sir Henry Hayden had been killed in the Alps in 1923 and Sir Sidney Burrard had retired from the service in 1919. But at the request of the then Surveyor-General he undertook about 1930 to revise the Geographical sections, for which he had been responsible so many years before, and the task of revising the geology was assigned to Dr. A. M. Heron. Their work is embodied in the Second Edition published again in four separate parts in 1933-34. It is of the highest interest to compare this second edition with the first. Then as now Part I is called The High Peaks of Asia, and by virtue of its title goes rather far afield, though it is far from including all the high peaks of Asia. It does not, for example, include Amne Machin and Minya Gongka, but it does take in a few of the highest peaks in the Kunlun, Qungur, and Tien Shan. For practical purposes however it is

limited to the Hindu Kush, Karakoram, and Himalaya, and it does not profess to be complete below 24,000 feet. Of those above 24,000 feet there were 75 in Tables I–V of the first edition, and there are 86 in corresponding tables of the second: numbered consecutively in order of descending height. Consequently the same peaks bear different numbers in the two editions, thus adding another to the complications which beset the identification of Himalayan peaks. Since it will be necessary to discuss nomenclature and numbering in some detail we may begin with a brief statement of the various systems employed.

Himalayan peaks are known by:

- (a) Name: one European (Mount Everest), others Asiatic or corruptions of Asiatic, with serial numbers in Roman to denote members of a group, as Makalu II, Gasherbrum IV, or with English adjectives attached, as Masherbrum West, East Ibi Gamin.
- (b) Roman numbers of the Indian Atlas, once assigned to all the highest peaks, as XV (Mount Everest), but now largely replaced by native names. The highest which survives is XLIII for one of the Dhaulagiri group.
- (c) Initial letters and serial numbers of peaks in a region: principally the Karakoram, as K<sup>2</sup>, which survives, while K<sup>1</sup> has become Masherbrum. N<sup>53</sup> of the first edition, now Chomo Lonzo, seems to be a relic of a similar Nepal series, and the only survivor even in 1907.
- (d) Similar initial letters and serial numbers of peaks triangulated by different observers, as T<sup>57</sup> by Tanner (now Gyachung Kang) or B<sup>504</sup> by Barckley, still nameless, north-east of Gosainthan.
- (e) Karakoram peaks with a new set of serial numbers, now obsolete, as Karakoram No. 8 of the first edition, otherwise K<sup>6</sup>, the Bride Peak of Conway, now Chogolisa after Collie.
- (f) Similar range names and numbers not yet superseded, as Kunlun No. 1, Indus-Nagar Watershed No. 2.
- (g) Descriptive names as Rimo Peak or Satellite of Kanchenjunga (which has for some reason not been treated as in (a)) or “close companion of K<sup>23</sup> and K<sup>24</sup>” on the Shyok–Nubra Watershed.
- (h) Numbers in two series, upright and sloping, on the Triangulation Charts for each Degree Sheet, and in the accompanying pamphlet a third series of numbers Pk. 1, Pk. 2, etc., combining the two series of major (upright) and minor (sloping) into one series in order of increasing longitude east. Thus Cho Oyu is Pk. 5/71 L, but on the triangulation chart is No. 2 of compartment L on Chart 7. There is a 2 close by.  
These peak and sheet numbers are given in Column 3 of Tables I to V in the second edition; but to find the peak on the triangulation chart the number has to be translated by reference to the pamphlet, which is highly inconvenient in practice.

In the first edition (p. 15) we read: “It is not often that a Surveyor can discover a native name for a peak: natives of the hills do not give names even to remarkable peaks. . . . Of the 75 great peaks included in Tables I to V but 19 have native names. . . . Colonel Montgomerie endeavoured to introduce for peaks a method resembling that of constellations, and he named the whole Karakoram region K, and its peaks K<sub>1</sub>, K<sub>2</sub>, K<sub>3</sub>, etc. . . . We cannot do better for Tibet and Turkistan than extend this simple system introduced by Montgomerie for the Karakoram: his method of constellations is more suitable for the peaks of Asia than a long series of successive numbers from west to east would be. . . . We can have rectangular constellations, enclosed by meridians and parallels.”

