AERIAL VIEW of EVEREST from the WEST
Route from TIBET

North Ridge
North Col
South Col
Everest
West Basin
Ice Fall
Rongbuk Glacier
Rapiu La
Lhoiise
Nuptse
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Twenty-two photographs are reproduced by courtesy of the Himalayan Committee, and two by courtesy of the Swiss Foundation.

The endpaper map drawn by Robert Anderson is based on a model of the mountain by courtesy of Messrs Cockade Ltd.
CHAPTER I

The Way to Peak XV

Since the North Pole was reached by Peary in 1909, and the South Pole by Amundsen in 1911, one of the last great adventures left to man on the earth’s surface was the ascent of Mount Everest. It has proved also to be the toughest.

At 29,002 feet, Mount Everest is the highest mountain in the world. The height was discovered only one hundred years ago because the mountain stands on the frontier of Nepal and Tibet, which were then closed countries, refusing admittance to European expeditions. And as seen from India, Everest is not pre-eminent: it lies far back among a white tangle of peaks, many of which, being closer, look higher.

In 1849 the world’s highest mountain was thought to be Kangchenjunga (28,146 feet). Officers of the Great Trigonometrical Survey of India, under the direction of Sir George Everest, were that same year taking observations from the Indian plains and hills towards the host of peaks in Nepal. They wished to determine the altitude and exact position of each, and since nearly all were unnamed, yet had to be distinguished, they were each given a Roman numeral. One of them was titled Peak XV.

On Peak XV six observations were taken from different stations, but the results not computed until 1852. Sir Andrew Waugh had succeeded Sir George Everest as Surveyor-General, when one day at his office at Dehra Dun a computer rushed into his room. ‘Sir!’ he exclaimed, ‘I have discovered the highest mountain in the world.’¹ His Peak XV had worked out at 29,002 feet.

The mountain was given the name of Everest. Most unfortunately it was not then known that the Tibetans had a local name for it (appearing later in documents from Rongbuk Monastery): Chomolungma. This word has been translated as ‘Goddess Mother of the World,’ or as ‘Lady Cow’ (Jo-mo-glan-ma),

¹ See Appendix I (p. 207).
according to small variations in Tibetan spelling and pronunciation. At Lhasa it would seem that no name for the mountain is recognized as distinct from the mountain district in which it is situated. In the days of the early Tibetan kings (A.D. 650–800) a large number of birds were fed at the expense of the king in the southern districts near the Himalaya. For this reason, probably, official papers from Lhasa refer to the district around Chomolungma as *Lho Cha-mo-lung*, which means 'The Bird Country of the South.' The similarity of the two names appears to be accidental. (*Cha* means 'bird'—whereas *cho* is 'Lord amongst Gods,' and *cho-mo* its feminine. *Lho* means 'south' and *lung* 'country' or 'district.') However translated, Chomolungma is an excellent and appropriate name. But Everest is a good name too and for that we must be thankful.

The height given for the mountain was the mean of six measurements which, on account of atmospheric refraction, were necessarily inaccurate. The rays of light from a distant summit come to the eye of an observer not in a straight line but a curve; in consequence the peak seems higher than it is. The computers were found to have made too great an allowance for this source of error, thus reducing the height excessively. At a later date six additional observations were taken (from the foot-hills of Sikkim) and all twelve again corrected for refraction. The result gave a height of 29,141 feet.

This new height made no allowance for deviations of gravity. So huge is the mass of the Himalaya that it pulls all liquid towards itself just as the moon draws the tides. The liquid in the level of an observer's theodolite is thus drawn by the Himalaya, so that the instrument when set is in fact tilted slightly upwards. The result is that angles of elevation read off the instrument are too small. The greatest possible error from this source was reckoned by Sir Sydney Burrard as sixty feet. But later calculations suggest that the original estimate may after all be nearer the truth. The Indian Survey have rightly not changed the official height, because uncertainty must attach to any alternative height given. Observations are still liable to error. No solution has yet been found to the complicated problem of exactly determining

1 See Appendix I (p. 207).
mean sea level under the mountain by the separation of the geoid from the spheroid.\(^1\) The Survey, therefore, holds to the conventional figure of 29,002 feet.

At the date of Mount Everest's discovery mountaineering was in its infancy. Mont Blanc had been climbed in 1786, but few other great peaks had yet fallen. Not until 1854 can mountaineering be said to have developed in Europe into a sport. Then, in 1857, the Alpine Club was founded. Modern

\(^1\) See Appendix (p. 207).
mountaineering began. There followed a full-scale exploration of the Alpine world and one by one the great peaks yielded, rewarding the Alpinist with battle and beauty and the companionship of adventurous men. As they became familiar with the hills, mountaineers grew in skill and resolution; the techniques of rock-, snow-, and ice-climbing steadily advanced.

About twenty years after the formation of the Alpine Club mountaineering began to extend to the most remote ranges of the world. In the last decade of the century men began to think about Mount Everest. Was it climbable? By what way could one approach? Clinton Dent and General Charles G. Bruce, former and future presidents of the Alpine Club, aired these questions, but not until 1907 was a definite proposal made. To celebrate the fiftieth anniversary of the Club, Arnold Mumm wanted to make a first reconnaissance of Mount Everest. The moment seemed propitious. Sir Francis Younghusband had recently returned from his treaty-making expedition to Tibet and Bruce was free to organize in India. But the Secretary of State for India said ‘No.’ He was trying to conclude a treaty with Russia and wanted no suspicious movements reported from Asia.

In the course of the next five years repeated attempts to gain entry to Nepal and Tibet, for the express purpose of exploring Mount Everest, were made in vain by Bruce, Colonel C. G. Rawling, and Captain J. B. Noel. Then came the war. Immediately after it, in 1919, Captain Noel raised the matter anew at a meeting of the Royal Geographical Society. The proposal for an expedition had strong support from Captain Farrar, then president of the Alpine Club, and from Younghusband, who shortly afterwards became president of the Royal Geographical Society. They pressed the matter with energy, obtaining first the goodwill of the Secretary of State for India, then, in 1920, asking Colonel Howard-Bury to visit the viceroy of India to explain the project. Howard-Bury went. The viceroy heard the proposal sympathetically. By great good fortune his political agent in Sikkim was Sir Charles Bell, then at Lhasa and on excellent terms with the Dalai Lama. Bell was at once asked to request the Dalai Lama’s permission for an Everest expedition.
This he did and after careful consideration the Dalai Lama gave his consent. On 9th December 1920, he gave an audience to Bell and handed him a strip of brown parchment. It was the now historic pass granting entry to an expedition. Its preamble did full justice to the occasion:

'To the west of the Five Treasuries of Great Snow (within the jurisdiction of White Glass Fort, near Rocky Valley Inner Monastery) is the Bird Country of the South...'

The great news reached London in January 1921.

The obvious choice for leader of the expedition was General Bruce, whose goal for a quarter of a century had been Mount Everest. But Bruce’s military duties in England that year forbade his departure. Fortunately Colonel Howard-Bury was available. He was a mountaineer only in the broader sense of the word, not in the technical, but he did know mountains, Alpine and Himalayan, and his team was to be a very strong one. The purpose of this first expedition was reconnaissance. No explorer had yet been within sixty miles of Everest. It was essential to start off by examining the mountain from every aspect in order to discover the easiest route to the summit, and so not waste time, and perhaps human life, in trying the first route that offered while a better and safer one existed all unknown. Mount Everest, as seen from Sandakphu and Phalut, the peaks just to the north of Darjeeling, was evidently both a great and complex mountain. Even although the whole southern half was in Nepal, and therefore out of bounds, there was every reason to believe that a thorough reconnaissance of the northern half would be at least a season’s work. A full-scale attack up one selected route could then be delivered in the following year.

The climbing team was limited to four men: two veteran mountaineers of great and varied experience, and two younger climbers who, it was hoped, would be the nucleus of next year’s assault party. The first two were Scotsmen: Harold Raeburn and Dr. Kellas. Raeburn was a brilliant mountaineer. He had an outstanding record as a guideless climber in the Alps and had been on Kangchenjunga in 1920. Kellas had done more

1 See Appendix (p. 207).
high-altitude climbing than any other man alive, and just the year before had been to 23,400 feet on Kamet. His climbing had been done almost exclusively with Sherpa and Bhutia tribesmen, whom he himself had trained as mountaineers.

The two younger men were George Leigh Mallory and George Finch. Unhappily Finch was at the time unwell and his place was taken by G. H. Bullock, whose list of Alpine climbs accomplished was a long one. Mallory ranked as one of the best Alpinists in England. His easy rhythm of movement on rock was fascinating to watch—never was he seen to 'struggle.' He accomplished all with a grace that distinguished both body and mind. He wrote well and loved poetry. He set himself high ideals. His appearance was arresting, for he had a beauty of face enlivened by personal charm and an urgent vitality. Fortunately he appeared to be unconscious of these graces.

In addition to the climbers two scientists and two surveyors joined the expedition. A. F. R. Wollaston came as naturalist and medical officer, Dr. A. M. Heron as geologist, and Majors H. T. Morshead and E. O. Wheeler as surveyors. The party thus numbered nine all told. Early in May 1921 they arrived at Darjeeling, which lies above 7,000 feet in the foothills of Sikkim. Darjeeling is only a hundred miles from Everest as the crow flies; on foot the journey is nearer three hundred and takes four or five weeks. Several days had therefore to be spent at Darjeeling engaging porters and pack-animals for the long march. The porters were Sherpas and Bhutias, both of Mongolian stock. The Bhutias are Tibetan subjects, mostly from the Chumbi valley, whereas the Sherpas are Nepalese, although originally Tibetan. The Sherpas live in north-east Nepal in the mountain district of Sola Khombu, which lies close under Mount Everest’s south-west side. They are Buddhists and born mountaineers. The pack-animals were a hundred mules. Ponies, donkeys, and yaks were to be engaged at a later stage.

The expedition set off on 18th May. The route lay at first north-east through the steamy jungle of the Tista valley, over the Jelep La at 14,390 feet into Tibet, then down into the Chumbi valley and still north-east up to the watershed of the Himalaya, which it crossed by the Tang La at 15,200 feet. So
at last they came on to the great Tibetan plateau. Its southern part is set at a fairly uniform level of 13,000 feet, although it rises often above 14,000 feet. Here no trees grow, little rain falls, and the country is desert.

It would be hard to find a journey of greater contrasts than those presented to the first Everest expedition.

In Sikkim the party had travelled through long, deep valleys, congested with a heavy, tropical vegetation. Dense forests cover the hill-sides, and these are steep. Down in the valleys the air is damp and hot, but a blue and beautiful haze lies along their length and lends enchantment.

As they travelled up the Chumbi the scene changed. The Tibetan plateau is bare and boundless; at first it may seem bleak, yet it shares with all great deserts a clean spaciousness, which gives the traveller a sense of exhilarating freedom. The air is so extremely clear that one has no perception of atmosphere. During that dry first half of the year, not even the distant scene shows any tinge of blue in the shadows. Yet Tibet is a most colourful land. All the stones and rocks, the sands and limestone hills, are red-brown; although the hue is light it is maintained into the farthestmost distance, not just close at hand. This clarity of atmosphere is almost beyond the imagination of a European. Peaks forty miles away seem close and are likely to be a hundred miles if they form a background. One's eye travels across the red-brown sand to the startling white of the summit snows, and sometimes these are reflected from blue or pale green lakes at one's feet. Wherever there is water there too will be gay flowers, but even out in the driest ground some tough and more venturesome plant will always offer a bright new blossom.

