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MOUNT EVEREST

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I DO not think that the exploration and attempted ascent of Mount Everest have ever before formed the exclusive subject of a paper at the Royal Geographical Society. This does not mean that the Society has never before interested itself in the Mount Everest group as a possible field for exploration—very much the opposite—but that never before has its exploration on a great scale been seriously taken in hand. It is probably known to all here that an ascent of Mount Everest and the exploration of the northern slopes of its massif, form the object, probably, and with luck, of the next great undertaking of this Society.

The history of all previous attempts to explore this region has been disappointing to its promoters. Political difficulties on each occasion have stood in the way.

It is necessary to give a short account of previous attempts. I believe the very first time such an expedition was mooted was in the following circumstances: but I must of course point out that I do not now refer to the immense attention which had before, and has since, been paid to the great mountain, its measurements, the arguments over its name, and its visibility from different localities; I refer strictly to proposals to get on to the mountain itself, and on to its satellites.

In 1893 I took part in a mission which was sent to Chitral from the Gilgit agency, to place a new ruler on the throne of that turbulent state. The mission was under the leadership of Sir George Scott Robertson, the explorer of Kafirstan, and later the defender of the Chitral fort. Its second in command was Sir Francis Younghusband. I had lately joined the Gilgit agency as Special Service Officer from Sir Martin Conway's expedition to the Karakoram. We talked over numerous projects, the most favoured and most sporting being an attempt to reach Lhasa *viâ* the headwaters of the Yarkand River, under the leadership of Sir George Scott Robinson and Macartney from Kashgar.

The second proposal was one that particularly appealed to myself, and I think also to Sir Francis—the Everest group. It is a far cry from Chitral to Eastern Nepal and the Tingri Maidan, but had not Sir Francis

himself come all the way from China through the howling Gobi Desert and over the Mustagh Pass in the Karakoram to boot? What is distance, anyhow? I think we finally attached our Everest expedition as a fitting end to the Lhasa expedition, but am not quite sure on this point. At any rate, after sympathetic letters had passed from Simla, all our plans were stopped for the usual political reasons. Subsequent exciting times on the Frontier and the exigencies of the service separated the leader and his humble and junior assistant.

Before the next proposal for an expedition was made there was a very big gap—no less than from 1893 to 1907—and in the interval the Tibetan expedition had taken place; Lhasa had been reached by British troops; and Colonel Ryder's and Major Rawling's magnificent journey up the Brahmaputra had been made. Our knowledge of the north side of the Himalayas had been vastly increased. Of course, this expedition is inseparably connected with the name of Sir Francis Younghusband. Curiously enough I found myself in Chitral again at that very time, and I think the President will remember an urgent appeal from Chitral to join him. I actually received an answer that I was too far off.

The next attempt was mooted in 1906. In that year I was at home, and suggested to Mr. Mumm one evening when we met at the Alpine Club that he should really come out to India and see the Himalaya. If the Himalaya, why not Everest? Dr. Longstaff was approached, but I fancy the idea had already attracted him, although at that time he was mightily occupied with his favourite Garhwal. We soon formed ourselves into a committee of three, and elected each other as the sole members of this expedition. I must say that it would have been entirely due to the generosity of my companions that the expedition was rendered possible.

We then naturally approached the Geographical Society, and were in every way most enthusiastically treated by Sir George Goldie, the then President. Not only did the Society make us a liberal grant, but the President took infinite personal trouble to obtain for us the sanction of the Secretary of State for India. From the Government of India itself we also received every encouragement, and were informed that if we could obtain the sanction of the Home Government, the Government of India was prepared to assist us in every way. There is no doubt that we could have counted on assistance for supplies from the Nepalese Government, although at that time it would have been impossible to have proposed passage through Nepal territory.

Our project was precisely the same as that now proposed, and I will roughly indicate it: to cross into Tibet to Kampa Dzong, and then proceed *via* the Tingri Maidan to the north of the Everest group, and thence make our attempt to climb Everest by the northern slopes. We should probably not have succeeded, but we should have gained experience which would have been of value to subsequent expeditions. This route has now been clearly shown to be the most convenient, for it must be

remembered that we then wished, and now hope, to establish a base as high as possible, and as near as possible to Everest itself, and that that camp should be replete with every mountaineering comfort. After all the route to it is but 120 miles from Kampa Dzong, and our main interest should be the avoiding of all unnecessary exertion and difficulty until that camp is established. After that time the intensely interesting country, including the gorge of the Arun River, and mountains east and west of Everest could, I hope, also be explored.

We had certain advantages. We had engaged the two Brocherel brothers, than whom no better guides have ever travelled abroad. They had both been with Dr. Longstaff in Garhwal and Tibet, and had undoubtedly with him reached 24,000 feet on Gurla Mandhata, which, if they had had facilities for measurement, would in all probability at that time, and until the date of the Abruzzi Karakoram expedition, have been the highest point attained, its only rival being the unproved but probably correct ascent of Kabru by Graham. We also had a good train of Gurkhas already ear-marked. What we had not understood, however, was the necessity for a full preliminary exploration, which is now amply made clear.

It was not to be, however. Lord Morley, the then Secretary of State, was averse to our entering Tibet at all, as being contrary to the lately completed treaty with Russia.

Owing to the kindness of Lord Minto, this expedition was directed to British Garhwal, and resulted, among other things, in the climbing of Trissul by Dr. Longstaff, the two Brocherels, and Subadar Karbir Burathoki (5th Gurkhas).

In the following winter I found myself the guest of Colonel Manners-Smith, the Resident in Nepal, and had several talks with the Maharajah, the Prime Minister and Marshal of Nepal, who was very much interested in our last attempt, and, after much talk, himself proposed a joint Anglo-Nepalese expedition, which should enter Nepal *viâ* Hanuman Nagar and march *viâ* the valley of the Dudh Kosi. Naturally I was overjoyed, and, with the assistance of Colonel Manners-Smith, approached the Government of India on the subject. Correspondence ensued.

I must mention that previous to this the Nepalese Government had given leave to the Government of India to send a surveyor of the Survey Department to explore the upper Dudh Kosi, and, I believe, determine if possible whether Mount Everest was actually in Nepalese or Tibetan territory. This is still a doubtful point. But the two passes, the Pangu La and the Popti La, respectively 20 miles west and east of the mountains, are claimed by the Nepalese. Beyond that, the report of his explorations would have been of the very greatest assistance.

I must mention that Maharajah Sir Chandra Shamsher Jang, the Prime Minister, though by far the greatest force in Nepal, is not an autocrat, and that he has to be just as careful of public opinion as any

