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Northern Approaches: Everest 1918–22

(Plate 56)

This is the third in a series of four articles, in consecutive volumes of the Alpine Journal, describing some of the important events, both geographical and scientific, which preceded the first ascent of Everest in 1953.

The First World War was hardly over before the subject of Mount Everest was raised at the Royal Geographical Society (RGS) on 19 December 1918. In an article in the *Geographical Journal* for 1920, T S Blakeney describes how Sir Thomas Holditch reopened negotiations by writing to the Secretary of State for India on behalf of the RGS and the Alpine Club. As Everest was now the central unsolved problem for both geographers and mountaineers, he urged that an expedition there should be mounted during 1919.¹

On 19 March of that year Lt Col C K Howard-Bury wrote to A R Hinks, Secretary of the RGS, suggesting a preliminary reconnaissance that summer, followed at a later date by an attempt on the mountain. His plan was initially to approach the India Office for permission to travel to the north slopes of Everest, via Tingri Dzong. He would then proceed to Gyantse to seek permission from the Tibetan authorities for a full-scale expedition to Everest in 1920. That permission would be sought through the good offices of the trade agent there or, if possible, from the Teshi Lama himself.

Howard-Bury was well qualified to lead such an expedition. Although not at that time an Alpine Club member, he had visited the Tien Shan and the Karakoram and was an experienced Himalayan traveller. Moreover, he had valuable contacts amongst highly placed officials in India.

The choice of Tingri Dzong as a starting point for an Everest expedition was first suggested by Captain Cecil Rawling as a result of his survey of western Tibet carried out after the Younghusband mission to Lhasa in 1904.² It was known to be an important focal point, being the Tibetan terminus of a main trade route with Nepal via the Nyelam valley. The route from Sola Khumbu in NE Nepal and over the Nangpa La (the 'Pangu La' of the pundit MH) also ended there. Another possibility was that the Kyetrak glacier leading from the Nangpa La, which had a branch joining it from the east, might provide access to Everest itself. The more direct route by the East Rongbuk glacier was only discovered on the 1921 expedition after the Kyetrak glacier had been explored and found not to provide access to Everest, though it did suggest a possible route to the Tibetan side of Cho Oyu and Gyachung Kang. Tingri Dzong was also within the 'see' of the Teshi Lama, second only to the Dalai Lama in the hierarchy of Tibet.

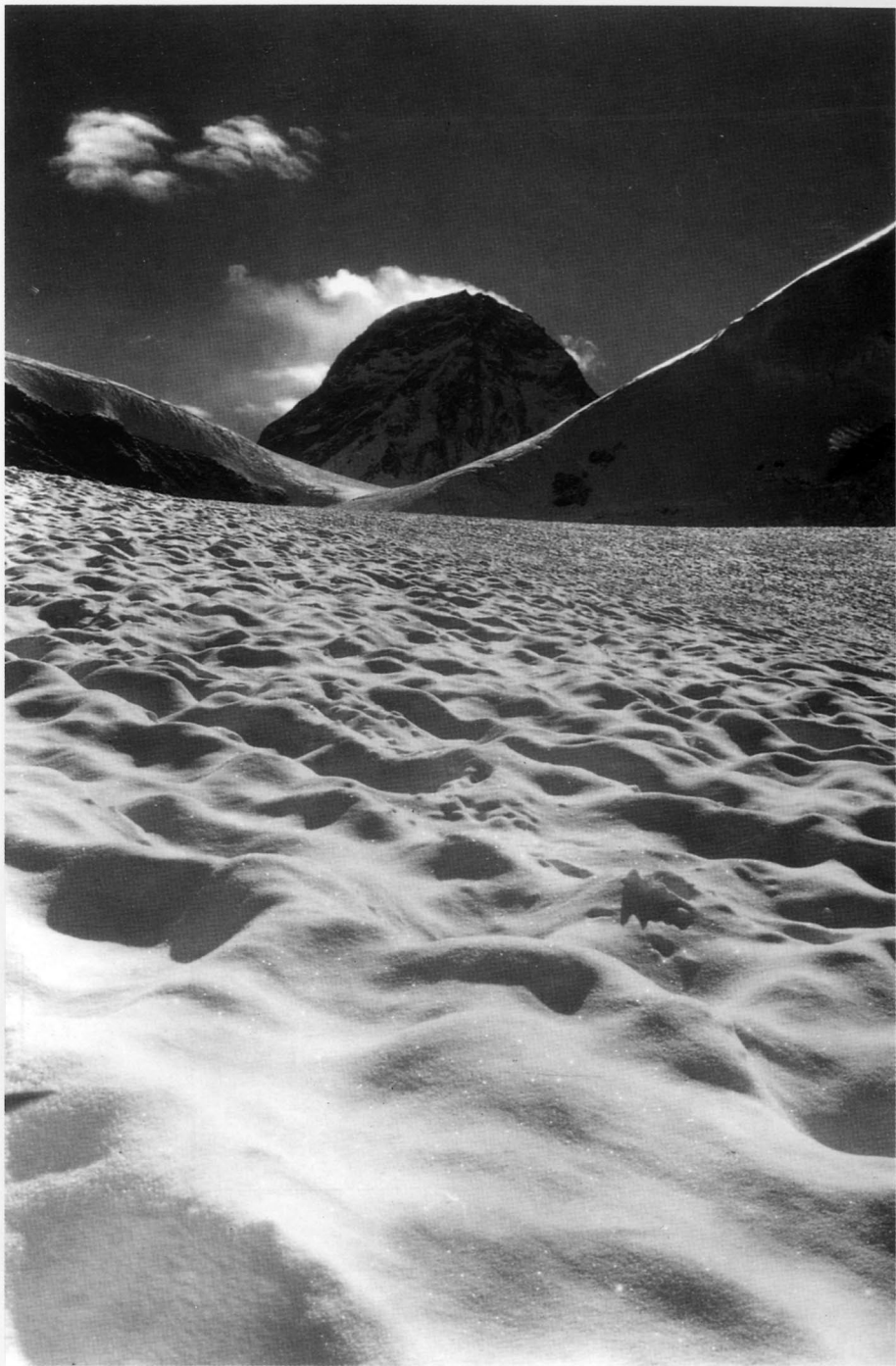
In his letter to Hinks, Howard-Bury also mentioned the possibility of visiting Kathmandu to negotiate an approach from Nepal. In addition, he proposed seeing the Surveyor General of India in order to try to arrange, through him and the Director General of Flying, for an aerial reconnaissance of Everest. However, the Government of India objected to all these proposals because it feared they might prejudice a scheme of its own for installing wireless stations at Gyantse and Lhasa to counter possible Japanese activity in Tibet. At that time (1919) the Japanese were gradually taking control of China's telegraph and wireless communications and it was feared that their influence could spread to Tibet.