Being big and spacious Tibet seems still and silent, which is one of the country's many paradoxes, for it is at the same time a land loud and alive with birds and animals. Roaming over the plains are the wild ass, the wild sheep, and the gazelle. Tiny mouse hares scuttle in and out of holes. Marmots, like rabbits with short legs and ears, pierce the silence with shrill whistling. Overhead sings the lark, itself invisible, swallowed up whole in the vast void of the sky.
In summer the scene changes when the monsoon breaks in June across the Himalaya. A haze of damp air spreads across the red-brown land and beautifies it anew. Far distant shadows take on a brilliant, unimaginable blue. The great peaks, formerly stark and near, become again remote. Ever-changing cloud-scapes wrap them round. They are no longer of our world but belong to the unknown, mysterious world of the heavens to which mountaineers are called.

Although rain accompanies the monsoon cloud the weather would not be called foul by British standards. It brings benefits in more water for more flowers and pastures, colour for the sun-settings. Across seemingly infertile tracts, carpets of grass and green herbs unroll with a magical swiftness. At all seasons high winds sweep across the loftiest summits, whirling powder-snow from the ridges far and high through the air. But at night-time when the sky is clear, the topmost snows flash to the moon, their white fires glowing on a vault blue-black. There the brightest stars of our world appear to contemplate men’s upturned faces; many a million stars, wide and calm and compassionate as the eyes of Buddha.

Through this country the expedition travelled several days, crossing passes of 16,000 and 17,000 feet, until on 5th June they entered a long valley ending in a limestone gorge, where the fort of Kampa Dzong stood upon a crag of five hundred feet. While crossing the pass of 17,200 feet at the head of this valley, Dr. Kellas suddenly died of heart failure. That was a sore loss for the expedition; he was a great mountaineer. Earlier in the year he had overtaxed his strength by too much Himalayan climbing. Next day he was buried on the hill-slopes south of Kampa Dzong.

On that same day, the 6th June, the party while standing near Kellas’s grave had their first view of Mount Everest, one hundred miles away.

‘It was a perfect morning,’ writes Mallory, ‘as we plodded up the barren slopes above our camp and rising behind the old rugged fort which is itself a singularly impressive and dramatic spectacle; we had mounted perhaps a thousand feet when we stayed and turned, and saw what we came to see. There was
no mistaking the two great peaks in the west: that to the left
must be Makalu, grey, severe, and yet distinctly graceful, and
the other away to the right—who could doubt its identity?
It was a prodigious white fang excrescent from the jaw of the
world.'

The reconnaissance of Everest had begun. Henceforth the
real exploratory work fell upon Mallory and Bullock. Raeburn
was now far from well and had to be sent back from Kampa
Dzong to Sikkim. The two most experienced men had thus
been lost to the expedition, but as has been shown so often in
the Himalaya, if youth and energy are allied to self-discipline and
intelligence their possessors suffer little disadvantage. Good
results are won; experience comes quickly in the heat of action.
Mallory and Bullock lacked no quality that makes for Himalayan
achievement.

Their view from Kampa Dzong had shown them only the
upper part of Everest, and that at too long a range for useful
conclusions to be drawn. The lower part had been screened
by the great barrier range of the Gyankar, which cut across the
middle distance. But the sight was inspiring: the party's heart
was now set upon passing the Gyankar mountains beyond which
lay new country, the valley of the Arun river cleaving the
Himalaya to Nepal and India, and to its west the unknown
Everest.

On 10th June they turned the north end of the range by a
gorge and so came to a wide basin, from which the Arun valley
cut south-westwards. Mallory and Bullock climbed a small
peak near Shiling at the west branch of the Arun. Dark clouds
hid Everest. As they optimistically gazed through field-glasses,
suddenly the veils began to shift. The gleam of the snows
could be seen dimly, then drifting chasms opened through to
the mountain revealing the detail in fragments—black crests
and ridges, the silver glint of their flanks, the sheen of glaciers
—at last even the summit, apparently adrift in the stratosphere.
From this disordered series of partial glimpses they were able
to piece together a fairly clear idea of the whole. Indeed,
Mallory's alert mind seized at once on every essential point.

First, a long north-east ridge dropped from the summit, just
a short way below which it exposed a black shoulder. Secondly, a northern ridge dropped from the shoulder to a north col and rose to a north peak. If a close reconnaissance were to be made of these ridges, then approach could apparently be made by way of a deep valley (the Kharta), which appeared to fall eastwards from the north col towards the Arun.

Thirdly, Everest was not one mountain but two at least. A huge, black peak (Lhotse) about two miles south of Everest was linked to the latter by a south col, which Mallory guessed to be at 27,000 feet (later found to be 25,800 feet). Here was another route worth investigation.

They returned to the main track below. A little way farther was a point from which the peak of Everest became visible. The expedition's yak drovers at once called it Chomo Uri, 'The Goddess of the Turquoise Peak.' This appeared to be a purely local name and not in general use. On 16th June the expedition arrived at Shekar Dzong, the 'White Glass Fort' of the Dalai Lama's pass. It was built in three widely separated parts on the flank of a sharp and rocky hill. At the base lay a small town; much higher were thirty or forty large monastic buildings accommodating four hundred monks; higher still stood the great fortress itself, shining white. A long turreted wall linked the fort to a solitary watch-tower on the hill-top.

The people of Shekar Dzong had never seen Europeans before. The traditional Chinese tent, reserved for guests of honour, was pitched for the expedition beside the town. The party stopped one day to win the goodwill of the joint governors, in whose jurisdiction lay the Bird Country of the South, now close at hand. Three days later, and one month out from Darjeeling, the expedition arrived at the village of Tingri, their base for reconnoitring the northern approaches to Everest. Tingri lay in the middle of a broad plain. Its three hundred houses were huddled on the side of an isolated hill. Yet the village is one of importance. It boasts a military governor and carries on a brisk trade with Nepal, for it lies just thirty-five miles north of the Nangpa La (19,000 feet) by which the Sherpas of Sola Khombu trade with Tibet.

The folklore of the country around Everest is well illustrated
by the tale of how Tingri got its name. Once upon a time there lived in the Indian village of Pulahari a youth named Tamba. Tamba was not happy; he wanted to leave home. So he asked Buddha where he should go. 'Take a rounded stone,' said Buddha, 'throw it as far as you can. Where it lands there spend the days of your life.'

Tamba took a rounded stone. He threw it as far as he could. It passed right over the Himalaya. For many months he journeyed north, searching in vain for the stone. At last he reached Tibet. It was winter and the ground snow-covered. When he came to the banks of the Gyu Chu river he saw there a great, bare patch of ground, from which the snow had been cleared. The people of the district told him that their cattle walked round and round that bare patch to prevent snow from covering it. And when Tamba looked, there in the middle of the patch lay his round stone. The people all over that district had clearly heard the stone as it flew across the mountains from India. It had whistled loud and shrill, like ting. Thus the district came to be named Tingri (the hill of the ting).

On the spot where the stone had fallen Tamba built himself a cell where he spent his days worshipping the Lord Buddha.

On this site there now stands a monastery called Langkor, which means 'the cattle go round.' In a casket within, Tamba's stone is still preserved.

It has been well said that the three golden rules of Himalayan climbing are (1) reconnoitre, (2) reconnoitre, and (3) reconnoitre. The task facing Mallory and Bullock was not that of climbing Mount Everest, although they intended going as high as they could, but of getting a thorough understanding of the whole shape of the mountain, the exact position of its many faces and ridges. Once they had this they could choose the best line of attack and put all their skills and energies into an assault. Any such assault would have to be organized at a later date. The present need was to explore the several valleys radiating outwards from Mount Everest. These were divided one from another by high ridges. Which offered the best approach to each main face and mountain ridge? Such approaches had to be discovered and understood before it would
be possible to understand the shape of Everest. This was no simple reconnaissance, nor one they could hope to be done with soon. Mallory and Bullock keenly realized the troublesome magnitude of the adventure, especially when they looked out across the wide plains from Tingri and saw everywhere the monsoon clouds gathering darkly. 'It would be necessary in the first place,' remarked Mallory, 'to find the mountain.'
CHAPTER II

*The Northern Reconnaissance*

On 23rd June Mallory and Bullock set off from Tingri with sixteen porters, a sirdar, and a cook. They had chosen the northern approach first. Accordingly they went two days south and east to Chobuk, where the Rongbuk valley draining the glaciers of Everest’s north face joins the Dzakar Chu, which flows east to the Arun. A little above and beyond Chobuk they passed through a gorge and came to the greenest meadow they had seen in Tibet. Yellow asters and rhododendrons bloomed there and Mallory was consumed with desire to idle for ever, sniffing the clean fragrance of mountain plants. The feeling is one that from time to time poignantly assails the Himalayan traveller. The oases are so delicious, the way ahead so monotonously stony, the heat of the day so enervating, the mountains so difficult and uncertain a venture that the desire to lie back and receive beauty in idleness can become wellnigh overwhelming. One has firmly to discipline oneself and push on, and trust to enjoy the beauty in course of action.

Mallory and Bullock had a swift reward that day. The Rongbuk valley which they now followed rose stonily and drearily. They came on to a little eminence. And there was Everest, revealed for the first time from the north and from top to bottom. That was a dramatic scene and Mallory alone must speak of it.

‘The Rongbuk valley is well constructed to show off the peak at its head; for about twenty miles it is extraordinarily straight and in that distance rises only four thousand feet, the glacier, which is ten miles long, no more steeply than the rest. In consequence of this arrangement one has only to be raised very slightly above the bed of the valley to see it almost as a flat way up to the very head of the glacier from which the cliffs of Everest spring. To the place where Everest stands one looks
along rather than up. The glacier is prostrate; not a part of the mountain; not even a pediment; merely a floor footing the high walls. At the end of the valley and above the glacier Everest rises not so much a peak as a prodigious mountain mass.

There is no complication for the eye. The highest of the world’s great mountains, it seems, has to make but a single gesture of magnificence to be lord of all, vast in unchallenged and isolated supremacy. To the discerning eye other mountains are visible, giants between 23,000 and 26,000 feet high. Not one of their slenderer heads even reaches their chief’s
shoulder; beside Everest they escape notice—such is the pre-
eminence of the great.'

As seen from Rongbuk the structure of the mountain is simple. 
There is one steep face of ten thousand feet with a great ridge 
to its left and right. The right-hand ridge is the West ridge. 
It falls more steeply than the other and is half as long again 
(4½ miles), for it levels out in its lower part. The left-hand 
ridge is the North-east ridge. It drops gently for fifteen hundred 
feet to the shoulder already seen from Shiling, then more 
abruptly. Between shoulder and summit the North face pro-
jects so that below the shoulder a corner of five thousand feet 
drops northwards to the North col. This North ridge sweeps 
up again to a North peak, continuing thence as a long range 
forming the east wall of the Rongbuk glacier.

From whatever angle one sees Everest, the supporting ridges 
are so long and high and the summit cone lies so far back 
behind them, that a distant view is required before the true 
height can be appreciated.

On this their third day out from Tingri, Mallory and Bullock 
pitched their base camp at a height of 16,500 feet near the 
Rongbuk glacier. The tents were sited but a short way beyond 
Rongbuk Monastery—the Rocky Valley Inner Monastery of the 
Dalai Lama's pass—which is sixteen miles from Everest. If we 
except hermits' cells it is also the last habitation of man.