In the first edition however Colonel Burrard did not follow up this idea, and his 75 designations for the peaks above 24,000 feet may be classified thus:

- (a) European name 1. Asiatic names 23, with 15 companion peaks bearing the same names, but distinguished by numbers II, III, etc.
- (b) Roman numbers alone: 15.
- (c) Regional initials and numbers: 5.
- (d) Observers' initials and numbers: 7.
- (f) and (g) Range numbers and description: 9.

Tables I to V of the second edition contain 86 peaks above 24,000 feet against 75 in the first, and it would have been convenient if a column had been added to give the serial numbers of the first edition, for many names have replaced numbered initials, two spurious 25,000-foot peaks, T<sup>42</sup> and B<sup>783</sup>, disproved by the surveyors of the first Mount Everest Expedition, have been omitted, and two or three others discarded for reasons unknown. T<sup>45</sup> becomes Cho Oyu (not Cho Uyo as used, apparently wrongly, by successive Mount Everest Expeditions), T<sup>57</sup> becomes Gyachung Kang, and N<sup>53</sup> Chomo Lonzo (spelled Lönzo by Colonel Howard Bury and Major Morshead). The two first were no doubt obtained by Morshead, but how or from whom is not, we think, anywhere recorded. Thirteenth in the list appears the name Broad Peak—in contradiction to all the good principles of the Survey of India. Dasto Ghil, Namcha Barwa, and Teram Kangri are notable additions. Five of the K series, five of the Roman number series, and B<sup>504</sup> survive, and a few awkward descriptive names like Indus-Nagar Watershed No. 2, and Kunjut No. 3. The peak forty-eighth in the list, named as a Satellite of Gosainthan, is really one of the Dhaulagiri group. The most surprising feature of the list is the appearance of a new series of initial and number, E<sup>1</sup>, E<sup>2</sup>, and E<sup>3</sup>, without explanation or remark. Of these E<sup>1</sup> is the fourth highest mountain in the world. Not until we reach Chapter 21 in Part III, headed "The Rivers of the Nepal Himalaya," do we come at last upon the explanation, in a criticism of the Mount Everest Committee which raises questions of the first importance. We must quote at some length from the section, tucked away among the glaciers and rivers, headed "The Symbols employed to designate the Satellite Peaks of Mount Everest."

"The system adopted by the Survey of India of naming high peaks is the outcome of 100 years' experience. The co-operation of mountaineering expeditions in this system will be always appreciated. Within the mountain zone which follows the Tibeto-Himalayan border many thousands of peaks are situated and two networks for distinguishing the peaks have been thrown over them independently of one another; firstly came the network of poetic nomenclature which the various hill-peoples have attached to their peaks, and secondly there followed the network of scientific points which have all been named by means of scientific symbols. The principle observed by the Survey has been to confine its activities to the scientific net, and faithfully to record the popular nomenclature without adding to, or interfering with it.

"On one occasion only has the Survey departed from principle, and trespassed upon the people's ground; the case of Mount Everest has been the only exception to its rule. In this case the requirements of world-wide geography could not be overlooked; the highest mountain in the world could not be left permanently nameless. The only disadvantage of the name Mount Everest has been the creation of a precedent; but the case was unique, it can never occur again, and the Survey has for 70 years refused to regard it as a precedent.

"The method which the Survey has adopted for distinguishing the many hundreds of nameless Tibetan peaks from one another has been to classify all the peaks of one group under a letter of the alphabet and then to add a separate number to each peak.

The same system is followed in many other branches of science. . . . When no group letter is obtainable from a region it is convenient to have the observer's initial as the group letter. . . . In 1921 the map prepared by the Mount Everest Expedition made a new departure. The map-makers in London took the English names which had been useful to mountaineers in the field, and with the aid of a Tibetan linguist they converted these names into Tibetan names. The Asiatic Society of Bengal has rightly objected to these spurious Tibetan names. If such a system be continued it will lead to chaos. It will mean that every explorer has a right to invent Tibetan names. In the future when the origin of these inventions has been forgotten, map-students may be misled into drawing philological conclusions from them, and travellers when planning an expedition may be led to imagine that a district covered with Tibetan names must have a resident population.