However, the matter was not allowed to rest. Following a lecture by Col John Noel on his attempt to approach Everest from the east in 1913, Sir Francis Younghusband and others spoke strongly in favour of a full-scale attempt on Everest. Previously Noel and AM Kellas had discussed a secret route from Tashirak, along a tributary of the Arun river to the Kharta valley and the eastern glaciers of Everest.

In the course of many years exploration in Sikkim, Kellas had trained a native in photography and sent him to Kharta and the Arun gorge to get pictures of the east side of Everest. As a result, he knew of a pass, the Tok Tok La, between Tashirak and Kharta and of a hide rope bridge across the Arun river which led on the far (west) side to the Langma La. This pass was used by shepherds of the Kama valley to gain access to the Kharta valley to the north. At the head of the Kharta glacier, which flowed into the valley, was the Lhakpa La, the col later crossed by Mallory and Bullock in 1921 on their first reconnaissance to the North Col. Kellas had worked out a plan to lay food depots, using his own Sherpas, in the high uninhabited valleys west of Kangchenjunga which he knew well from his own explorations, and this route would have evaded Tibetan surveillance. However, these plans were thwarted by the First World War.³

With the backing of the RGS, Howard-Bury visited India in 1920 and conferred with Charles Bell, Political Officer in Sikkim, who was responsible for the British side of Anglo-Tibetan affairs. His support would be needed for the expedition to pass through Sikkim on the way to Tibet, since access from Nepal was not to become possible until 1950. Howard-Bury also called on the Viceroy at Simla.

By this time the position with regard to Japanese infiltration into Tibet had improved and the main obstacle appears to have been Charles Bell himself who frankly admitted that he was opposed to the expedition. In addition, there was friction with Tibet over the British Government's refusal to allow ammunition to be sent to Lhasa despite the fact that rifles had already been dispatched. The Dalai Lama was friendly towards Britain but his *Tsongdu* (Council) favoured turning to China for support. Eventually it was arranged that Bell should visit Lhasa that winter (1920) and semi-official instructions were sent to him by the Government of India asking him to sound out the Tibetan Government about an expedition to Everest. The inference was that he should tactfully explain to the Tibetan officials that if no reason existed to fear serious objections on Tibet's part,



56. Kamet, 1920. (*Dr A M Kellas*) (p215)

the Government of India would be glad if permission were granted. This was done. On 15 December 1920 the Viceroy of India, Lord Chelmsford, telegraphed the India Office in London as follows: 'Bell telegraphs that he has explained to the Dalai Lama object of desired exploration and necessity of travelling through Tibetan territory and obtained Tibetan Government's consent.'