The monastery held some twenty lamas who live there 
permanently. In addition, several hundred lay lamas are asso-
ciated with the monastery and use it for retreats, presumably as 
they find time. The hermits' cells are all higher up the valley, 
along the hill-sides closer to Chomolungma. Both men and 
women retire to them for contemplative prayer and meditation, 
seeking truth and enlightenment and union with Buddha.

Mallory and Bullock's first move was to explore the Rongbuk 
glacier; or, more exactly, they tried to explore it and did not get 
very far. This was their first visit to the Himalaya; they were 
not yet acclimatized to high altitudes and had much to learn. 
In the Alps, for example, a glacier is normally reckoned as a 
highway especially provided for the swift and safe delivery of 
mountaineers at its top or bottom end. In the Himalaya
glaciers are not normally a highway but an obstacle to be avoided. One must then hope that to one side or the other will be found a good moraine, which is the line of scree and stone that has fallen on to the surface of the upper glacier from the flanking cliffs, been carried down on the surface and deposited all along the valley-sides in the form of a continuous ridge. The crest of a moraine often gives good walking.

Mallory and Bullock set off at 3.15 a.m., tramping under a full moon and stars towards the greatest mountain in the world. All the anxieties and harassing minor troubles of preparation and approach were now things of the past, done with and forgotten. Out on the mountain-side mountaineering is suddenly found to be straightforward and simple. It is an elemental adventure of the human soul, pushing forward to penetrate new country, to open new ground, to gain new experience, to know itself and know the world. And not all the doubts and hardships, nor yet the dangers and threatening obstacles of the way, will turn back a man if only he be young at heart and spirited.

That first day gave Mallory and Bullock a foretaste of close-quarter work in the Himalaya. They went five miles, which is a creditable performance. The surface of the glacier rose like an angry sea, its huge waves running not in any special direction, but confusedly. Often they were able to follow the troughs between the waves, but this meant that they had to keep crossing from one to the other while unsure of direction. It was exhausting work, but not dangerous. Innumerable ice-pinnacles, called séracs, had been caused by the melting away of all surrounding ice. Their size varied from twenty-five to fifty feet, but no big chasms or crevasses lay between them.

The climbers were assailed all the while by despairing lassitude. Stale air seemed to settle over the surface and fill the troughs and hollows, upon entering which they were enervated, robbed of all energy. The loss gave conclusive reason for preferring the moraine where the air stayed fresh. So they moved thankfully off the ice and travelled up the west bank until they came to an unexpected western branch of the main glacier. It appeared to cut well to the north of Everest’s West ridge, but cloud prevented them from seeing anything at the head of it.
They decided to go no farther. Their height was 18,500 feet and they were feeling mountain-sick, that is, unnaturally fatigued, due in great part to the lack of oxygen. To keep that fatigue at bay they had to breathe deeply and rhythmically, and they had to do it consciously. Nor were they yet in really good physical training. In the Himalaya as in the Alps, although a man may suffer on the ascent from oxygen-lack, none the less he has a resurgence of energy on the descent. But there was no such resurgence to-day. Even coming down Mallory and Bullock had to breathe deeply, and still they felt tired. The one incident that enlivened the day—one of a kind to cause unbounded delight in the simple heart of the Sherpa—occurred when Mallory crossed a glacier lake. The ice split and he fell in.

They arrived back in camp at 8.15 p.m. Mallory remarks with touching despondency: ‘The party is not fit.’ After a fifteen-hour day a measure of tiredness may be allowed them. Nor were they exhausted in the full sense. However, the truth was plain enough, and it applies to all climbers who arrive at the base of a great Himalayan peak: in order to acclimatize, men require a week or more around 17,000 to 18,000 feet, helped by daily excursions to higher levels.

Mallory appears to have realized this hard fact, for he and Bullock spent six days in the upper Rongbuk valley without making any move to reconnoitre Everest. Yet they were active. On 29th June they established a Camp II at 17,500 feet on a shelf above the glacier. The Sherpas, moreover, although born and bred among high mountains were not skilled mountaineers, so Mallory spent a little time teaching them how to use a rope and axe, and crampons, which are ten-pointed metal claws strapped to the boot for ice-work.

Some idea of the whole structural plan of Everest was meanwhile forming in Mallory’s mind. He conceived the notion that there must be another big glacier basin on the far side of the great West ridge, and that probably the newly discovered west branch of the Rongbuk would provide a route round to it. He accordingly decided to examine first the head of the Rongbuk glacier, then to go westwards, and see what he could see.

On 1st July Mallory (leaving Bullock) started off with five
Sherpas for the head of the Rongbuk glacier, directly under the North face of Mount Everest. Three questions required an answer. Could access be gained to the North ridge by way of the North col? Was there any route on to the great West ridge? Was there a col at the foot of the West ridge giving access to the probable glacier valley on its south side? The party was badly delayed in soft snow. They could see bad weather coming up and made a strong effort to enter the upper basin before clouds blanketed the scene. They partially succeeded. From 19,100 feet in the basin Mallory saw the North col. Mist was already veiling it, and that was unsatisfactory, but he saw enough to ascertain that no inviting way lay up this west side; the snow, he thought, was too steep near the col and the glacier underneath it too broken. Likewise he disliked the look of the slopes running up to the West ridge. Neither route should be attempted save as a last resort.

It was now doubly clear to Mallory that he must go at once to the west side, then break off the whole northern approach and change to a new theatre in the east.

In the gathering cloud he had been unable to see whether any col lay below the West ridge, but was in any event more inclined to work round to the west by using the West Rongbuk glacier. Meantime, three hours of snow-ploughing up the glacier had exhausted Mallory and Sherpas alike. Again they noticed no relief on the descent. In all it was a thirteen hours’ job and no one was able to climb next day.

Three miles west of their glacier camp stood a peak of 22,500 feet called Ri-ring. Its position seemed ideal for commanding the complicated country west of Mount Everest—a puzzling tangle of peaks—the approaches to and connections with which might be well seen from its summit. On 5th July the ascent was begun by the entire party, but only Mallory and Bullock finished the course. The route involved snow-, ice-, and rock-climbing, which no one claimed to enjoy. Mallory and Bullock were again mountain-sick; quick deep breathing had to be imposed on their lungs; halts were frequent; their memories of the climb dim.

Compensation of a kind was found at the summit. They
could see in full detail the upper North face of Everest. At least as far as the North-east shoulder the rocks of the North ridge lay back at a promising angle. The most important view they had—the one of greatest consequence in the sense that it led them into error and needless trouble—was of Everest’s North peak. They gained the impression that a high ridge ran from the peak eastwards, forming the side of a valley that stretched all the way to the Arun river. And that confirmed the view they had had from Shiling. They imagined, therefore, that any approach to the North col from its east side must lie up the Kharta valley. It never occurred to them (for there was no visible evidence) that this East ridge was breached two miles from the summit,
thus allowing the glacier that flowed east from the North col to double back north-west and join the Rongbuk glacier almost opposite their own camp. From camp the only sign of the East Rongbuk glacier was a small stream flowing down from a bay of the main glacier.

The westward view revealed Gyachungkang (25,910 feet) and Cho Oyu (26,750 feet), the latter being the world’s sixth highest mountain. It looked as though access to them could be gained by crossing a pass (the Nup La) at the head of the West Rongbuk glacier. Another still more promising pass lay due south, up a branch of the West Rongbuk glacier. This was the col between Pumori and Lingtren. It appeared that by means of it entrance might be made to the great western glacier basin of Mount Everest, which Mallory called the West cwm. The existence of the latter was now a certainty although its glacier could not be seen. On its far side stood the West peak of Everest, called Nuptse, by far the most graceful and icily formidable of all the great tops of Everest. It was apparently connected by a narrow ridge to the South peak, Lhotse, so that these two with Everest must form a huge horse-shoe enclosing the West basin.

However, this fact had still to be verified at close quarters. The plan for the immediate future was now clear and definite. Mallory and Bullock returned to camp determined to carry a light camp up the West Rongbuk glacier, and from there try to enter the West basin. After which they would be in a position to plan a return in force should that prove necessary. First they had a rest day and then, on the night of 6th July, the monsoon broke at last. Snow fell heavily and that was the beginning of gradually worsening weather. There followed a ten-day series of abortive attempts to reach that North-east col of Pumori.

On 8th July they carried Camp III five miles up into the West Rongbuk glacier. They contrived to find a camp site on its north side, and since the valley ran east and west the tents had the sun both early and late. This was a happy circumstance amid others less pleasing. On three successive nights snow fell heavily; at each grey dawn mist and snow lay so thick around the tents that any long expedition of the kind planned was
discouraged. They spent the time moving up stores from the lower camps.

Towards the evening of the 10th the clouds began dispersing in mass. Along the far side of the glacier stretched the great curtain barrier of the Nepali frontier, ending at the high and spiky peak of Pumori (23,190 feet), before sweeping on again to Everest. They watched the splendid scene from their tents and Mallory describes it thus:

'To the West Rongbuk glacier they present the steepest slopes on which snow can lie; the crest above these slopes is surprisingly narrow and the peaks which it joins are fantastically shaped. This group of mountains, always beautiful and often in the highest degree impressive, was now to figure for our eyes as the principal in that oft-repeated drama which seems always to be a first night, fresh and full of wonder whenever we are present to watch it. The clinging curtains were rent and swirled aside and closed again, lifted and lowered and flung wide at last; sunlight broke through with sharp shadows and clean edges revealed—and we were there to witness the amazing spectacle. Below the terrible mountains one white smooth island rose from the quiet sea of ice and was bathed in the calm full light of the western sun.'

Mallory and Bullock were in high spirits the next morning. The weather had stayed clear overnight and the sun rose with heartening warmth. At 5.30 a.m. they were away, all set for the West basin of Everest. First they had to cross the West Rongbuk glacier and so gain entrance to the south branch which flowed from the frontier ridge. They went at the crossing with dash, and were wellnigh over when they got trapped in a maze of white spires. They entered a little bay ringed by icy towers and ridges, worked a way through to a second one, hewed steps up a final wall—and found themselves looking down a sheer ice-cliff of one hundred feet.

So they had to go back and find an escaping passage. This involved more exciting climbing than time allowed. They spent two and a half hours crossing that glacier and their final success spelt defeat. The time was ten o'clock when they reached the south bank, clouds were boiling up round the tops, and the day
was lost. They had underestimated scale and ground and withdrew to camp determined to redeem themselves next day.

Having granted them one good day the monsoon was not so ready to oblige with another. However, they started shortly after 4 a.m. in good weather, crossed the glacier in one and a half hours, and took to the snow of the south glacier. At 8 a.m. a nasty wind got up, driving the snow into their eyes so that nothing could be clearly seen. The weather thickened and snow began falling steadily. Crevasses loomed to each side. They kept on up steepening snow, finally traversing across a slope that rose high above them on the left, until they came out on to a spur on the edge of a precipice. Where were they? What was below and how far? No answers were vouchsafed them. Not a single feature of any kind or in any direction appeared through the dense mist. They had to retire utterly baffled.

The most likely answer was that they had arrived on the frontier col, which would be the col between Pumori and Lingtren. If that were so (and of course they could not know) then there was no way into the West basin unless perchance by that other doubtful col, the Lho La, at the lowest point of Everest’s West ridge.