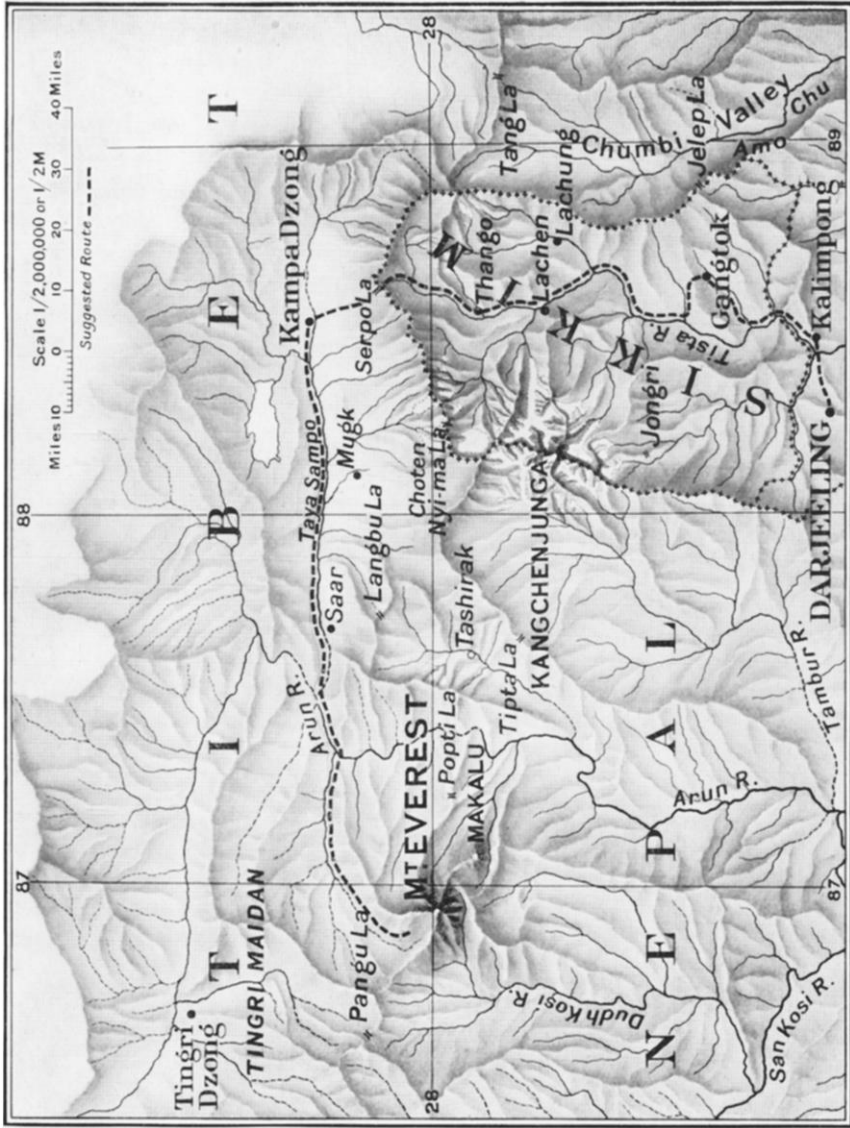
one else in a similar position. The result was that, as my preparations proceeded, so was the scope of the expedition cut down, until I was finally reduced to a three months' rush across the frontier, and a maximum of twelve coolies. My original proposals had naturally been for a sufficient though, knowing what to expect, not an ample outfit. I promptly accepted, hoping to get at least a photographic record of the greatest interest, but seeing that I was not to be put off, a final telegram came saying that the expedition was unadvisable.

Public opinion in Nepal means that of the Kshettriya nobles, and cannot be despised; and even though the Maharajah himself was in favour of it, it would have been quite impossible for him to have gone against the ingrained prejudices of his Darbar; of that I am certain. But so long had been the negotiations, and so many times had I cut down my requirements, and yet so near was the date for my start, that I was actually waiting with my modest camp packed when the final telegram arrived. An outlet was required, so I cut down something else, to wit my leave, could take only a month, and hastened to Jongri in Sikkim at express speed in the vain hope of seeing some of the glaciers that descend from Kabru and Janu. But my luck was out that year, and not for a moment did the mist lift or the snow and sleet stop.

Our present proposal is based on the same plan as that of the 1907 project, but we intend to go much more thoroughly into it. It is hoped to make a thorough reconnaissance of the upper Tingri Maidan and of the country surrounding the northern slopes of Everest. There are certain ridges to be crossed. The upper course of the Arun River must also be crossed, and our whole outfit and main base established as near the great mountain massif as is possible. We also have to organize our transport, both men and animals, and it is hoped to train a team of porters for the exploration of the upper snows. In some ways the country enjoys a great advantage, in that it is in all probability not too difficult for yaks. We hope by their help to carry our main camp, or from the main camp to push higher ones, to over 20,000 feet, from which point we must depend on men; and that is one of our most serious difficulties.

We hope to be able to sufficiently interest the Government of India, so that they will place aeroplanes for reconnaissance at our disposal. Whether it would be possible for aeroplanes to land safely, and having landed, to rise again, must be left by mé for experts to decide. Naturally, if this could be done our whole arrangements would be simplified mightily.

I am pretty certain that Nepal would be willing to help us by sending grain and food, either over the Popti La, or the Pangu La, or up the Arun River. Before they could arrive we should have to make very careful arrangements for meeting them. There are however known passes into Tibet through the Nepal Himalaya, and therefore no great



SKETCH-MAP OF THE NEIGHBOURHOOD OF MOUNT EVEREST

Everest

Makalu



MOUNT EVEREST FROM SANDAKPHU, 16 MILES WEST OF DARJEELING

Tele-Phot. by Mr. J. Burlington Smith, Darjeeling

difficulty should be experienced in communicating with them, especially with the help of an aeroplane service. The whole of these questions will be gone into thoroughly, and tested during the preliminary reconnaissance.

It does not by any means follow that during the reconnaissance ways and means of approach, camping grounds, aeroplane service, landing grounds, establishment of depôts, etc., will be the only work to be done. We must also thoroughly train and test our teams, and we must also test our men. As much as possible of the lower slopes of Mount Everest itself should be thoroughly explored, and also, if possible, the final line of advance actually determined. We should see how far we could expect to push our camps. We have a good deal to go into in all this, but not too much by any means. We know that in not too difficult ground sufficient equipment can be carried to 22,000 feet, because it has been done more than once; but against that we know that on the Duke of the Abruzzi's highest climb the pace of a very strong party, to wit that of the hardest Italian guides, and the Duke himself, was near 250 feet per hour. We want to push camps to at least 25,000 feet, or higher, if possible. Now no one can say that the Duke's party was overworked. It was a splendidly fitted out expedition with ample means, and therefore with ample portage and the best of food—two most necessary conditions if great things are to be done well. Therefore the members were not worn with much preliminary toil, but should have been at their best when the final test came. Yet we see how slow their progress was. His actual rates were as follows: from 23,000 to 23,450 the rate was 396; between 23,450 and 24,250 it was 273; and the last stretch to 24,600 was at the rate of 160 feet per hour.

Our task is to put camps higher than the highest already attained by unladen men, and to produce our climbing party at the top of its form at these camps, and it is for this reason that we must take the greatest care to have adequate carrying power, well clothed, fed, and trained.

When one looks at the north ridge of Mount Everest, it appears not too steep, but one must also take into consideration the climate of Tibet. Sir Francis Younghusband tells me that in the height of the monsoon season the northern face was nearly always clear. The climate of Tibet is notoriously dry, and the sun notoriously strong. The result of that combination is that the face will almost certainly be largely ice. It will be very lucky if it is not so. That will be a very great difficulty, as ice invariably means hard work, and that is the one thing we do not want. What we want is continual fine weather and firm snow. Our other great danger is too much wind; that also may possibly be a serious difficulty.

One of the most important tasks for the reconnoitring party to undertake will, of course, be to find the easiest way which leads from Kampa Dzong and over the Tingri to the foot of Everest. We are not quite clear how far to the north the great gorge of the Arun river extends, but we

do not want to be involved in the hard work of crossing high ridges and descents, when probably by travelling further to the north we could advance on much easier ground direct to our objective. From the map we now have it seems as if to avoid the ridges it will be necessary to pass well to the north, and the easier our route is, the longer we shall be able to do without man carriage and to employ our yaks. It might even be worth while to carry a certain amount of fodder for the yaks, if the scanty herbage on which they seem to thrive gives out, and if the ground is still possible for them. Naturally, having pushed our yaks to the greatest extent, a base would be formed and the yaks would return to feed, and to get into condition again for further efforts, or to return for further supplies.