"Moreover Tibetan names when invented are never in harmony with local thought. The peak in Nepal, which is 2 miles south of Mount Everest, was given in London the Tibetan name 'Lhotse,' meaning 'south peak'; this peak stands just inside the northern boundary of Nepal. In the map of Nepal the peak named 'south peak' will be shown in the extreme north of the state. Also on the other side of this boundary it will be necessary to explain to Tibetans that the peak near the southernmost limit of their country has been given the Tibetan name 'Changtse,' meaning 'north peak.' There is both a scientific and an artistic side to mountain nomenclature; scientists are not qualified to add to the nomenclature of the people. If we regard the Himalayan-Tibetan nomenclature as a whole, it presents a wonderful picture of historic art, and a geographer has no more right to add to it his own ideas than he has to add colours to Raphael's Madonna in the National Gallery.

"On the flanks of every peak there are numerous excrescences which may become triangulation points; but these satellite peaks, partly hidden by their giant companion, have not the importance of an independent isolated summit. In the case of Tirich Mir its satellites have been named Tirich Mir II, Tirich Mir III, etc., and the same plan has been adopted in the case of Teram Kangri. But the name Mount Everest is not a local name; it is a world-name; and it was not considered advisable to extend this unique name to all the satellite peaks on its slopes. The satellites of Mount Everest have therefore been given the group letter E, and have been designated E<sup>1</sup>, E<sup>2</sup>, E<sup>3</sup> in the Tables II to V of Part I. It was considered better to give the designation E<sup>1</sup> to the highest satellite and not to Mount Everest itself. Mount Everest is not a *primus inter pares*; it is of interest to the world, whereas its satellites have only a local interest."

Faithfully to record the popular nomenclature is ideal, but not always possible. "Natives of the hills do not give names even to remarkable peaks" (Burrard, First Edition, p. 15), and people who live in the plains on opposite sides give different names, if any. Makalu is believed to be a surveyor's corruption of Kamalung, but "the name Makalu has now an historic place in geography and cannot be changed" (Second Edition, p. 42). Nanga Parbat is the Kashmiri name: the regional name is Diamar or Daryamur or Diamarai (Bruce), and this regional name is applied to the mountain locally (p. 42). Gurla Mandhata is a Sanskrit name used by the Hindus, but the Tibetans, in whose country it lies, call it Memo-nam-nyim-ri (p. 44). Rakaposhi is the name known in Gilgit, but the Mir of Hunza used to declare it a British invention, the correct name in Hunza being Dumani (p. 50). "In the wild Trans-Indus country south of Dardistan there is a mountain range named Hindu Raj . . . General Bruce says that the name Hindu Raj is hopeless, and he asks why Hindu? why Raj? These questions cannot be answered" (p. 52). But they throw some doubt upon the faithful record of popular nomenclature, and suggest another little blot upon the "wonderful picture of historic art," already defaced by Mount Everest, Broad Peak, Masherbrum East and West, and the "close companion of K<sup>23</sup> and K<sup>24</sup>."

The ideal cannot be realized. When an uninhabited region is studied in detail by Europeans they must have some way of referring to familiar peaks and passes.