The following three days were spent in short excursions from camp, and in photography. Bullock went off towards the Nup La at the head of the West Rongbuk glacier, but had to turn back short of the col. He found that snow-shoes greatly helped him to deal with the soft snow. Mallory went twice to his ‘island’ (Lingtrennup), a low rock spur projecting from the frontier ridge northwards into the ice-sea. He took many photographs from there, again saw Lhotse and Nuptse, and conceived the idea that perhaps Nuptse was connected to the col of Pumori. The precise shape and extent of the West basin thus remained an unsolved mystery. On 18th July they moved a light camp across the glacier to the south branch, fully determined to get into the West basin at the first chance thereafter. On the 19th they started off at three in the morning by moonlight. The western peaks threw huge black shadows across the shining snow-fields. They wore snow-shoes, and with these made good
speed, the clouds scattering before their advance. At 5 a.m. they reached the col.

Beneath them a rock, snow, and ice cliff fell fifteen hundred feet to the valley of the Khumbu. On its far side soared Everest. No cloud remained. From the summits of Everest and Lhotse two west ridges thrust straight towards them. That on the left dropped to the Lho La, and that on the right ended on Nuptse (25,700 feet), one of the most splendid peaks of the Himalaya, raw-edged and pointed, ponderous with hanging glaciers; from valley floor to summit, fluted with snow and ice. Between these high-flanking walls poured the Khumbu glacier, running level for some miles, then bursting through a slit where the walls drew together. These narrows were a quarter of a mile wide. The glacier plunged through them in an ice-fall of more than two thousand feet, then turned sharply south into Sola Khumbu.

The South col between Everest and Lhotse could not be seen, nor the slopes running up to it, nor the West basin from which the glacier issued. In view of events that were to occur here thirty years later, it is of peculiar interest to quote Mallory's own diary:

'Another disappointment—it is a big drop about 1,500 feet down to the glacier and a hopeless precipice. However, we have seen this western glacier and are not sorry we have not to go up it. It is terribly steep and broken. In any case work on this side could only be carried out from a base in Nepal, so we have done with the western side. It was not a very likely chance that the gap between Everest and the South peak could be reached from the west. From what we have seen now I do not much fancy it would be possible, even could one get up the glacier.'

Such was Mallory's opinion, and there were few men better judges of a mountain, or more talented in developing hunches that prove correct. His diary for the day ends with the words of a true mountaineer: 'We saw a lovely group of mountains away to the south in Nepal. I wonder what they are and if anything is known about them. It is a big world!'

On 20th July all three upper camps were struck. The
reconnaissance of the north and west aspects of Everest had ended, and the party withdrew to base. The results of the reconnaissance were largely of a negative character. There was no good route by the West ridge, no way into the West basin, no satisfactory route on to the North col. The main ridges of the mountain were all so enormous that no route could well be followed along their whole, extraordinary length. The towers, chasms, walls, and knife-edges, which normally adorn the crest of a Himalayan ridge, must at all costs be avoided on Everest where time is short and oxygen scanty. However, there was a credit side to the account. The North ridge offered a short cut on to the upper section of the North-east ridge, and this North ridge was a broad and rounded edge, free from serious obstacle. It could be reached only by way of the North col. Could the North col be reached from its other, eastern side? An answer had to be found at once, and the more easterly face of the mountain explored.

On their way to the Kharta valley across the unknown spurs of Everest, Mallory and Bullock planned to examine that east branch of the main Rongbuk glacier, more as a matter of curiosity than through any inkling that it might lead to the North col. Thrice in quick succession providence foiled that move. First snow fell a foot deep around the base camp and even down to 16,000 feet; the start was delayed—then delayed again by a sirdar’s incompetence in organizing supplies, and finally, on the 22nd, by Colonel Howard-Bury. He sent up a note from Tingri stating that all Mallory’s photographs of the reconnaissance had been spoiled. The truth is that Mallory was not a photographer. He had carried a quarter-plate camera and had put in all the plates back to front.

That night gloom and despondency prevailed in camp. Mallory had never been so chagrined. They were finished with Phase I of the reconnaissance. They had been living at high altitudes for a month and were eagerly looking forward to rest and relative warmth, a change of scene, and new adventures in prospect. The past had been shed off. And now here they were, faced with the need of repairing a dire failure. Photographs from all angles must be had of Everest and neighbouring peaks: they
must go back and get them. The gloom outside the tents rivalled that within. Clouds pressed down and new snow lay nine inches deep on the ground.

The weather relented. During the next two days Mallory and Bullock made lightning raids to north and west. Mallory went to Lingtrennup and photographed the west side of Everest, while Bullock made the first ascent of the Lho La and photographed both the western ice-fall and the North col. In humble triumph they hastened down to base. On the morning of the 25th July, amid sleety snow and a rising wind, the last tents were struck.

They travelled north to Chobuk. Howard-Bury's party awaited them there with pony and yak transport. Thence the expedition turned south-east, and riding forty-three miles over the Doya La, came down in three days to their new base at Kharta.
CHAPTER III

Everest from the East

While Mallory and Bullock had been so fully engaged on the northern reconnaissance, the other members of the expedition had been hard at work too. Morshead and Wheeler had been making an original survey of twelve thousand square miles, and of all the expedition’s members (climbers included) perhaps the toughest time was had by Major Wheeler, who made a single-handed photo survey of six hundred square miles close around Mount Everest. His persistence and determination in moving around these difficult spurs alone, camping constantly at high altitudes, rendered great service to this and all future expeditions. Wollastone had identified and collected birds and plants. A geological reconnaissance had been made by Heron.

Early in July Howard-Bury made a reconnaissance of the Kharta district and selected the site of the future base camp. On crossing the Doya La (17,000 feet) he found himself in a new country. The range breached by the pass made an effective barrier to the monsoon. To the north was dry and typical Tibet; to the south another little known Tibet, of softly moist air and richly varied plant life. Upon reaching the gorge of the Arun river he turned south for three miles and came on a huge, unfordable glacier stream rushing into the Arun from the west. He perforce turned up this side valley and in three miles came to the village of Kharta Shika.

The Jongpen (governor) of Kharta district lived here and showed himself most hospitable. But neither he nor any one else living in the valley could tell Howard-Bury where the Kharta river took its source. This ignorance of the high country above their own valleys is common to almost all Tibetans. Since the river was glacial Howard-Bury concluded that almost certainly it must come down from Everest or its
close neighbourhood, and here in this valley would be a good site for the eastern base camp.

The Jongpen was helpful and together they selected a house and garden on a terrace above the river. The house could be used as a store-room, a dark-room for photography, and office for survey work; tents could be pitched in the garden among poplars and willows. There was a good water supply. And the rent, at 3½d. per day, would not ruin the Everest Committee.

Howard-Bury had then returned to Tingri and later in July had organized the transfer of stores to Kharta. To this new base the whole expedition descended on 29th July. They came to it eagerly. Mallory and Bullock especially hungered for relaxation after the long, stern discipline of high mountain work; their eyes had been surfeited on grey and white; camps had been set upon ugly screes or icy wastes, where the winds blew bitter. They were assailed as much by a mental as a bodily weariness. Kharta was a place to rejoice their hearts. Its altitude was 12,300 feet; the climate perfect. The temperature was 70° F. during the day, warm but never close. Enough rain fell to freshen the ground and air but not to discommode men. The primulas, which had carpeted the meadows on Howard-Bury's first visit, had given place to gentians; the wild roses bloomed no longer, but a host of other flowers had appeared instead. Here no everlasting winds of Tingri scourged men's faces. In the terrace garden at Kharta they reclined and listened to a gentle wind rustling in the willows. They had almost forgotten about trees and leaves.

After four days of joyous idleness Mallory and Bullock were stirring again. Where did the Kharta river come from? Mallory suspected that it might lead him straight to the North col. But still they could find no one who knew. The Tibetans' ignorance of anything beyond the habitable Kharta Chu was almost complete. Questions about time and distance even within the valley would without fail receive widely differing answers. Distance was reckoned not by mileage, but by marches. Thus whether a distant village lay one march or three marches away necessarily depended on the individual and how long he chose to make a day's march. For short distances the measurement was by cups
of tea. ‘How far is it to Teng village?’ one might ask; and the answer would be: ‘Three cups of tea.’ After a little experience Howard-Bury worked out that three cups of tea equalled approximately five miles, and thereafter every one could use the term as a basis for measurement.

Failing reliable information, Mallory and Bullock reckoned that they need only follow the Kharta valley and perhaps in two days would be in sight of the North col. On 2nd August they set off westwards with Tibetan and Sherpa porters. At intervals of a mile they came on villages, where they bought food for the porters, and passed many monasteries surrounded by old and gnarled juniper-trees. The porters were ill-disciplined after those slothful days below. At every village they sampled the local beer (chang). Progress was slow, complained Mallory: only eight miles that day. He was still applying European standards to Himalayan work. Eight miles is a fair day’s work in the Himalaya, unless there is urgent reason for speed.

They camped that night where another smaller valley joined the Kharta Chu on its left-hand or south side. The local Tibetans insisted that the true route to Chomolungma now went up this south-west valley, and next day Mallory was persuaded to follow it. It led them to the Langma La at 18,000 feet, whence they came down into the Kama valley, which runs roughly parallel to the Kharta. Thus they arrived, all undesignedly, in one of the most beautiful valleys of the world.

The weather was cloudy on that first arrival, and they saw little when they pitched camp on the grassy alps of Pethang Ringmo at 16,400 feet. On the morning of the 5th August the weather cleared. Great cloud-banks broke away from the mountain-flanks, and little by little that unique scene unfolded. Their now sun-smitten alp lay directly under the vast north wall of Chomolonzho, itself the north top of Makalu. It was hung with ice and powdered with new snow. Great avalanches thundered down its sides. Twelve miles westwards at the head of the valley towered the twin peaks of Everest: Lhotse on the left and the summit on the right, both enclosed by the shining arms of the North-east and South-east ridges. Below and between them lay a gigantic basin of ice, the Kangshung glacier,
fed by tributaries of tumbled ice pouring off the great walls of the cirque.

Three of the five highest mountains of the world thus overlook the Kama Chu: Everest, Lhotse (27,890 feet), and Makalu (27,790 feet). Mallory writes of the scene: 'For me the most magnificent and sublime in mountain scenery can be made lovelier by some more tender touch; and that too is added here. When all is said about Chomolungma, the Goddess Mother of the World, and about Chomo Uri, the Goddess of the Turquoise Mountain, I come back to the valley, the valley bed itself, the broad pastures where our tents lay, where cattle graze and where butter was made, the little stream we followed up to the valley head, wandering along its well-turfed banks under the high moraine, the few rare plants, saxifrages, gentians, and primulas, so well watered there, and a soft familiar blueness in the air which even here may charm us. Though I bow to the goddesses I cannot forget at their feet a gentler spirit than theirs, a little shy perhaps, but constant in the changing winds and variable moods of mountains and always friendly.'

Mallory and Bullock had thus no regrets on coming to the Kama Chu, but the fact remained that they were in the wrong valley. Their true intention had been to follow a glacier to the North col. From the foot of Everest's long North-east ridge a chain of peaks runs due east towards the Arun. They were now on the wrong side of this west to east watershed and must cross it once more to get into the upper Kharta. An examination of the East face of Everest had, of course, also to be made, but no sound judgment of a route was possible from their present position. Angles seen en face always appear greater than they are. An ideal vantage point offered itself in the shape of Kartse, a peak of 21,390 feet on the watershed, and only two and a half miles from the foot of the North-east ridge. They agreed to climb it. From there they should be able to see the North col and to examine the East face from a revealing angle, and to look up the crest of the North-east ridge.