In order to make the most of our British climbers, we must have, as I have said before, a properly trained team of porters. This is a very important part of the expedition, and therefore it would be well to review the subject of Himalayan porters in general and the work that they have done for numerous expeditions. Almost always one finds, on reading accounts of Himalayan travel, that difficulties have arisen over the coolies. Some well-known explorers have apparently met continuous difficulty. One exploring party invariably has done so, and I am afraid not without reason. Here is an extract from one of their works which speaks for itself. "We were told that as the natives had been starved for two and a half years they were anxious for work; but this does not appear to be the spirit at all." Starvation certainly does seem an excellent preparation for about the hardest work a human being can do.

Naturally, if the Himalayan is to be explored at all, assistance must be given in obtaining porters. The result is that every able-bodied man from the local villages is usually roped in by the civil authorities, and more or less obliged to go, nearly always against his will, certainly against the will of the majority, to carry loads up into the snows at a stated and quite inadequate remuneration, for a more or less protracted period, according to the locality. If, however, the traveller confines himself to well-known passes, and holds out hopes that his men will be back home in a few days, and, above all, if he requires few men, there is usually very little difficulty in obtaining sufficient, especially for non-ambitious journeys.

I will give an illustration of what I mean. The village of Askoley in Baltistan, which is the last village in the direction of the Biafo, Punmah, and Baltoro glaciers, is emptied by every explorer in succession completely, and usually the villages a little lower down as well. Eighty per cent. of the inhabitants loathe going on to the ice. They are indifferently clothed, have to live over-hard, even for them, and if there is bad weather have a miserable time; there is naturally no incentive that they would care twopence about. Naturally they do everything possible to lighten their work and get away. Mr. Montagnier of the Alpine Club gave me

an amusing account of his arrival in 1903 or 1904. The whole village took to the hill on his arrival, and refused to come down, and from this elevated spot showered stones and abuse on him and his emissaries. "Here is another infernal traveller on his way to the ice."

The Balti is a hardy, very simple, but a rather low-couraged and depressed specimen of humanity. For their trouble they have received very little besides abuse from any one. But it is really wonderful what has been got out of them. Dr. Guillardod, in his excellent book on his exploration of K₂, states that his Balti coolies served him well, although many of them were barefooted; they made boots out of raw sheepskins for glacier work. He apparently had little difficulty during the five to six months that he employed them.

It has been the same all through. The porter difficulty has required right handling. When their employers have done their own obvious duty by their coolies the men have played up in a wonderful way, and, considering that they have little interest and small reward, have often shown themselves good sportsmen. But the view that on a climber's arrival in a Himalayan village, all the young men, most of the old, and some of the boys, will shout, "Hurrah! here's another chance of sleeping on the ice and eating chupatties a week old," should be eliminated.

With regard to the resistance of Himalayans to cold, the average can stand greater exposure with his scanty clothing than the average European under the same conditions of clothing. Tibetans undoubtedly can. But great cold, night after night, reduces condition and vitality, and we are out to produce our carrying train at great heights at the top of their form.

May I quote an extract from a book I wrote on Himalayan travel to show my views on the subject?

"We had our special outfits, the best of clothing, sleeping-bags, thermos bottles, and boots and light tents, and even then we all suffered considerably from cold. How could the wretchedly clad local man be expected to lie out at 18,000 feet in the snow on May the 20th, and, even if he survived, be worth anything the next day? I have on many occasions seen natives sleep in the snow with the one blanket that they carried with them as their only coverlet, but not at such a height nor so early in the year. I have also been on expeditions in which our numerous coolies slept packed together in a tent with no more cover, and lived on the lightest food; but such exposure would take it out of the strongest and best-nourished man. I believe there have been several criticisms on the local men by Europeans and other travellers, who have been hurt and disappointed because the natives failed them after several days of this sort of thing, 'although,' as they said, 'we provided them with tents.' In fact, when I creep into my Mummy tent and take my boots off and pull on a pair of special long sleeping-socks over my dry stockings, and put on a dry shirt and pull down my Balaclava cap, and then creep into my swan's-down sleeping-bag and finally have a nice hot pull out of my

thermos bottle, I have often wondered myself why the coolies should complain of feeling unwell in the morning."

Properly treated, real good men can be got anywhere, and, if we take the trouble, no better than from Eastern Nepal and Sikkim; but it must be made worth their while. Good men must be got, well clothed, well fed and trained, and above all made to take an interest in the proceedings. It must be thoroughly understood that invariably the local superstition about the mountains will play its part. I have had it said to me on several occasions that Kangchenjunga always claims his man, and that after that its explorers are all right and are safe enough. Kangchen naturally has its especial god. You can see pictures of him in any Sikkim monastery.

Now I have travelled with every conceivable porter in the Himalaya and Hindu Kush, from Kalash Kafirs to Tibetans, and I must place first of all Hunza-Nagaris and Kanjutis, and Tibetans of whatever class I have employed, Sher Pas especially, for high expeditions; but I have had excellent experiences with many other types as well. If one gets the right men, and above all gets their confidence, one can get together splendid teams of carriers in almost any part of the Himalaya, but one must accept them as one finds them, and not expect them to immediately fall in with one's own views about everything. They will try one's patience, that is a certainty. Their food arrangements will come at the wrong time, and irritate. All sorts of things will irritate, and will have to be borne philosophically.

Now what we want is a full team of specially picked Tibetans or Bhotias. I am all for getting a team of Sher Pa Bhotias. The Sher Pa is usually a Nepalese subject, and inhabits largely the high southern slopes of the Himalaya; there are many of them settled in Sikkim, and numbers working in Darjeeling. The advantage of the Sher Pa is that one has a greater hold over him than over the other Bhotias, with the exception of the Sikkim Bhotia, the Deng Jung; and I have always found him a sportsman. Many speak usually their own Tibetan dialect, and Nepali and Hindustani occasionally. These men should be directly in charge of their own sardars, but should have besides two or three young Gurkhas, N.C.O.'s of our Gurkha regiments, who would really be in charge of them. These N.C.O.'s should be of certain particular classes, besides being specially chosen for physique and cheerful dispositions. They should belong to the Low Church Party, not the High Church. I know at this moment three or four who would do admirably.

The Sher Pa team should be well clothed and booted, and among their duties the N.C.O.'s would have to interest them in the objects of the expedition, and awake an *esprit de corps*. The men must come back from their reconnaissance the first year, ready and willing to return and complete their work, and feeling keen and anxious to meet again the

members of the expedition, part and parcel of which they must feel themselves.

I know this can be done, and I give you one instance. In 1909, when I went to Jongri, nearly all my men were those who had been employed by Messrs. Rubenson and Monrad Aas. Now although we had awful weather and continual discomfort, these men were as keen as possible, and kept on urging me to go on; they said they were quite ready at any time to go up into the Himal. They were almost without exception Sher Pas, and came from the upper waters of the Dudh Kosi. All this speaks well for their previous experiences with Messrs. Monrad Aas and Rubenson.

Here is another way in which the Nepal Government could undoubtedly help. If we found difficulty in Darjeeling itself or from Sikkim in getting suitable men, they would probably be able to find us, and possibly pick for us themselves, a limited number of known good men. We must be liberal, however, in terms and outfit. After all, we don't want a very big team. The fewer permanent men we can get on with the better.