Meanwhile, Kellas and Morshead, backed by the Everest Committee in London, had mounted a reconnaissance expedition to Kamet in 1920 (Plate 56). Experiments were made with oxygen compressed in cylinders and oxygen obtained from mixing water with sodium peroxide in oxyliethe bags, as suggested by Professor Leonard Hill at Oxford. Neither was satisfactory on the mountain, the cylinders being too heavy and the oxyliethe bags only being able to produce oxygen at rest; Kellas was not impressed by either. The main discovery on this expedition was the importance of good cooking stoves. Neither adequate fluid nor food had been available at the high camps.^{4,5}

Kellas stayed on in India after this expedition and in November he trekked from Darjeeling along the watershed between Nepal and Sikkim. Near the Kang La he took some photographs of the Everest group and ranges to the north and sent them to Professor Collie for examination by the 1921 reconnaissance party.⁶

Because of the difficulty that Kellas had had with the Primus stoves on Kamet, sample stoves were sent to Oxford for tests in the decompression chamber in the laboratory of Professor Dreyer, FRS. Dreyer was a consultant to the RAF and had carried out a considerable amount of research on oxygen at altitude on airmen. He held strong views on the use of oxygen on Everest and commented: 'I do not think that you will get up [Everest] without, but if you do succeed you may not get down again.' His views impressed Farrar, a member of the Everest Committee, who expressed the wish to meet Dreyer.

The stoves were duly altered for use at altitude and Farrar, Finch (then a prospective member of the proposed 1921 Everest expedition) and P J H Unna went to Oxford on Good Friday in March 1921 to witness the tests. Unna was a civil engineer by profession and an experienced mountaineer and member of the Alpine Club. He was also recognised as an expert on alpine equipment and took a great interest in all the mechanical gear for Everest. While they were there Dreyer easily convinced Finch that the use of supplementary oxygen should receive serious consideration for an attempt on the summit. Finch stayed overnight in Oxford so that experiments could be carried out on himself in the decompression chamber next day. Finch was decompressed to 21,000ft and exercised both with and without supplementary oxygen. Obviously his performance was much better with oxygen, but the experiment was inadequate as a method of assessing performance on Everest, since it made no allowance for acclimatisation. It was later shown in the course of Operation Everest I in the United States in 1946 that, after acclimatisation over 30 days, man was indeed capable of an 'ascent' to the summit of Everest without oxygen;

whereas if he was taken too quickly to that altitude he would become unconscious and die. Finch was examined medically prior to the experiment and found to be perfectly fit. This finding was at variance, however, with that of a Harley Street doctor used by the Everest Committee, and Finch was rejected for the 1921 expedition. (The whole episode is dealt with in detail in Scott Russell's memoir of George Finch.⁷)

This Oxford episode alerted the Everest Committee to the likelihood that supplementary oxygen should be taken for the attempt in 1922 (the 1921 expedition being a reconnaissance only, supplementary oxygen would not be required). Their view was supported by the extreme breathlessness of the climbers above 22,000ft in 1921. Though Mallory and Bullock climbed in that year to the North Col from the East Rongbuk glacier in only a few hours, in general the rate of ascent of most mountaineer's at altitude was slow.

The result was that in January 1922, Farrar and Unna, with Finch and Somervell, who were both prospective members of the 1922 party, visited Oxford again. Finch and Somervell were decompressed to 23,000ft and exercised at that altitude. Somervell nearly became unconscious and oxygen had to be forcibly administered to him. Immediately on return to London a detailed report was submitted to the Everest Committee to the effect that supplementary oxygen should be used on the 1922 Everest expedition. A considerable amount of work was carried out with the help of the Air Ministry and other organisations. A flow rate of 2.0 to 2.4 litres of oxygen per minute was decided on, and oxyliethe bags for use at rest, together with other remedies for mountain sickness, were sent out. These included morphia and bicarbonate of soda, and also garlic either breathed through the nose or taken as a flavouring in soup. Liquid oxygen was also considered but dismissed as too expensive.

Before the departure of the 1922 expedition, the general feeling seems to have supported P J H Unna's view that 'an ascent [of Everest] is not likely to be made without an artificial aid to respiration'.⁸ It was to be another 30 years before Griffith Pugh showed, in 1952, that a flow rate of 4 litres per minute was necessary to compensate for the weight of the set and provide a boost to climbing rate. How this discovery culminated in the successful ascent of Everest in 1953 was fully explained in 'The Contribution of Medical Science to the First Ascent of Everest' in the 1993 *Alpine Journal*.⁹

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