At 2 a.m. on 7th August Mallory's alarm-watch sounded through a frozen camp. The night was starry, and moon-white from the light of Everest, which dazzled the world with its
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The porters stayed inert, drew their blankets close, and risked a tentative snore. Mallory's warning shout went in vain. He had now no choice: half clad, he raided the outlying tents and left behind him a trail of suddenly stimulated Sherpas. By sunrise they were well up the mountain. Towards Makalu a sky of livid Chinese blue became flushed with red. But the first light on Everest fell pale yellow, flaming to gold as the sun crowned the final pyramid.

Shortly afterwards they were engaged in steep rock-climbing up a wall of granite and so came at length to a col east of the top. From this col they could judge the chance of climbing Everest by its East face. None was visible. A great hanging glacier on the face threatened to bombard the rocks of approach with ice-avalanches dropping off its bottom edge; any attempt to turn the danger area must involve excessively hard climbing. Looking now in the opposite direction, they saw below them an eastward-flowing glacier. Was this the valley they had seen two months ago from Shiling? The one that appeared to run from the North col to the Arun? Or did that valley lie still farther north? No one could risk an answer.

They pressed onwards. The ridge gave them difficult climbing, forcing them off at one point on to its dangerous left flank, from which they returned to the crest at a higher level by cutting away an overhanging snow-cornice. Above came more step-cutting on the edge of the ridge, and then, just where the angle eased, the snow became so soft that snow-rackets had to be strapped to the feet. These delays were in one respect fatal, for cloud was already building up at the head of the two valleys.

Five hundred feet from the top they enjoyed a clear view straight up the splendid crest of the North-east ridge. 'If any doubts remained,' said Mallory, 'as to that line of attack, they now received a coup de grâce. Not only was the crest itself seen to be both sharp and steep, suggesting an almost infinite labour, but the slopes on either hand appeared in most places an impracticable alternative; and leading up to the great rock towers of the North-east shoulder, the final section, the point of a cruel sickle, appeared effectually to bar further
progress should any one have been content to spend a week or so on the lower parts.'

Unfortunately the North col was still invisible. A final effort was needed to reach the summit and Mallory went on with two young Sherpas. Just before they gained the summit a rift opened through the western clouds. They caught a glimpse of the North peak and the very rim of the North col below. Of the slopes below the col, and the approach to them, not a thing could be seen. By the time they reached the top a new veil covered all.

This last-moment failure was especially exasperating. They had indeed seen the East face and North-east ridge, and for these mercies were thankful. This reconnaissance from the east, like the reconnaissance from the west, had confirmed Mallory's suspicion that no good route was to be found from either of these sides. The future line of attack had at last been narrowed down to the North ridge, and the ridge could be reached only from the North col. If there were no way to the col from this east side, then the necessary move back to the Rongbuk glacier would cause great trouble and loss of time. Mallory was in fact most anxious to be done with his reconnaissance by the 20th August, so that he and all others, including porters, might have a thorough rest before attempting the mountain in September at the end of the monsoon.

When the party descended to camp the future was thus still in doubt. They resolved to pack up at once and return over the Langma La to Kharta. They still did not know if the Kharta Chu ran up to the North col, but they could make a shrewd guess, and both Mallory and Bullock were unusually talented at guessing correctly. They guessed now that the Kharta glacier did not flow from the North col, but from a nearer col which they had not seen but whose presence they had deduced from the course of the glacier, the long distance to the North col, and a glimpse of an intervening sky-line apparently running north and south.

If that guess were correct, then the glacier flowing east from the North col must, they thought, come into the Kharta Chu somewhere on its north side, because no other glacier stream
found exit to the Arun north of Kharta. Up the Kharta valley they must accordingly go, and with all dispatch, to investigate side valleys.

That night Mallory took a high-temperature chill destined to last six days. Before leaving Rongbuk he and Bullock and all porters had become thoroughly acclimatized; they were now remarkably fit. But these unexpected chills have always been an irregular feature of Himalayan climbing. They come and go at random. And when they go the sufferer is left not a whit the worse. Meanwhile Mallory was down and out for a day, then forced on himself that three-day march across the Langma La. On 11th August they pitched camp in the Kharta Chu at 16,500 feet. In front the valley forked. They were set for the final quest. But Mallory had to pay the penalty for marching with a high temperature: for two more days he remained sick, and Bullock, they agreed, must continue alone up the right-hand fork. This was a hard blow to Mallory. For now surely was the climax of the quest: the discovery of the North col route; the decision to mount the attack by it. All decisions and plans of the past had been shared by Mallory and Bullock equally: this Mallory states unequivocally. Yet Mallory had attributes of leadership that made it especially hard for him, on that morning of 13th August, to wave good-bye to Bullock from his sleeping-bag. His thoughts, he says, were full of questionings. How many days will Bullock be away? When he returns at last what sort of story will he have to tell? Will he know for certain that the way is found? How long will our doubts continue?

That same evening, just as darkness was gathering, Mallory saw a Sherpa racing down the steep, sandy slope above the camp. He came with a note from Bullock: 'I can see up the glacier ahead of me and it ends in another high pass. I shall get to the pass to-morrow morning if I can, and ought to see the North col glacier over it. But it looks, after all, as though the most unlikely solution is the right one and the glacier goes out into the Rongbuk valley.'

Bullock was guessing again, but with an unerring intuition. Mallory was stunned. He remembered now that little bay of
the Rongbuk glacier just above their old Camp II, and the chapter of accidents that had stopped his last plan to look into it. But the stream issuing thence was surely too small to drain the great glacier that must lie above it—if Bullock were right? The mystery seemed to be deepening instead of clearing.

This note, coming on top of the unexpected arrival of Morshead, stimulated Mallory into action. He and Morshead strolled next morning up the main glacier in the left fork. It revealed itself as the glacier seen a few days ago from Kartse. At its head was a high snow col over the crest of which peeped the top of the North peak. This near col could easily be reached. On its far side must lie a glacier basin under the North col—a lofty basin: the descent to it not long. Might it not be quicker and better to use this nearer col for approach rather than waste time searching for the foot of the elusive glacier?

Mallory was still more inclined to favour this new idea when Bullock returned to camp from his col in the other right-hand fork without positive information. A letter then arrived from Howard-Bury enclosing a new sketch-map by Wheeler showing the spurs and valleys east of the Rongbuk. He had clearly marked the course of the North col glacier: it turned sharply north and debouched westwards into the main Rongbuk glacier. Thus was Bullock's guess confirmed. Wheeler's discovery was henceforth to be known as the East Rongbuk glacier.

The idea of returning to the Rongbuk valley was uncongenial. There might be a good route over the near col (later called the Lhakpa La) and this way they now determined to try. Four days slipped by in 'messing about.' Supplies failed to come up; snow fell nine hours daily. At last the 18th August dawned fine. The party climbed on to the glacier keyed up to an all-out effort. Failure to reach the col this day would bring crisis to the expedition's plan, for no second attempt could be made under four days. If a way to the North col were not then discovered, the assault planned for September would be jeopardized.

The glacier was in a parlous condition. The new snow lay knee-deep and would have stopped them had they not worn snow-rackets. Tiring as they found it, the deep powder was not the worst of their several enemies. The trials of a big
Himalayan glacier, besides which those of the Alps although of like kind are relatively trivial, are disclosed in Mallory’s denunciation of the Kharta:

‘In the glacier furnace the thin mist became steam, it enveloped us with a clinging garment from which no escape was possible, and far from being protected by it from the sun’s fierce heat we seemed to be scorched all the more because of it. The atmosphere was enervating to the last degree; to halt even for a few minutes was to be overwhelmed by inertia, so difficult it seemed, once the machinery had stopped and lost momentum, to heave it into motion again. And yet we must go on in one direction or the other, or else succumb to sheer lassitude and overpowering drowsiness. The final slopes, about seven hundred feet at a fairly steep angle, undoubtedly called for greater efforts than any hitherto required of us.’

A second enemy was oxygen-lack. The pass ahead was 22,200 feet. Deep rhythmical breathing had to be consciously practised, and that not only with the chest but the diaphragm too. At ordinary levels the lungs keep pace with the legs without one’s giving thought to the matter. At high altitudes the method is best reversed. Full attention has then to be given to the work of the lungs, each breath consciously drawn deep and the legs allowed to swing in harmony. Unconscious deep breathing is very hard to acquire and not likely to be maintained. When attention is relaxed the breathing becomes too shallow, whereupon a sense of great fatigue (mountain sickness) supervenes. Rhythmical deep breathing need be practised only when climbing, rarely when in camp or at rest.

Shortly after one o’clock the party arrived on the Lhakpa La—in cloud. Everest was invisible. The North col was invisible. Nothing could be seen of the glacier’s line of flow. By good fortune they were at least able to see into its upper bay. This was broad and smooth and displayed only a few big crevasses. The descent was twelve hundred feet and perfectly practicable. As a line of approach this route would suffice, decided Mallory. The monsoon should end on this northern side of the Himalaya some time early in September. Sun would melt the snow by day and frost harden it by night. The Kharta
glacier, at present a morass in which men wallowed as in a nightmare, would then give the porters a firm and solid surface on which to carry up the camps.

But what of the North col? Was it climbable? Mallory had seen only the rim of it from Kartse. But the slopes rising to its either side were not at all formidable; from the general run of the contours above and to the sides of the col, and the inclination of the glacier below, Mallory inferred that all would be well with the slopes falling from the col itself. 'I was prepared to bet my bottom dollar,' said he, 'that a way could be found.'

Thus the final decision was made and the first reconnaissance ended. They would go for the North col by way of the Lhakpa La. Food and fuel were scarce in the Rongbuk valley, abundant in the Kharta Chu.

It was two o'clock in the morning before they made camp that night. They had been out twenty-three hours and although exhausted were cheerful. In the near future they might hope to reap the reward of all mountain reconnaissance: the channeling of effort and energy and skill and resource up one self-chosen line to a summit. The material result of exploratory venture may not always be substantial, but the living of the life is the true and the worth-while end.

On the 20th August they went down to base camp at Kharta. They could now look forward to ten days' rest—with plenty of work to keep them busy. Except in high camps in bad weather, an idle day in the Himalaya never seems possible. From all quarters the various detachments of the expedition now began to gather for the assault.
CHAPTER IV

The North Col

Not only had the 1921 reconnaissance to find an approach to Mount Everest, and a route on the mountain—but also to observe the peculiarities of wind, weather, snow, and ice at greater heights than man had hitherto climbed; for these peculiarities were largely if not entirely unknown. The especial difficulties they present are indeed the principal obstacles to man's achieving the summit. Ignorance of them imposed a handicap too heavy to allow a first expedition any chance of reaching the summit. By very reason of this fact it was important that they should try to reach the top; that is, go as high as they could. It is by attempting the impossible that men learn most.

Mallory and the others were no doubt well aware of this truth. However, they did not yet exclude the summit as a possibility, and laid plans for the attack. While they rested down at Kharta, an advanced base was moved up to a grassy plateau at 17,300 feet, and a second camp to 20,000 feet on the Kharta glacier. These were fully provisioned but not occupied. The plan thereafter was to put a third camp beyond the Lhakpa La, a fourth on the North col, and then just one more between the col and the summit, say at 26,500 feet under the North-east shoulder; so to the top. In planning just one camp above the North col they had greatly underestimated their opponent and overestimated the strength of the Sherpas.