Take another instance, Dr. Kellas' Bhotias. No one could speak more highly of his companions than he does, and further he gives them credit for wonderful powers at high altitudes. He states that his coolies above a certain height, 22,000 feet, even with light loads, were 30 per cent. better than himself even without any load at all. Now these coolies were often obliged to put up with very short commons of indifferent food, and yet they stood the cold down to 29 degrees below zero Cent. without harm. I wonder how many times they have come back to him. Not only did they travel with him in their own country, but the only time I met him, on his way to Nanga Parbat, which lies on the Indus in the Gilgit agency, and is, as every one probably knows, the actual western extremity of the Himalaya proper, they were with him then, very very far from their own country. Now Dr. Kellas does not travel luxuriously, and he makes his men work, and work mighty hard. But he does it correctly, and his especial men he develops in a wonderful way.

We have greater attractions to offer, and bigger aims, and if during the reconnaissance our carrying team is well run, when called upon for the actual attempt it should be more than willing, well-trained, and reliable; and we should ourselves feel that at any rate we shall be able to establish and ration camps as high as it is humanly possible to place them. Looking back over the record of the greatest heights at which climbers have had camps established, we find that on a few occasions camps have been carried to over 22,000 feet.

Having now more or less disposed of one of the important elements of the expedition, let me proceed to examine the chances that the climbers will have of actually reaching the summit of the great mountain itself. We really know very little of its geography. We have a distant picture

of its northern ridge, far the most promising part of the mountain that has yet been seen. It however causes one to think ; there are evidently portions of it which are steep, and we have to think out our camps. Very much will depend on what that ridge usually is. Will it be ice, or firm snow, or soft snow? This last is terrible at great heights. It is what stopped the Duke of the Abruzzi.

Let us review what has already been done. First and foremost, as being in my opinion the feat of the greatest endurance that has yet been accomplished, and which leaves us full of hopes : not the climb of the Duke of the Abruzzi, but Dr. Longstaff's attempt at Gurla Mandhata in 1905. To begin with, I am convinced that 24,000 feet was to all intents and purposes reached, and may have been passed. The height of the mountain is probably 25,850 feet. They had had a week or more of the hardest work, during which they had twice reached at least a height of 22,000 feet, the last time carrying their own camp to at least 20,000 feet themselves. On the day when they made their final attempt they got on to some treacherous snow which gave way and carried them down in a great avalanche for 1500 feet, successfully jumping two small cliffs. Finally, by a supreme exertion of strength on the part of one of the Brocherels, they managed to extricate themselves. After a little time, having recovered, they proceeded with their attempt, and found a better route, spending a night in a hole in the snow with a minimum of food and naturally no extra clothing. They continued the ascent next morning, and only owing to extreme fatigue and to headache, induced by the loss of at least two hats, were then compelled to give up, having, according to their rather modest computation, reached to within 1500 feet of the summit, and hit on the exactly correct route.

Now this is not the right way to prepare one's self to conquer a great peak. I am certain that, if they had been fresh, had had ample time and provisions, instead of having to travel hard to catch up their main camp, they would have succeeded in reaching the actual summit of Gurla Mandhata, and have established a record which would have remained to the present time.

As a matter of fact Dr. Longstaff was travelling hard, being attached to Mr. Shering's mission, and, in my opinion, not prepared from that point of view to tackle a mountain of the first class, and not at all prepared with food, from what one might call a professional trainer's point of view. Further, nearly the whole of their reserve of strength must have been expended in those marvellous moments on the avalanche, and during that terrific night. I place their performance as the one which gives us most hope, but we must take care to eliminate the little jokes they indulged in, and have a more normal outlook.

Our model should be the next on the list, the Duke of the Abruzzi's : a model from any point of view, whether of reaching a great height, or of scientific observations, or of dealing with the natives. Remember I

merely say a model. I do not say that it was necessarily economically carried out, or that the over-payment of the Balti did not make it difficult for more humble travellers who followed after, but a model for Mount Everest, in that it was completely and well equipped, was composed of first-rate men only, whatever their business on the expedition was, and that no effort was spared to render everything adequate to obtain the required end.

Again Alexis Brocherel was of the final party. They reached a height of 24,600 feet, and this is up to the present time well the highest measured point attained. Further, they took native porters up to a height of 22,500 feet, and their men remained there under very adverse conditions of weather for many days. They themselves were terribly hampered by bad snow. Given a fair chance, with a fortnight's good weather, and in consequence good going, and there is no doubt a much greater height would have been reached. Possibly even Bride Peak itself would have been climbed. It is well and often said that the easiest mountain may be rendered impossible by bad weather, and soft snow is one of the greatest possible enemies at a great altitude. It will be seen that their pace was slow, about an average of 250 feet per hour. They were evidently nearly at the end, and had little chance owing to the softness of the snow: a possible, though not so likely, condition that may also be found on Everest. Here we have an expedition run on entirely different lines from Dr. Longstaff. Their food had been packed in special tins. Each tin contained a balanced diet for so many people, as should be done by us as well. They had not been, or ought not to have been, worn out by too much hard carrying of their own camp at high altitudes. Their route also was not too difficult; it is almost certain it was due to snow conditions that they did not attain a much greater altitude.

Next I place bracketed the climbing of Trissul (23,400 feet), Messrs. Rubenson and Monrad Aas on Kabru at 23,800 feet, and Dr. Workman's climb of 23,400 feet on a ridge above the Chogo glacier in Baltistan.

On the first great climb there were again Dr. Longstaff, the two Brocherels, and Subadar Karbir Burathoki of the 1/5th Gurkha Rifles, who had been with Sir Martin Conway's Karakoram expedition and his journey in the Alps "from end to end." A high camp had been made at 20,000 feet, but a hurricane confined the expedition for thirty hours to their bivouac tents, and obliged a descent to 17,400 feet, and a re-ascent for the climbing party from that comparatively low elevation. I do not include hurricanes in my preparations for a model expedition, or as a training adjunct: hurricanes sap the strength, and don't improve it. This one compelled a descent and re-ascent, also undesirable. Finally the climbing party ascended from about 17,500 feet, climbing over 6000 feet in a day at a great height, a notable performance. The condition of the snow was good. Messrs. Monrad Aas and Rubenson's attempt on Kabru

was probably as noteworthy. There was no professional assistance, and only a scratch but very successful team of Bhotias. Kabru is immensely fatiguing, but not difficult. This climb is noteworthy by reason of the amount of baggage taken high, and the cheerful and willing co-operation of the Sher Pa Bhotias.

There have been other noteworthy high explorations which give us hope, and also point their particular lessons. Such is Slingsby's attempt on Kamet. He reached a very great height under the most adverse conditions, with unwilling and frightened Marcha Bhotias and bad weather. It must be admitted that the Marcha Bhotias' foot gear is the very worst for the mountains I have ever seen, giving no hold in the snow, nor any protection. From the point he reached, Kamet would probably have been climbable by a fresh party; but Slingsby was quite played out, and did not recover for a year afterwards. He was a complete enthusiast, and a thorough sportsman in the highest sense. Himalayan exploration suffered a very great loss by his early death, and that of his cousin, Major Todd, of the 5th Gurkha Rifles.

Dr. Kellas' innumerable Himalayan expeditions are as important as any—notably his ascent of Pawhunri in northern Sikkim—and no one has done better work than he, or knows more about the effects of high altitude on the human frame. He has just lately been making a second visit to Kamet, and the result of his explorations and physiological tests will be of the utmost importance to the Mount Everest expedition, both in making its preparations and in its subsequent conduct.