Sound opinion has rejected the fanciful names Bride Peak, Golden Throne, and Staircase used for want of better by Sir Martin Conway, and the personal names proposed by Mrs. Bullock Workman. When Mallory discovered the beautiful mountain west of Mount Everest now called Pumori on the maps of the expedition, he desired to call it Mount Clare, after his daughter. This could not be allowed, but "the map-makers in London, with the aid of a Tibetan linguist," invented the name Pumori, the Daughter Mountain, which fulfilled in spirit Mallory's intention. This was their happiest effort. Other peaks in the neighbourhood were called Pethangtse, Khartaphu, Khartachangri, not, if we recollect aright, by the geographers in London, but by Colonel Howard Bury in the field: peak-names fashioned on the analogy of Longstaff's Teram Kangri by annexing the Tibetan for peak or snowy mountain to a district name. There remained for treatment the principal summits on the Mount Everest massif, the South Peak, the West Peak, and the North Peak as they had been called provisionally. These were translated into Lhotse, Nuptse, and Changtse, and were so shown on the map of Morshead and Wheeler made from their surveys in 1921. In the map of Mount Everest and Environs, on the scale of 1 inch to 2 miles, published by the Survey of India in 1930, all these invented names are written between inverted commas, with the explanation "Tibetan names appearing in inverted commas are not used by the local inhabitants." The device was reasonable, but a little pedantic, if it was really adopted for the reason implied. Had Sir Sidney Burrard put these names into his tables in inverted commas no one could have complained. But we do not think he was justified in calling them E<sup>1</sup>, E<sup>2</sup>, E<sup>3</sup>, in the tables of Part I, without a word of explanation until Part III was published in the following year. Nor do we find his eventual explanations sound.

Lhotse is not just inside the northern boundary of Nepal: it is on the watershed generally accepted as the boundary between Nepal and Tibet. Lhotse is not a satellite peak partly hidden by a giant companion. It stands up in full view in the panorama of Makalu and Mount Everest as seen from Sandakphu (Part I, Chart VI), but it was somehow missed by the triangulators. It stood up in full view of Mallory from the north-west ('Mount Everest: the Reconnaissance', Plate facing p. 218) and of Howard Bury from the north-east (Plate facing p. 138). If the South Peak is in the north of Nepal, it is in the south of Tibet, to which it belongs equally. And as for having to explain the name to the local inhabitants, it will at any rate be no more difficult than explaining E<sup>1</sup>. For the intelligent local inhabitant may soon ask whether E is a regional initial, on the analogy of K, or an observer's initial, on the analogy of T or B, or why if the fourth highest mountain in the world is a mere satellite of the highest, it was not called E II, Mount Everest II, Mount Everest South, or South Mount Everest, for all of which there are precedents in Tables I to V; but no precedent for E<sup>1</sup> as a satellite of E. The case against Nuptse is a little better, for Nuptse is in Nepal, though it got named from Tibet. But Sir Sidney has not objected to Nuptse: he has just ignored the name and called the peak E<sup>2</sup>.

The fact that these Tibetan-sounding names, invented in all good faith and with the best intentions to serve an urgent need, have been adopted on maps produced by the Survey of India, is in itself some justification for them. If future map-students are misled into drawing philological conclusions from them, they will be no worse off than those who study the name of the mountain called Kangchenjunga, Kanchenjunga, Kinchinjunga, Gans-chhen-mdzod-Ingga, Kancan-jhanga; as well as Kong Lo Chu, Khumbh-Karan Langur, and otherwise (Burrard, pp. 26, 33, and 209-212). And if future travellers imagine that a district covered with Tibetan names such as Cho Oyu, Gyachung Kang, Lhotse,

and Pumori must have a resident population, they will have only themselves to blame.

"Scientists are not qualified to add to the nomenclature of the people." But geographers who take more interest in the high mountains than the people do have to find some way of naming or lettering or numbering the mountains. When they are in the country they may try to get their native followers to suggest names, as Major Mason did in the Shaksgam. But when afterwards at home they are working out their surveys and photographs, what are they to do? Imagination even aided by a Tibetan linguist soon fails. Does the "network of scientific points which have all been named by means of scientific symbols" assist them? Not in the least: for these are the points of the G.T.S. triangulation or intersection, and nothing can be added to them except by the Survey of India. One of the R.G.S. draughtsmen has been engaged for many months in making a provisional map of the Mount Everest neighbourhood, especially of the southern face, from photographs taken on the Mount Everest Flight, combined with Colonel Howard Bury's panoramas of 1921. We shall soon have hundreds of unnamed peaks and minor features identified on the photographs, and placed upon the map. Some method must be devised for reference from photographs to map, and *vice versa*; and the Survey of India method of sheet numbers for the peaks will be inapplicable. Not even Sir Sidney Burrard, writing for the Surveyor-General, could do anything better in this way than to invent the misleading series E<sup>1</sup>, E<sup>2</sup>, E<sup>3</sup>. It is a real and urgent problem which has to be faced, and the Survey of India has given no lead.