Meanwhile they waited confidently for the monsoon to end in September. In the event they had to wait a full month. On the last day of August, although the weather remained bad, Mallory and Bullock occupied advanced base in order to divert the porters from the pleasures of chang and rakhsi (beer and spirit), which were sapping their energies and breeding discontent. They had three weeks there, watching an unending
MEMBERS OF 1922 EXPEDITION
at Darjeeling

C. G. Crawford, Col. E. F. Norton, G. L. Mallory, Dr. T. Howard Somervell, Major H. T. Morshead, Dr. Wakefield,
THE TIBETAN PLATEAU
between Kampa Dzong and Lingga
Village of Mendi in foreground
MOUNT EVEREST
North face from Base Camp, Rongbuk glacier
North peak below summit  West ridge on right
EAST FACE OF MOUNT EVEREST

from 20,000-foot camp above Kharta glacier
South col and Lhotse to left of summit    Kama valley below mist bank
THE NORTH COL FROM THE LHAKPA LA

North-east shoulder immediately to left of summit. Lhorsa on extreme left.
MALLORY AND IRVINE ON NORTH COL
about to set off on their last attempt, 6th June 1924
procession of clouds discharge sleet by day and snow by night. Howard-Bury, Wollaston, Morshead, Wheeler, and Heron joined them, and even Raeburn arrived back unexpectedly from Sikkim. They made excursions to keep fit, but already they had been three months in the field and were no longer so strong as they had been. Even Mallory comments: 'I began to experience a certain lack of exuberance when going uphill. I came to realize that all such efforts were unduly exhausting; my reserve of strength had somehow diminished. The whole machine in fact was running down.' The same decrease in vitality could be observed in the Sherpas. The attempt on a great Himalayan peak should be delayed as little as possible after men are acclimatized.

The weather cleared on the 19th September. On the 20th, Mallory, Morshead, Bullock, and Wheeler set off for the Lhakpa La with fourteen laden Sherpas. For the first time they enjoyed hard snow on the moonlit glacier—this to their surprise and salvation. Although they made good progress up the ice-fall and through it, the party straggled and porters fell out on the
final slopes to the pass. The snow there was soft and deep. Halts were frequent. But at long last the day and the pass were gained. Eleven loads were up on the Lhakpa La and the North col was in full view.

That scene was a more formidable one than they had anticipated. From the basin of the East Rongbuk glacier the North col slopes rose two thousand feet at no gentle angle; a series of big crevasses split the face. They were sure it could be climbed, but a camp could not be set on top in one operation. A strong climbing party would have to find and make the route, and stores be carried up afterwards by Sherpas who were fit and well trained. They now returned to the 20,000-foot camp, where the whole party had gathered.

On the morning of the 22nd, all except Raeburn went up to the Lhakpa La with twenty-six Sherpas. In the soft snow near the top they could see the tracks of hares and foxes, and—to their great astonishment—a strange track that looked as though made by a bare human foot. The porters at once declared the footprint to be that of a Metohkangmi, or ‘Abominable Snowman.’ This was the second time it had been seen by Englishmen, and the years that followed were to bring many similar reports from different parts of the Himalaya. The Nepal-Tibet frontier, however, appears to be the animal’s chief home and hunting ground.

Shortly before noon camp was pitched on the pass in grey and gusty weather. The wind blew from the north-west, so they did not go on to the farther side of the col. The party was in poor condition. Some were exhausted, many had headaches, and a few were seriously mountain-sick. They had 34° of frost in the night. Next morning only ten of the porters were capable of going on. Loads had therefore to be jettisoned. To reduce the demand on stores, Howard-Bury, Wollaston, and Morshead turned back. The others descended slowly into the basin and pitched camp on the open snowfields under the North col.

Deep down in the shelter of the basin they had hoped for a calm and peaceful night. Instead squalls descended on them at irregular intervals, seized and worried the tents as though to

¹ See Appendix (p. 207).
uproot them, stole away for a space, then back they came again: so it continued all night. No one could sleep, and few felt rested. They had to start late in the morning to get some warmth from the sun. Three Sherpas went with them to help in stamping out the track. No loads were carried. Everything went well and only once did they have a little axe-work when turning a crevasse; after which they took the slope in one long zigzag, first to the right and then to the left. Close to the col snow lay deep at a high angle, but when this laborious passage lay below them it was all over. Before midday they were on the col.

It was now evident that the North ridge was rounded and easy, quite free from danger; a good route at least as far as the shoulder. Unluckily they were met on the col by wind. An ice-cliff gave them shelter, but out in the open it was blowing a gale from the north-west. Clouds of spindrift were careering across the great North face, shooting up for a moment where the wind struck the ridge, then hurtling down the flank to leeward. It made a fearsome sight. They exposed themselves to the blast by way of experiment and hurried back to shelter. No further advance was possible. They went back to camp in the basin.

On the morning of the 25th they had to make a decision. Should a camp be carried to the North col? If this were to be done the Sherpas would have to go back for more loads to the Lhakpa La and return. This was what Mallory had originally planned, but although the distance was short the men were no longer fit enough to go and return in one day. Nor did Mallory consider that the climbing party could now sleep at 23,000 feet and retain a safe reserve of energy for an emergency. To clinch the argument, there was no longer hope of accomplishing any useful advance from the col: the wind was increasing daily in violence, the weather worsening, and the signs all pointing to a heavy fall of snow. Thus, as things fell out, the party had no choice. They returned over the Lhakpa La, struck the upper camps on the 26th, and withdrew to Kharta. The reconnaissance was ended.

The expedition left Kharta on 5th October. One week later,
at Kampa Dzong, they stood again by the grave of Dr. Kellas; and in sight of Everest, where a furious storm raged all day long, they set up a stone upon which was engraved in English and Tibetan his initials and his day of death.

Before the expedition left Tibet, the Everest Committee met in London and decided that a full-scale attempt to climb the mountain should be made in 1922, under the leadership of General C. G. Bruce. A way had been found, practicable at least as far as the North-east shoulder. It was thought that the mountain could indubitably be climbed were it five thousand feet smaller. The Duke of Abruzzi had climbed to 24,600 feet on K2 (28,250 feet) in Kashmir, but physiologists of repute thought that no man could go higher and live. The cells of the body are nourished by oxygen, which the red corpuscles in the blood carry to them from the air in the lungs. At high altitudes, where atmospheric pressure is low, the oxygen is diffused and becomes more so the higher one goes until there is not enough to support life. If a man were taken up in an aeroplane to 29,000 feet without oxygen apparatus he would quickly die. But if he goes up slowly, spending several days in approaching 15,000 feet and several more below 20,000 feet, he 'acclimatizes.' That is, his body adapts itself to the changed conditions. His bone-marrow, given time, will manufacture more and more red corpuscles and so provide more carriers to fetch in oxygen. When a man lives at sea-level the number of his red corpuscles is normally five million; when he is fully acclimatized to high altitudes the count goes up to nine million or more. In 1921, however, this fact was not yet established. Physiologists predicted that the process of acclimatization would cease at 20,000 feet. The question remained, how high can a man go and live? That question is still unanswered to-day, and indeed the answer will vary very greatly from one man to another. In 1921 physiologists believed that the limit was 25,000 feet. They did not realize the extraordinary adaptive power of the human body. Fortunately mountaineers were not intimidated. It was plain, none the less, that one of the principal obstacles to the ascent of Mount Everest was the lack of oxygen,
concerning which the reconnaissance of 1921 had learned nothing new; the other obstacles were those of weather and temperature, concerning which the new information was at least useful as a pointer to what might be expected in future. Too much reliance could not be placed on the experiences of this one year.

There was no doubt that the expedition had been unlucky in getting much worse than normal September weather. Rain below and snow above had been unusually heavy. Likewise (and in compensation) the monsoon had been a month late in arriving. It broke on the 6th July with a fall of three to four inches of snow; after which the mountain became ever whiter as the days passed.

Down on the glaciers this snow melted with surprising speed whenever the sun shone. On open slopes melting could be observed up to 23,000 feet. But above 25,000 feet no melting could be seen, however strong the sun. This implied that snow falling on the upper part of the mountain, since it would not react to sunshine, would remain as it fell—a dry powder. It would therefore be a very serious obstacle if it fell in bulk. Lower down on the mountain snow partly melts by day and freezes by night; it thus settles down and becomes hard, giving sure and safe footing. Deep soft snow is disagreeably exhausting at low levels; at high it may stop all upward movement. At best it will impose intolerable strain on the climbers and unhappy delays.

On the other hand, it seemed that an Everest party would be spared exacting ice-work above the North col. In June there was ice to be seen on east and west slopes up to 21,000 feet, but above 23,000 feet, none except on a very few of the steepest slopes. Nor had the night frosts been very severe. Mallory indeed remarks that he found heat more dangerous than cold. When the sun beat upon his back on the glaciers he sometimes felt all his vigour of body and vitality of will ebb away.

The only bad effects of cold were curiously enough suffered on a warmed, eastward-facing slope in sunshine. In such apparently favourable conditions men's feet were apt to get immoderately cold on snow even below 23,000 feet. Snow retains lower temperatures than the air above it.
example, will freeze at night, although the air is a little above freezing-point. So that a sunny morning is no guarantee against frost-bite if one is working on a snow-slope. Mallory was sufficiently perturbed by his own experience to write a note on the danger. In the high Himalaya it is possible to suffer frost-bite and sunstroke at the same time. In order to mitigate the danger of frost-bite whale-oil was issued to the Sherpas, who anointed their feet with it to good effect. The sahibs relied upon three pairs of socks. The third pair brings benefit only if the boots have been made big enough to take them in comfort; otherwise the effect is the reverse of what is intended.

In 1921 the wind was never to be feared, least of all during the monsoon. Taken at their average level the Himalaya are relatively windless mountains when compared with some lower, seaward ranges. They are not, for example, one half so windy as the Scottish highlands whose plateaux lie in the storm track of the North Atlantic hurricanes, nor do they suffer the same high velocities. Thus, up to the heights they reached, Mallory and company were not troubled by wind, although visited by an occasional nastiness. Above 23,000 feet it is a very different matter. Upon first reaching the North col Mallory's party had a glimpse of what the upper part of Everest could be like. High winds from the north-west are there normal before and after the monsoon. The fact had yet to be realized: meantime a first experience had been won, and the correct conclusion reached. 'Winds strong enough to blow up the snow,' said Mallory, 'will prevent the ascent.'

Wind by itself is no very terrible obstacle. Nor is cold. But the two combined are the mountaineer's deadliest enemy. When to these pair we add low atmospheric pressure, which means lack of oxygen, we have an impossible situation. High mountains become unclimbable. High camps can be held only in acute misery of body and soul. And now that these hard facts had been personally experienced by mountaineers on Everest the real and peculiar difficulties of climbing that mountain were beginning to be understood.