We have also the climbs and explorations of Mrs. Bullock Workman and her husband. No one has travelled more consistently, but I do not think there is much in their experiences which will be of special use to us in our contemplated expedition.

Such was the position when I finished writing this paper, but during the last two days the following information has been received. The saddle reached by Mr. Meade during his explorations and attempts on Kamet in 1914 has been officially measured by the Indian Survey Department and turns out to be no less than 23,500. Mr. Meade fully established a camp at this point, and this camp is by far the highest yet made, and it is also by far the highest point at which an explorer has passed the night. This comes from an officer of the Survey of India, who writes that this year Dr. Kellas with Major Morshead reached this same col, but was unable to get his coolies to the col itself, and therefore was unable to camp there. Since this information was sent Dr. Kellas has made yet another attempt to climb Kamet, and let us hope a successful one.

Two other performances to me are as important as any, not so much from the actual height obtained as for what it gives us a right to expect. First comes Mr. Mummery's final attempt on Nanga Parbat by its W.N.W. face. For forty-eight hours he and the Gurkha, Ragobir Thapa,

Makalu

Everest



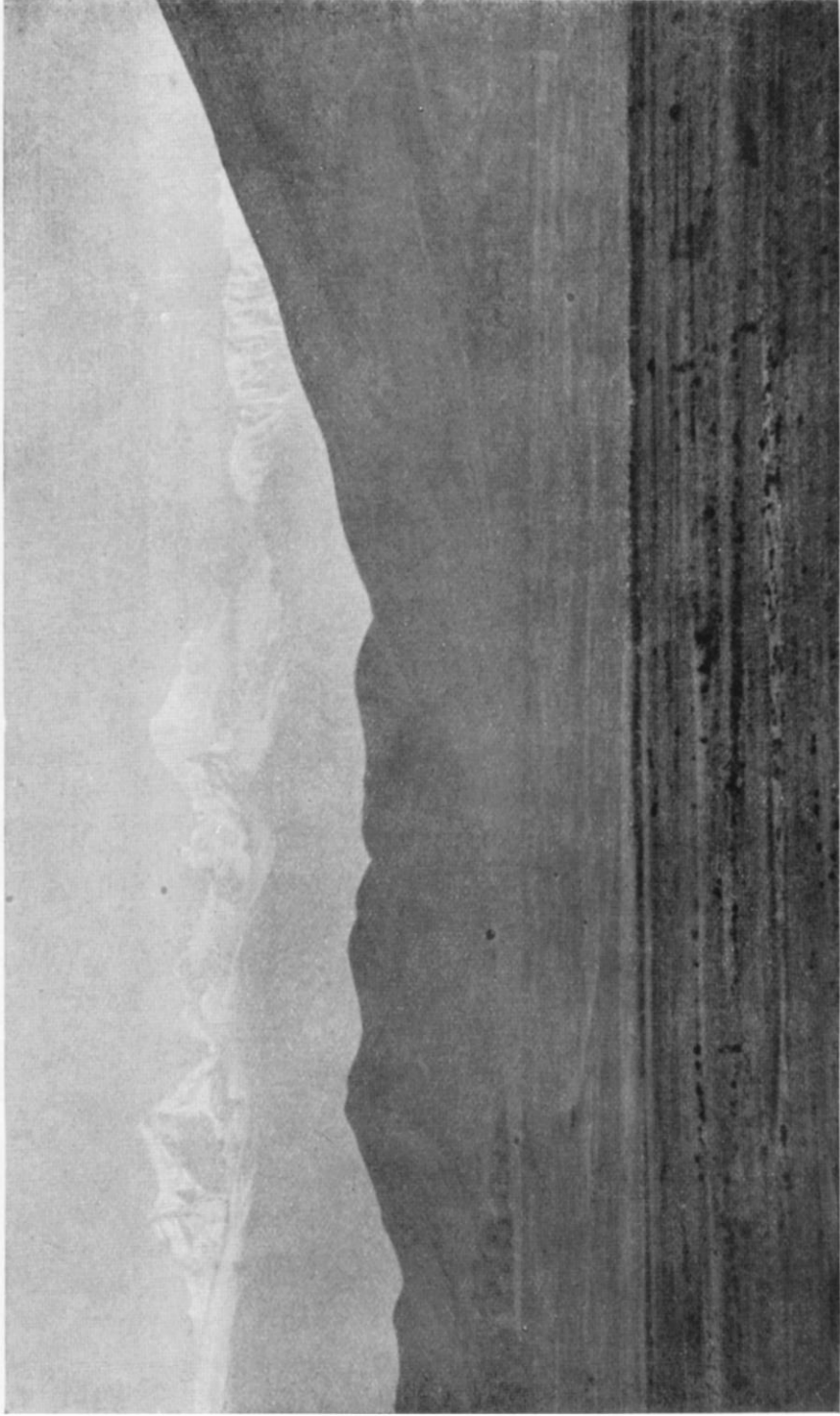
Arun Valley

MOUNT EVEREST FROM CHUNJERMA LA, 15 MILES SOUTH-WEST OF KANGCHENJUNGA

Tele-Phot. by Sign. Vittorio Sella on Mr. Freshfield's expedition to Kangchenjunga, 1899

Makalu

Everest



MOUNT EVEREST FROM KAMPA DZONG

Tele-Phot. by Mr. J. Claude White on the British Mission to Tibet, 1903.

were engaged in the most terrific rock climbing it is possible to imagine, and finally reached a height of 21,000 feet. The most desperate gymnastics hour after hour at this great height were a prodigious exertion. I put the difficulty of the climb as quite the equivalent of another 5000 feet of elevation on better ground, and I know I am not exaggerating at all. The second example includes two climbs by Major Todd, with Heinrich Führer, a Swiss guide, and the Gurkha Chandra Sing, on a mountain of the curious name of Mewakundini, which is just under 20,000 feet, which again entailed the very hardest gymnastics on both rock and ice; and another unnamed peak of about 21,000 feet, of less difficulty, but which they accomplished in rough weather at a pace which would compare favourably with the ordinary pace on a 10,000-foot Swiss peak. In my opinion both were remarkable athletic performances.

I give these instances as I know well the places where each was accomplished, and am able to judge. I consider it gives a very fair line on which to judge what we can expect from probably still better men, properly trained and taken care of, as our final climbing party should be on Everest.

Now we come to the constitution of the proposed expedition. It is to be a combined Geographical Society and Alpine Club party.

The Alpine Club members are to organize and carry out the actual climbing of the mountain. The Geographical Society undertakes the scientific side, and hopes for the co-operation of the Survey of India. There is of course great hope that functions may overlap, but it is also necessary that the climbing members should treat themselves seriously from their point of view, and whatever other work they undertake must, in their case, be to them a side show. The Geographical members may, and it is hoped will, assist in the climbing, but their side show should be the climbing.

There should also be a base commandant, who would be responsible for food supply for the porters, arranging for camps, etc., in fact a general utility man. He should also be general interpreter, and might with advantage be an officer of a Gurkha Regiment. I know, however, of one Indian civilian in particular who would fill the post very well.

Again speaking of our Alpine party, I am convinced that as few nights as possible should be spent at great heights. It is much better to come down as far as possible for a good rest, and re-ascend when fresh, than to try and recover from fatigue by lying up at a great height. The height itself is against recovery. It might, even if several attempts were necessary, be right to get the party back to such comparatively low elevation as 15,000 feet. Dr. Guillarnod's expedition passed, I think, a greater number of nights without descending than any other expedition, and were certainly badly affected by so doing.