Before leaving this vexed subject there are two matters of wider interest to be mentioned. In the spirited discussion following Major Mason's paper on Nomenclature in the Karakoram (read 12 May 1930), reported in the *Journal* for August 1930 (vol. 76, pp. 148-158), Sir Sidney Burrard said: "The Karakoram Mountains stand in Tibet"; and on June 2 he read a paper to the Royal Society, "The Geographical Representation of the Mountains of Tibet" (*Proc. R.S.*, ser. A, vol. 127), in which he said that "the main features of the Karakoram were determined . . . by Colonel Montgomerie's Surveys." An editorial note upon this paper, added to the above discussion in the *Journal*, remarked that Montgomerie was not concerned at all with Tibet. On p. 15 of Part I Sir Sidney takes us to task and maintains that Baltistan was called Little Tibet by Montgomerie, and the name "is still to be seen on the maps of the Survey of India": true, because the maps of Montgomerie may still be seen; but untrue of any maps published by the Survey in the present century. Further, in the first edition of the 'Sketch,' and so lately as in the above-mentioned R.S. paper of 1930, Sir Sidney spells the name Karakoram. In the second edition of the 'Sketch,' now under review, he has changed the spelling to Karakorum throughout, without, so far as we have discovered, any word of explanation. Whether the true pronunciation is best represented by *ram* (English "rum") or by *rum* (English "room" very short) is a matter on which authorities differ. But the Survey of India have spelled the name Karakoram in their publications and on their maps for many years, and it is disconcerting to find Sir Sidney Burrard using Karakorum without remark.

Part II is entitled "The Principal Mountain Ranges of Asia," but does not cover so large a field. It is largely occupied with the controversial subject of ranges and their names, and we cannot at this juncture usefully discuss the author's opinions. Some years ago our Society was invited by the Surveyor-General of the time to consider this question, and it became evident that nothing could be done without a map of the Karakoram area embodying all recent Surveys, and representing the relief by a system designed especially for the high

glaciated mountain areas. Such a map has now been drawn by the Society's senior draughtsman, and a preliminary edition, without any range names, will be ready in a few months. When it has been studied the Society will be in a position to resume the discussion which revealed such a lively difference of opinion in 1930.

Part III is nominally devoted to Glaciers and Rivers, but continually reverts to the controversies on peak names and ranges to which we have already referred. It contains a mass of information, but is not well arranged. Thus Chapter 18, "The Surveys of the Glaciers and of the Snows," mentions most of the principal expeditions of recent years, except the Mount Everest expeditions. Only in Chapter 21, "The Rivers of the Nepal Himalaya," do we find a brief reference to the Rongbuk Glacier: nothing of the East Rongbuk, nor of the Kangshung and Kangdoshung and Kyetrak glaciers, the Karma Valley, the Nangpa and Popti passes, and the Rongshar gorge, or of the many other contributions to Himalayan geography made by Colonel Howard Bury's expedition of 1921. A few lines on p. 169 mention Major Mason's exploration of the Shaksgam, but only in reference to the range question: there is no word of the Kyagar and Lungpa Marpo glaciers. The Duke of Spoleto's expedition which rounded off our knowledge of the valley is unrecorded.

We are compelled then, with real regret, to say that the second edition of this famous work gives a very inadequate picture of Himalayan geography in 1933. It is unequal and inconsistent, unduly controversial, sometimes unfair, and occasionally a little disingenuous. How far it represents the present opinion of the Survey is not clear; but it is published By Order of the Government of India.

A. R. H.