Mallory summed up his own lessons learned in these words: 'In all it may be said that one factor beyond all others is
required for success. Too many chances are against the climbers; too many contingencies may turn against them. Anything like a breakdown of the transport will be fatal; soft snow on the mountain will be an impregnable defence; a big wind will send back the strongest; even so small a matter as a boot fitting a shade too tight may endanger one man's foot and involve the whole party in retreat. The climbers must have above all things, if they are to win through, good fortune, and the greatest good fortune of all for mountaineers, some constant spirit of kindness in Mount Everest itself, the forgetfulness for long enough of its more cruel moods; for we must remember that the highest of mountains is capable of severity, a severity so awful and so fatal that the wiser sort of men do well to think and tremble even on the threshold of their high endeavour.
CHAPTER V

The First Attack

General Charles G. Bruce was that rare personality, the ideal leader of an expedition to the Himalaya. He seemed twice as large as life, bursting with high spirits which he could communicate to every company he entered. In his presence the deadest soul became alive. This peculiar gift of enlivening others went together with a youngness of heart that in great part accounts for his love of Gurkhas and their love of him. For they too are young at heart, simple men and born fighters. Bruce worked with them and trained them in India; he commanded them in battle both on the North-west Frontier and in Gallipoli, and so great was his name among them and so unhesitating his lead and their following of it, that when he was wounded at Gallipoli and knocked out of action his loss was felt at divisional headquarters as the equivalent of a battalion.

In appearance Bruce looked like a benign bulldog. He was big and broad and meant business. He had the air of command, but not that Olympian aloofness exhibited by leaders to whom command does not come naturally. Thus, without one moment losing his men's respect, he could laugh and joke with them, sing their songs at the camp-fire, and learn their folklore from their own lips. In exchange he would spin them outrageous yarns that sent them into roars of delight. In brief, he loved Gurkhas: they knew it and responded by giving an unswerving loyalty. He could do what he liked with them.

In 191, when I was walking alone from Katmandu, the capital of Nepal, on my way to India after the Everest expedition of that year, I was suddenly stopped by a Gurkha. He had seen from a distance that I was a white man and come running. Was I from England? he asked. I said yes. Then I must know General Bruce! The moment I returned to England I must go straight to Bruce and say that I had met Havildar Major
Birbahadur Tispa of the 2nd/6th Gurkhas. He told me then some of the tales from the Bruce saga, and so obviously worshipped the man that I had not the heart to say that Bruce was dead. And thus it is everywhere. Bruce and his exploits—feats of strength and of all manner of immoderation from Bacchanalian jest to swift decisive courage in action—have become legendary in Nepal. His memory stays alive in the Hills.

After Gurkhas he loved mountains, and mountain travel was the real joy of his heart. He had done much, in all parts of the Himalaya, and few knew that country better than he: Kellas perhaps was one, and Dr. T. G. Longstaff another. By good fortune Longstaff was with him in 1922. He was the principal British pioneer of Himalayan climbing and doyen of travellers. His knowledge of Himalayan peaks, their weather and snow and ice conditions, their avalanche dangers and perversities of habit, has never been matched by any man of any nation. He had the remarkable faculty of being able to forecast, by deducing weather and temperature from the position of a mountain as shown on the map, what formation and condition of snow and ice would be found on some unseen face. In such prophecies he was never yet found wrong. The conditions and snow and ice levels found on Everest in 1921 had been correctly forecast by him many years earlier.

Longstaff said outright that he loathed the hurly-burly of big expeditions. He travelled as counsellor, doctor, and naturalist, and so the deputy leadership fell upon Colonel E. L. Strutt, an Alpinist of great experience. The actual climbing team was of five men all thought capable of reaching the summit. These were Mallory, Captain George I. Finch, Dr. Howard Somervell, Major E. F. Norton, and Dr. Wakefield. A stronger team has never been gathered together on Everest. Mallory and Finch were the best of English Alpinists, accustomed to high standard rock- and ice-climbing and now at the very peak of their performance. Somervell and Norton were quite exceptionally tough and determined mountaineers. They possessed a grim resolution and will to go on, destined to take Norton to heights never surpassed on the north side. They were all men of
abounding energy and self-discipline: a necessary combination without which little can be done in the Himalaya.

Five other men were taken for transport, photography, and survey work. These were C. G. Crawford, Captain C. J. Morris, and Major Morshhead (all first-class mountaineers), and Captains J. G. Bruce and J. B. Noel, who were not trained mountaineers. Captain Bruce was a transport officer and Noel was photographer. Oxygen apparatus was provided and placed under the care of Finch.

Bruce's plan was to approach the mountain by the East Rongbuk glacier and to have his base camp established by the end of April, thus leaving six weeks for the ascent before the break of the monsoon. To understand the limitations of time we must consider Everest's position. The Himalayan Chain is 1,550 miles long and approximately 200 miles wide, and is bent like a bow. Everest stands close to the most southerly bulge of the bow, only 460 miles from the Bay of Bengal. Furthermore, it stands at the narrowest part of the Chain. For these two reasons the Everest region is the first part of the Himalaya to encounter the south-west monsoon, which advances up the Bay of Bengal earlier than its westerly, Arabian Sea branch. In consequence, spring mountaineering on the great peaks of the Everest group suffers an unusually short season. The monsoon normally arrives at the fringe of the foot-hills near the end of May. The current strengthens. The clouds filter up the valleys and gorges, drift across the ridges, soon to pile themselves against the south faces of the high Himalaya, there discharging rain and snow. As seen from the main range, the cloud-banks flow in like the tide of a universal sea until the world's greatest peaks project as islands, finally to be submerged.

In a normal year the monsoon reaches Everest between the 6th and 10th of June—three weeks earlier than it reaches the central Himalaya. It is imperative that the mountaineer exploring in the Everest area should make his decision about goal and route with all speed, get his base camp established quickly, his high camps pitched without waste of time, so to the top. His problems resolve themselves into a race against the monsoon.
Why not go out earlier in the year? Time can only be saved in this way at the cost of the party's physical and mental fitness. The heaviest snowfalls occur in December and January, and during the arctic cold of February, March, and April the great peaks cannot be climbed, while a camp pitched high on an upper glacier would be unendurable and serve no good purpose. It was Bruce's opinion that the very journey across Tibet in March, where passes of 17,000 feet have to be crossed, would be an unwise prelude to high mountaineering, in imposing unnecessary strain on the climbers' stamina at a period when it ought to be conserved for the more exacting work ahead. Accordingly the expedition did not start from Darjeeling until the 26th March.

Starts three weeks earlier than this have since been made, but Bruce's wisdom in 1922 was swiftly confirmed. On coming out on to the Tibetan plateau the expedition was greeted by bitter winds. The ground was frozen hard; the plains of icy grass were swept by a wind blowing straight off the snows and often continuing unabated all day long. On some days it approached gale force, on others it bore blizzards that concealed the track, lashed the face, and blinded the eyes.

Three hundred baggage animals and sixty porters accompanied the expedition. Of the animals twenty were ponies, eighty mules and donkeys, and over two hundred yaks and bullocks. The climbers rode the ponies when possible, but in winds so cold were often happier on foot. Throughout the march they wore windproof clothing. The animals appeared to get all the protection they wanted from their own hides. Yaks in the morning would be seen contentedly chewing the cud, although their flanks were encased by frozen snow.

The yak is the lord of the Tibetan plains. He is like a Highland bull, but black—short in the leg, broad in the hoof, enormously strong; his long shaggy coat and superbly bushy tail almost reach to the ground like an apron. Some have a white tail or even a white face. The great tail serves a practical purpose: the yak feeds with his back to the wind. They feed on the very coarsest grass and scrub, which could hardly sustain life in any other beast, and yet the cows produce good rich milk, their coats are always glossy, and they keep it well combed,
clean, and silky by rolling and kicking on suitable soft banks. The yak is a slow pack-animal. He does only between one and two miles an hour; on the other hand he will keep going for ten or twelve hours regardless of the difficulty of the ground. The cows calve in the spring.

It might almost be said that the yak comes second to Buddha as the saviour of Tibet. While carrying the people’s burdens on his broad back, he provides them at the same time or on death with meat, milk, wool, hides, butter, cheese, and fuel. Tibet lacks trees and usually the only fuel is dry yak dung, which burns like peat. This invaluable but humble creature is thus an indispensable link between Everest and India via Tibet: in the annals of the expeditions his part has to be remembered.

The winds of Tibet normally die away in the evening. The night and early morning are calm, then the winds rise again throughout the forenoon. For this reason Tibetans often journey by night. The expedition was able to avoid much exposure to wind by starting early each day and finishing early. Usually they were in camp shortly after noon. It is one of the merits of the northern approach that the climbers have a chance of starting the process of acclimatization in crossing several high passes. Mallory and Somervell added to these when passing the Gyanker range by trying to climb Sangkar Ri (20,402 feet). They went to 20,000 feet and felt sick and exhausted. Mallory had a severe headache but remarked that he felt ‘no worse than I expected at this stage of our training.’ The value of such preliminary climbing is at once apparent.

The weather relented as they advanced, until butterflies and flowers and all kinds of birds relieved the rigours of the five weeks’ march, drawing from Longstaff the dry comment: ‘To experience all this is worth the penalty of being condemned to climb the monster.’ The expedition arrived at Rongbuk Monastery on 30th April. Longstaff’s reaction to the sight of Mount Everest adds a qualification to Mallory’s first vision of the year before: ‘It had no athlete’s grace of form,’ he writes, ‘but the brutal mass of the all-in wrestler, murderous and threatening.’

At Rongbuk Monastery they made the acquaintance of the Lama, who by general consent of all who have met him over a
long term of years, was one of the most remarkable men to be met in Tibet. Bruce described him as a large man of sixty, 'full of dignity, with a most intelligent and wise face and an extraordinarily attractive smile.' His own people held him in the utmost reverence as a man who had realized perfective union with the Godhead. The Lama blessed the climbing party and the Sherpas. He had but one request to make—that no wild animals should be shot.

The Rongbuk valley is to the Tibetans sacred ground and sanctuary for all living things. No animal may be killed in it. Meat supplies for the expedition had therefore to come from beyond Chobuk, sometimes from villages forty miles down the Dzakar Chu (which flows north from the snout of the Rongbuk glacier). The Tibetans themselves, although by their religion not allowed to take wild life, are permitted to kill domestic animals, and do in fact eat much dried yak and mutton. When Bruce questioned the Lama about the Metohkangmi or Abominable Snow-man, the Lama calmly replied that it was true that five of these wild men lived in the upper Rongbuk and its glaciers.

Bruce engaged a hundred Tibetans for work on the lower glaciers. On the 1st May the hundreds of burdened animals and men streamed up the valley and unloaded on the wide flats of stony ground just below the snout of the glacier. Camp was pitched there at a height of 16,800 feet. The Tibetan drovers were paid off and departed with their animals. Fifty Sherpas were retained, and to conserve their energies for a later stage arrangements were made for local men to carry up the first three camps.

The whole party had arrived fit, and on the 4th May Strutt, Norton, Longstaff, and Morshead went out to reconnoitre the route up the East Rongbuk glacier and to select camp sites. In three days they travelled nine miles to 21,000 feet in the basin under the North col. This despite extreme cold and glacier lassitude. That they had acclimatized so well in so short a time was a great encouragement to every one else. They returned to Base Camp on the 9th with a full report, and the establishment and provisioning of the first three camps proceeded apace.
Camp I was put at 17,800 feet just within the entrance to the East Rongbuk glacier and about three miles from Base. Camp II was two and a half miles farther up on the left bank at 19,800 feet, and Camp III three and a half miles farther at 21,000 feet. Camp III was now to be an advanced base and Mallory and Somervell pitched the tents there on the 12th May, on top of a
mass of stones, which had rolled off the North peak on to the glacier.