I will bring this lecture to a close by referring once more to the name of Mount Everest. It would be a great misfortune if the present

beautiful and suitable name were ever changed, even although it is actually the name of a late and honoured Surveyor-General and not a native name. At the same time there is no harm in speculating on what the native name may be. It is doubtful if the actual peak has one at all. Colonel Wood has clearly shown that the name Gaurisankar belongs to another group, and there are no backers for Brian Hodgson's Deva Dhunga.

It is not true, though, that natives of Nepal have no names for single peaks, for any Gurkhas from Central Nepal are familiar with the names of Macchha Puchri, Dhaulasiri—or Giri, Chibchibia, and Gosainthan, and others. My Sher Pas from the Dudkosi, whenever I have questioned them, gave the name Chomolungmo for the Everest group: I thought at first for the actual peak, but I think now for the group. They also, and unshakably, called Makalu "Kamalung," except Darjeeling men, who knew Englishmen used the former name for the mountain. In fact, I have never discovered any one else who knew the name of Makulu. Mr. Freshfield quotes the name Chomo Kankar, probably also for the group, and there is no reason that shouldn't be right. His authorities were Colonel Waddell and Chandra Das. Major Noel also obtained what he believed was a local name, probably also quite correct. He obtained this on his journey in 1914 to find a short and direct approach to Everest from the east and south-east *via* Tashirak, an exceedingly ambitious project. It was a real bit of exploration, and I believe he traversed country not before crossed by an Englishman, and of intense interest.

There is a river in Nepal, one of the affluents of the Trissul, which I called the Dharmdi. I was told I was wrong, and that its name was the Dharmkhola. Di is the Maggar word for river, and Khola the Nepali. I give this instance to show how very easy it is to confuse local names.

Even if this proposed expedition finds its real name written clearly on the mountain, I hope it will take no notice, as I am sure you will agree that no name is so beautiful and suitable as Mount Everest. May the 2 feet never be cut off its 29,002! Luckily the loss is now rendered more difficult, as the latest computation credits the mountain with 140 more.

One final word. I am sure that whoever takes part in this proposed exploration will join with me in regretting that the late General Rawling does not form one of the party, for I believe it was his life-long ambition, and that in all probability if he had lived he would have been himself one of the actual leaders.

Before the paper the PRESIDENT said: In my Presidential Address this year I stated that the Alpine Club and our Society were interesting themselves in plans for the ascent of Mount Everest. Since then the Secretary of State for India has been good enough to receive a deputation from our two Societies

and to express his sympathy with the project. Colonel Howard Bury then on our behalf—though we acknowledge with gratitude at his own expense—visited India to explain our wishes to the Government. He was cordially received by the Viceroy, who recommended him to visit Sikkim and talk the matter over with the local officer. Unfortunately it has been decided that for political reasons the present is not a propitious moment for actually commencing operations. But in the meanwhile till the political horizon clears we may well occupy ourselves in reviewing the whole project, for it will never be eventually successful unless it is planned out with particular attention beforehand. Utmost care in detail must go hand-in-hand with boldness, and the ascent of Mount Everest, one will realize, requires boldness in the extreme.

First let me say a few words about the general idea of climbing Mount Everest, for I want to get the idea enshrined in the very heart of this Society. I have never myself been a peak climber or acquired the art of Alpine climbing, but I have had ample evidence of the practical value of mountain climbing. When exploring a new route across the Himalaya in 1887, I came to the Mustagh Pass. What carried me over was the remembrance of the deeds and example of Alpine climbers. As I looked down the awful precipice I had to descend, I confess I felt terror, and if I had lived a hundred years ago I should not have dreamed for a moment of attempting the passage. I should have assumed as a matter of course that it was impossible, but with the recollection of what Alpine climbers had done in Switzerland, and what sportsmen do in India, I pulled myself together, took the plunge, and got over all right. And having, through the example of the Alpine Club, successfully negotiated the Mustagh Pass, I was able in subsequent years to tackle many other unknown passes in the Himalaya. And having become accustomed to Himalayan passes, I did not hesitate to advise the crossing of the Himalaya even in the depth of winter when I was leading a mission to Tibet in 1904.

The high spirit of the Alpine Club thus percolates downwards till it reaches us lowly geographers, soldiers, and political officers, braces us up, and enables us to carry out enterprises we should, but for their example, never have attempted. The ascent of Mount Everest will have the same effect to an increased degree. Our forefathers were terrified of mountains, and called the most ordinary peak inaccessible. Nowadays we refuse to admit that the highest mountain in the world cannot be scaled, and the man who first stands on the summit of Mount Everest will have raised the spirit of countless others for generations to come, and given men a firmer nerve for scaling every other mountain.

A further good result will follow. The ascent of Mount Everest will be preceded and followed by ascents of numerous other Himalayan peaks, and as we pit ourselves against them, we shall get to know them better, and as we get to know and understand them, we shall finally rid ourselves of the ridiculous idea of the littleness of man in comparison with mountains. We shall realize that man is incomparably greater than any mountain, but at the same time we shall see a beauty in these mountains which only those who have wrestled with them ever see. The beauty of the Alps was never properly appreciated until men climbed them, and it will be the same with the Himalaya: as we climb the Himalayan peaks and get to know them properly, we shall begin to enjoy their beauty, and the enjoyment of their beauty is the second result, and one of inestimable value, which will follow from the ascent of their highest summit. I have said that the first man to ascend Mount Everest will raise the spirit of countless others. Much also to raise it was done by the first man bold enough to conceive the idea. That

man—as I told the Society three years ago—is General Bruce. General Bruce has climbed in the Himalaya for nearly thirty years, and is known from one end of these mountains to the other. What is more, he is known not only as a great climber, but also as a great companion ; in any party he joins he is the most loyal member of it. A further recommendation to us is that he is a son of one of our most distinguished Presidents, the first Lord Aberdare. On all these accounts we welcome him most warmly among us.

General Bruce then read the paper printed above, and a discussion followed.

The PRESIDENT: We are fortunate in having the Alpine Club well represented here this evening, by its President, Prof. Norman Collie, and two ex-Presidents, Mr. Freshfield and Sir Martin Conway. I call upon the President of the Alpine Club, who was one of Mummery's party to make the attempt on Nanga Parbat, and who can appreciate what mountain climbing in the Himalayas means.

Prof. NORMAN COLLIE (President of the Alpine Club): As you have heard, this expedition to Everest is to be a joint expedition of the Geographical Society and of the Alpine Club. Two things of course naturally have to be determined about Everest. Firstly, it is of the very greatest importance that we should know something more about that part of the world out of which springs this very highest spot on the globe, Mount Everest. At present we know practically nothing. No white man has ever been within 40 or 50 miles of Everest, and all the country round it is unknown. Secondly, people can be sent who are capable of showing how it will be possible to get to the top of this mountain. Naturally, I think it is a great prize for the Geographical Society to have almost within their grasp, this most interesting part of the world as yet unknown and unexplored, and I wish it was as easy for the Alpine Club to say that the winning to the top of Everest was as easy. It will need an immense amount of work, an immense amount of labour, and it will be a most difficult thing indeed to climb to this highest point in the world's surface. The President and the Geographical Society have taken a very great deal of trouble in order to make this expedition successful, and I certainly hope it will be started next summer. The first expedition will necessarily not have much to do with the climbing of Everest. The way there will first have to be found ; then, having got to the bottom of the mountain, a possible route up to the peak might be suggested. This will take quite the whole of the time of the first year's expedition. In the second year's expedition there will have to be a properly equipped climbing party. They will probably find that the suggested route may not be successful, and may have to change it ; that will mean that they will not have time to change their route in one year, but will have to come back another year, and therefore it is not one expedition, but many, which will have to go to Everest before anybody is likely to set foot on the top. One other thing : most certainly if any expedition is allowed to go into this unknown and forbidden land round Everest, the expedition ought to be a British expedition ; under no conditions whatever should the British Government allow other people to go there before us. After having waited so long for leave to approach Everest, I think we really have prior claim to any one else to go into that country. Moreover—and now I speak from the Alpine Club standpoint—it is the Alpine Club which has taught the way to climb mountains. Every other Alpine Club in the world, and most of the climbers of mountains, have been followers of the first members of the Alpine Club. It was the members of the Alpine Club that

first began serious climbing in the Alps, although De Saussure first went up Mont Blanc, and it was fifty years almost after that before any other big mountain was ascended, and even then no one really took up climbing as a serious recreation. The members of the Alpine Club first made climbing in the mountains a successful venture, and therefore I think under those conditions it ought to be not only English people, but members of the Alpine Club, who must have the first say in the matter of climbing Everest, the highest mountain in the world.

The PRESIDENT: I will ask Mr. Douglas Freshfield, who made that wonderful climb round Kangchenjunga some years ago, if he would address the meeting.

Mr. DOUGLAS FRESHFIELD: It is a great pleasure to me to see an expedition to climb the highest mountain in the world, which I have dreamed of for at least fifty years, carried into effect. I had hoped, but for the unfortunate interruption by the war of all our normal activities, that it might have happened during my own Presidency, but it is now a consolation to me to find it undertaken by a President who can bring more influence than I could bring to bear to overcome the initial difficulties—the official obstacles. I hope most heartily it may be during our present President's term of office that the summit of Everest is reached. I will condense what I have to say as far as possible. First as to season and weather. The shortness of the interval between the end of the monsoon and the first heavy snowfall is a very serious hindrance to mountaineering, at any rate in the Eastern Himalaya. Is it possible that in the early summer, before the monsoon, the ice and snow might be found in better condition? Again, it is doubtless true that on the north side of the range there is far less mist and snow than on the southern slopes; but Tibet is far from immune from summer snowfalls. The great storm of September 1899 covered the whole district north of Kangchenjunga about a yard deep in snow and put a stop to any high climbing—nearly put a stop to all exploration; and this year Mr. Raeburn, a noted climber who went out to Kangchenjunga, has, I hear, been similarly hindered. As to the effects of altitude up to 21,000 feet: few members of my party were seriously affected. I myself at the age of fifty-five experienced no more than a sensation of lassitude, just as if I had taken up a heavy knapsack. Dieting is very important. Improper food was one of the principal causes of the great suffering in the High Alps amongst the early pioneers—sufferings we hardly ever hear of to-day.

As to transport, my experience may be to the point. Our party carried the baggage of over fifty men, including provisions for a fortnight in advance, and heavy photographic apparatus over a pass of 21,000 feet, in the worst conditions, after a heavy snowfall which had spread from 2 to 3 feet of soft snow over the whole range. With all that General Bruce has said with regard to coolies I agree, but they have one regrettable failing: they hate getting up early in the morning, and are eager to have a hot breakfast before they start. The consequence is they often have to wade in snow which would have been hard a few hours earlier.

My next point is local topography; the nature of the approaches to Mount Everest. In the Eastern Himalaya on the southern slope you come to a point where glacial protection has ceased and erosive action by water and ice has had full play. In the Teesta valley this point is well marked; below it the river flows in a deep gorge, higher up through an open valley. There is probably a similar point in the Arun basin. Its situation should be easily ascertainable by aeroplane. Machines could fly up from the plains of India and back

again in the day: they might also be used for telephotographic purposes, and even possibly for dropping provisions at high bivouacs. As to the character of the climbing on the great peak, I have seen it nearer than most people, and I should be sorry to commit myself to any prophecy. The ridge from its northern shoulder to the top is, it is true, not steep, resembling seen from a distance that from the Aiguille du Gouter to the Dôme on Mont Blanc, but we know nothing of the middle part of the mountain, which in the Himalaya is apt to be the worst.

Last, as to nomenclature. I adhere firmly to the general principle that it is a mistake to affix personal names to great mountains. We should all have been sorry if Mont Blanc had been called Mont Paccard or Mont Saussure after its early climbers; and when the individual has no claim to connection with the peak the case is stronger. But I do not propose to reopen to-night an old controversy in this particular instance of Mount Everest. For I recognize there comes a time when the inconvenience of any change may more than counter-balance other considerations.

The PRESIDENT: We have heard of Captain Longstaff's wonderful climb. If he could give us the advantage of his experience we should be very grateful.

Captain LONGSTAFF: It has been naturally a great delight to me to listen to this paper of General Bruce's; it reminds me of a most happy six months with himself and Arnold Mumm, who was then Secretary of the Alpine Club, when we went to console ourselves with Trisul to celebrate the jubilee of the Alpine Club in 1907. We had hoped to go to Everest, but the lack of sympathy with geography of the Secretary of State for India prevented it. I am sure that every climber of experience agrees with General Bruce's thesis. There are many things one would like as a climber to say on these most interesting subjects, but there is not time, and there are others who have greater experience than I have. There are also many questions of great geographical interest involved. General Bruce objects to my slapdash methods of mountaineering. I will remind him of the crossing of the Bagini Pass in 1907, which I think bears a very fair comparison with the sort of thing he accuses me of. He will remember all about it. Of course, seriously, General Bruce is perfectly right. There can be no question but that with a mountain like Everest you must adopt Polar methods. The dashing at the first thing you see is a very pleasant pastime for youth, but it is not the way to get up any very high mountain. We must adopt these Polar methods. We must divide our work into at least two years; we must find out whether there is what we call an easy route up Everest. If there is no easy route we shall not get up it! Therefore it is most important—I wish, Mr. President, to make this point strongly—that in the first year, when the reconnaissance party is to go out, this party should include as many experienced climbers as possible, not with a view to climbing the mountain, but with a view to finding the route; without mentioning names, there are two members of the Alpine Club who are both officers of the Royal Engineers, both members of the Survey of India, both of the right age, who have both extremely good experience—varied experience of mountain work—and I think it would be a thousand pities, considering that you have two men like this in India, if they were not permitted to accompany the expedition, because we want trained topographers with mountain knowledge to tell us mountaineers at home whether a route is possible or not. Without there being any idea of these particular men doing the climb we must have as many trained topographers with mountaineering knowledge in the first year to give us some idea of what the mountain is like. Having done that, I agree with General

Bruce. We must have a gang of trained coolies. The best men I ever had were Bhotias from the north-west corner of Nepal ; and in Tibet on Gurla Mandhata they did splendidly. I do not think it is necessary to give high wages, but you must feed them well, and sleep them well, and blanket them well, and shoe them well, otherwise you cannot expect to get anything done. When you have found your route and got your porters together, then I think you must make a base camp as low as you can on Everest, say about 16,000 feet. Then with your team or teams of porters you have got to turn to Polar methods and lay camps ready for the actual climbers—say a camp between 21,000 and 22,000 feet for the climbers ; the coolies that make that camp may take two, three, four days, or longer, but the actual climbers will have to climb from 16,000 to 22,000 in a day, and the next day from 22,000 to 26,000 in a day. If they cannot do this, they won't get up Everest ! I am convinced, and my friend Meade too, I know, who has climbed higher than Trisul with guides and with native porters, will tell you he agrees with me, the longer you stay above 20,000 the weaker you are going to get. We do not believe in acclimatization in that way. Do not stay up—go up as often as you like, and then come down. There is only one cure for mountain sickness, and that is to come down. If they are going to take longer than three days' actual climbing they won't get up Everest ! I believe that the reason why the Duke of the Abruzzi went slowly on his final climb was that they spent too many days over 18,000. I can only refer to my own experience. On our ascent of Trisul, on the last day the successful party did 6000 feet in ten hours, 600 feet an hour. They came down 7000 feet in three hours. It is perfectly easy to come down—anybody can come downhill. Graham made the same progress on the ascent of Kabru. There is no reason, I believe, why climbers who have the necessary physiological attributes, not necessarily mere physical strength, if they are carrying no weight, if they have not to carry their food and tents on their backs, should be unable to climb at the rate of about 500 feet an hour. If they are not going to be able to climb at that pace they won't last out the cumulative trials of low pressure. But even in this case, the geographical results alone would be a full and sufficient reward for this most necessary venture.

The PRESIDENT: Colonel Wood was sent to decide whether there was any higher mountain than Everest at the back of the Himalaya. He found there was no higher mountain. He has seen Everest, I think, nearer than any one else, and we should like his account of what it looks like from the northern side.

Colonel H. WOOD: I was fortunate enough to be sent up in 1903 to investigate the nomenclature of Everest, and I was able to see the mountain for a short time then, and again with Colonel Younghusband, unofficially, I went, along with Ryder and Rawling, up the Brahmaputra, when we saw it from the north. It is fifteen years ago, and my memory of it is rather faint, but it certainly is a most stupendous undertaking to attempt to climb it. The gorges are very great, and I do not think there will be anything very easy in the route there, and therefore the reconnaissance is most necessary. Of course the geographical side is more interesting to me than the other, although I wish I was younger and able to attempt the climb myself. I am sure the Survey of India will give any assistance wanted. I hope, also, the Survey will be considered in the climbing, and one of our younger members will be allowed to go up. Prof. Norman Collie says it should be an English party, but I think a Survey of India one, as it is named after our original Surveyor-General. I

have been asked to say what I remember of the mountain from the northern side. It was generally rather cloudy, and there was a great deal of mist about, but there is no doubt it stands up a most enormous peak. It is, I think, on a spur about 20 miles to the north of the main range. You see it with all the big Himalayan peaks as a background, and it stands out by itself—an absolute giant.

Mr. C. F. MEADE: I am afraid I can claim only a very limited experience. I know only the district which Capt. Longstaff was first referring to. I agree very heartily with what he says, and especially about the speed of coming down. I may say that the thought of the rapidity with which, if necessary, one can come down again, is a perpetual comfort and inspiration. One has that great advantage over Polar expeditions in being able to come down again. I am afraid I cannot claim to have reached any much greater height than my camp on Kamet. We succeeded in camping at 23,500 feet, but the sequel is not very brilliant. We passed the night there and were ready to start the next morning, but the previous day we had had about 100 steps to cut in very hard ice, and I think no one who encounters much step-cutting at great heights has a fair chance of doing much. Another thing I have always found in June is that the snow has always been in a powdery condition, and this is extremely exhausting, and in my opinion likely to be prohibitive. I notice that Dr. Kellas and Capt. Morshead, who have just made their recent attack on Kamet, have reached the same saddle, though their coolies could not get the camp up to it. They had decent weather and did not find the snow bad. This may be due to the effect of the season, September, and I think September instead of June may be a more favourable month.

The PRESIDENT: The time is getting on and I must bring this interesting discussion to a close, but I should like, if I may be permitted, to make a few observations. General Bruce said that I told him we could see Mount Everest from Kampa Dzong during the months of July, August, and September. I remember perfectly well seeing Everest at a distance of 100 miles, and to my remembrance I could see it nearly every day, and I asked Sir Henry Hayden of the Geological Survey, who was there in September, and his recollection is the same. Nearly every day, certainly at the time we were there, Everest could be seen. That means to say that the monsoon did not fall upon Everest as it does upon Kangchenjunga and upon other Himalayan peaks. The fact is, as Col. Wood has said, Everest stands well back from the general line of the great peaks, and it has in front of it (and this is a very important point) two peaks of 23,000 and 24,000 feet which serve as a buffer in between it and the full brunt of the monsoon. That is rather a favourable point, for it means that it may be possible to climb Everest in the hottest months of the year, July and August. I want to say, and to say it with emphasis, that I concur with General Bruce that a very great deal can be made of these Himalayan people if they are properly treated. He referred to the Baltis and mentioned especially the village of Askoli. It so happened that the guide who showed me over the Mustagh Pass was a Balti and was from this very village. I engaged him in Chinese Turkestan, where he had lived for twenty-five years. He certainly was not pressed into the service, but came entirely of his own accord. When we came to a very nasty part where he might quite well have given up, he said "No," he had undertaken to show me over, and would not go back until he had carried out his undertaking. The Duke of the Abruzzi's experience was precisely the same as General Bruce's and mine, that an immense amount can be got out of Himalayan people if they are treated well, given a thorough interest

in the expedition, and, as Captain Longstaff has said, clothed well and shod well. If these matters are looked after, I am certain amongst these Himalayan people there can be got together a party of well-trained men who will form a carrying party for the expedition. As regards survey. One would very much hope that a member of the Survey of India should be the first to climb Mount Everest. There is no reason why that hope should not be combined with the President of the Alpine Club's suggestion that the climber of Everest should be a member of the Club. As Captain Longstaff has said, there are two very fine Alpine Club climbers already in the Survey of India, and the more members of the Survey of India who join the Alpine Club the better. Lastly, I should like to corroborate all General Bruce has said as to the Duke of the Abruzzi's expedition having been a model one. We could not do better than model our own expedition for Everest upon the model of the Duke of the Abruzzi's K_2 expedition. Now I will ask you to join with me in giving a very hearty vote of thanks to General Bruce for his valuable paper. General Bruce is one of those men who have explored most in the Himalayas, and all his observations upon the treatment of the people are of special value because he belongs to a Gurkha regiment, and no man knows how to handle people of the Himalayas better than he does. It is known probably to most of you that in the Gallipoli campaign his presence alone was considered worth a whole Brigade.

TOPOGRAPHY OF THE GOLD RANGE AND NORTHERN SELKIRKS, BRITISH COLUMBIA

Howard Palmer

ALTHOUGH the valley of the Columbia River north of Revelstoke, British Columbia, has been a route of travel for a century, and fifty years ago it was the scene of a full-fledged "gold rush," there is available no adequate account of its physical features. Bordered on the east by the outlying foothills of the Selkirks and on the west by the Gold Range, both of which occupied practically unmapped territory, it promised to well repay geographical investigation. The present paper aims to report briefly the results of a month's reconnaissance of the region made by the late Major Robert H. Chapman and the writer.

From Revelstoke on the Canadian Pacific Railway there extends northerly along the river for 117 miles "The Big Bend Trail." This is maintained by the Government for fire patrol purposes, and affords practically the only land communication with the district embraced within the great northerly loop of the Columbia. A ferry near the tip of the Bend enables connection to be made with another section of the Government trail that strikes the railway again at Donald. We were told that branch trails gave access to some of the lateral valleys, and by these we planned to penetrate into the Selkirks and make a plane-table survey of as much of the new ground as we could. We expected to extend the author's earlier surveys of the lofty Mount Sir Sandford district westerly