The most interesting part of the ascent came between Camps II and III where the glacier, although never steep, bore on its surface a maze of gigantic ice-pinnacles, a tumbled and gleaming host which could for the most part be avoided on the glacier’s left edge, until at last a deep trough through the spires of ice gave access to a more even surface beyond. The surface was everywhere extraordinarily smooth and blue and hard, and therefore slippery to nailed boots. In consequence, porters taking loads to Camp III had henceforth to be supplied with crampons.

The task for next day was to find a way to the North col. These slopes are simply a steep, slow-moving glacier fed by the snow-masses near the crest. Thus the detail of the slope varies greatly from year to year. The way followed in 1921 could still be distinguished, but the first long slope to the right had become a thousand feet of glittering ice: Serried ice-cliffs barred the whole left half of the wall. The only alternative was to force a direct line up the middle. This new way started with four hundred feet of very steep ice, but the surface was luckily split by a zigzag fissure. Mallory and Somervell went up to examine the fissure and found its edges so rough that they were able to climb on them without cutting more than a few steps.

One Sherpa named Dasno accompanied them, carrying eighteen-inch wooden pegs and spare rope. At the end of the first two hundred and fifty feet one peg was driven in to its head and a length of rope left dangling to help future parties. They then made a leftward traverse to the edge of a big crevasse. This crevasse had to be crossed, but luckily it was partially filled with snow. They cut large steps down and up its two walls, fixed more rope on them and across the traverse leading in, and so mounted much easier slopes to a snow-corridor.

Their objective was a long shelf which lay beneath ice-cliffs immediately under the col. They found no further serious difficulty. The corridor inclined gently save for one short icy section where steps had to be cut and another rope fixed. Once on the shelf they saw no way at first, for the leftward approach
to the col was trenched by crevasses. These forced them to turn about and follow the shelf far towards the North peak, even on to its snow-slopes, from which they were able to come down on to the extreme north end of the col. The ice there was much split and riven.

The west wind of Tibet was blowing over the col as usual, but without the ferocity of 1921. They were able to look beyond the West ridge of Everest, across the Lho La to the Khomflu glacier flowing south into Nepal and the splendid peak of Pumori on its far side. This mountain is a pyramid, but the precipitous fall of its faces, plated with snow and ice, the abrupt lift of their sharp edges, give to the final peak a lofty upsurge shared by no pyramid of humbly geometrical pattern. Running north of west from Pumori into the far distance stretched an apparently frail ridge of icy towers and steeples, elegantly corniced, high and savage of outline but of unearthly beauty: unearthly not only in establishing its kingdom in the blue of universal skies rather than in Asia, but in writing there a signature of things everlasting.

They returned to Camp III. Being still not acclimatized they had headaches that night and felt thoroughly ill—a sensation not unlike carbon monoxide poisoning. It was no disadvantage, therefore, that they had to wait three days for supplies and Sherpas to establish Camp IV. Somervell, who is a fine artist, spent much time sketching and painting in oils, twice climbing alone for this purpose to the Rapiu La, the col at the foot of the North-east ridge. He was a man commanding extraordinary energy, both mental and physical. Their library at Camp III was supplied by Mallory, who had brought Bridges's *Spirit of Man* and Shakespeare's *Hamlet* and *King Lear*. Mallory appears to have been unusual among Everest climbers in maintaining his mental standards on the mountain. Somervell and he read the books aloud to each other and enjoyed them.

On 16th May Camp III was at last heavily reinforced. Strutt, Morshead, and Norton arrived at noon with a large convoy of porters. It had been Bruce's intention that Mallory and Somervell should make the first attack, promptly followed by Finch and Norton (or Morshead) with oxygen apparatus.
But two events combined to interfere with that sound plan. First, although the oxygen cylinders were being brought up, Finch was still at Base with stomach trouble. His illness was only temporary. However, neither he nor his oxygen was yet here. The second event was a most disturbing one. Thus far the weather had been settled, but on 16th May when a large party visited the Rapiu La they saw that the clouds boiling up from the Kama Chu were not white but grey and sombre. Makalu looked coldly grim and the valley an ugly grey-blue. The North-east ridge of Everest seemed to be a dividing line between a fair-weather system to the west and bad weather approaching from the south-east. Was the monsoon already drifting up the Arun valley and were these clouds its harbingers? If so, how long would the west wind hold back its advance upon Everest?

Strutt, as deputy leader, had Bruce's authority to change the disposition of assault parties as circumstances required. He decided not to hold back Norton or Morshead for the later oxygen attempt, but to put them into action now, lest worsening weather altogether prevent their attack. It is probable, moreover, that Norton and Morshead lacked confidence in the oxygen apparatus. They were anxious to go ahead at once. And Mallory, at this stage of the assault, strongly maintained that four men were better than two. A party of four was thus agreed for the first attempt. On 17th May they moved up to the North col with ten Sherpas, whose loads weighed thirty pounds. From Camp III onwards no one could be certain how the Sherpas would perform. They would have to make two journeys to the col in order to stock the camp, and the whole success of the attack depended on their ability to go very much higher. The Sherpas knew this and were silent that day. They were very much keyed up to proving themselves. Of the sahibs, every one felt better acclimatized than before.

None the less, 18th May was a rest day to allow acclimatization to continue smoothly. On the 19th they went down and brought up the remaining loads from Camp III. Again every one felt better and had energy to spare on reaching the shelf under the col. Their five tents were pitched on this shelf,
doors facing the ice-cliff, which gave them perfect protection from the west wind. The food-stuffs brought to this camp proved to be excellent and were freely eaten—a sure sign that the climbers were fit to go higher. The basis of the diet was pea-soup, biscuits, ham, chocolate, butter, jam, and cheese. These were in abundant supply. Various other tinned goods were carried as luxuries, such as quails in truffles, crystallized ginger, sliced bacon, green vegetables, peas, beans, spaghetti, herring, sausages, and beef stew. Tea and sugar were of course consumed in large quantities at every opportunity.

The weather remained good. The sky was clear and starry that night and the establishment of Camp V high on the North ridge seemed certain. It was Mallory's declared opinion that the ideal plan for the climb was to have the final assault party starting from a camp not more than two thousand feet from the summit. But the porters could not be expected to climb four thousand feet from the col in one day, so that an intermediate camp would be needed at 25,000 feet. Mallory's ideal plan, however, had been compromised by Strutt's decision to double the number of climbers without doubling the porters. Extra porters had not been available. Without a dangerous loss of time (having regard to the weather) stores for two camps on the North face could not be fetched up to the col. No one seems to have been much concerned at this sacrifice of a camp. The plan now was that Camp V should be pitched a thousand feet higher at 26,000 feet. All were confident that a final climb of three thousand feet to the summit should be practicable. They still had hard lessons to learn from Mount Everest; by the decision of 16th May their chance of success had in fact been forfeited.

Mallory had meantime taken every precaution to ensure that all loads would reach 26,000 feet. Thus there were to be just four loads for the Sherpas and none would exceed twenty pounds. Nine Sherpas would be employed: two to each load. They would relieve each other as the need arose, and still there would be one man in reserve. The plan seemed flawless. Hopes were high that night. Mallory confesses that as he lay in his eiderdown sleeping-bag his mind went over the details of
preparation quite without anxiety, 'like God after the creation seeing that it was good. And it was good.'

At five o'clock next morning Mallory was shivering outside the porters' tents and trying in vain to get them to turn out. It transpired that five were too mountain-sick to carry loads. Only four men were sufficiently fit to go high, and thus at one stroke the whole reserve had to be written off. Severe as the blow was, it did demonstrate the wisdom of having more than a hundred per cent reserve of porters on the North col. They were at least able to carry on, when otherwise complete rout would have been their lot.

An unexpected lesser trouble arose in the preparation of breakfast, for which two tins of spaghetti had been set aside. These tins were frozen so solid that not even an ice-axe would open them. They ought to have been kept warm in a sleeping-bag all night. Now much time had to be wasted in melting down snow and then boiling it up to thaw out the tins. However, the party stayed in good spirits and at 7.30 a.m. they were off.

In half an hour they were on the true col and looking up the full length of the North ridge. The morning was still and sunny. Snow covered the rounded crest. To right and left the North and North-eastern faces sweep away concavely, but more deeply so on the left where the fall of the ground is too abrupt to give good climbing throughout its first fifteen hundred feet. Below the crest on its right-hand side, a line of bare rock and stones bordered the snow-slopes where they merged into the great North face. They had a choice of following either the crest or the long line of stones. Morshead led the first of three ropes and tried the stones. He found them securely bedded in frozen snow. Their surfaces were flat and thus provided an excellent staircase, sparing them all the trouble of step-kicking.

Conditions for the ascent could at first hardly have been better. It was true that the air temperature seemed unusually low, but that was only to be expected. What did surprise them was the weakness of the sun shining from an apparently clear sky. At this time of year the sun should be warming. At great altitudes the sun's rays, unfiltered by atmosphere, strike fiercely through, and although the rarefied air is not appreciably warmed by them
solid objects are, for on these the rays impinge. To-day they were obstructed by something not yet visible.

Gradually the wind rose out of the west. Remembering how it had scourged them on the plains ten thousand feet below, they expected no mercy here. As yet no more than a breeze, it allowed them to climb twelve hundred feet before forcing a halt. The donning of spare clothes had become essential. All except Morshead had been already wearing windproof suits of light, close-woven cotton, under which they wore shirts and woollens. Mallory records that he now added a silk shirt and a Shetland sweater. But Morshead added nothing except a woollen scarf round his head.

Shortly after they started again a high veil of clouds began to materialize across the sky, blotting out the sun and spreading over the recent sparkle of snow and rock a waste of grey gloom. A heavy, continuous wind was soon blowing across the face until they could lean their bodies against it. Ears, toes, and fingers, at first only stung by cold, now lost sensation and the danger of the whole party’s being knocked out of action by frost-bite became apparent. A more sheltered route had to be found at once, either to leeward of the ridge or up on the crest, which might be relatively calm if the flank were deflecting the wind upwards.

While Morshead stopped to put on his windproofs Mallory took the lead. He struck leftwards on a three-hundred-foot slant up snow towards the crest. The snow was too hard for step-kicking. Steps had to be cut, and cut fast. In the Alps a step can be cut in hard snow with one powerful blow of the axe, but at 25,000 feet the cutting of a whole series of steps in that way will quickly leave the climber exhausted and blown. The only alternative is to use more and gentler strokes of the axe. Mallory tried to do so, but the need of hurry being urgent he had to sacrifice his own reserves of energy to get the job done at speed. At 11.30 a.m. the party was lying on the rocks beyond the crest, out of the wind.

The aneroid reading was 25,000 feet. Their intention had been to pitch Camp V at 26,000 feet. In a sense they still had time to do it: three hours, they reckoned, would see them
up to that height. But in another sense that three hours was no longer theirs to command. The wind had been strengthening since morning and the worst, they were convinced, was yet to come. Before that happened the porters must be sent down. The risk of injury by frost-bite was already upon them, and a further long delay of several hours looked like changing a risk to a certainty. This was the first attempt to carry a camp high above the North col; more would follow. Severe injury to the porters now, on this their very first attempt, must weaken the morale of all who followed, and be to the injured a personal disaster, which it was their employers' plain duty to avoid at whatever sacrifice of mountaineering ambition.

None the less it was not an easy decision to make. An hour elapsed before Morshead's party, who had arrived late, were sufficiently rested to climb again. They might have been tempted to go still higher had a camp site been visible on the lee side of the ridge above, but no reason for supposing it to exist was given them. A camp on the crest or to windward was in such a wind not a sane proposition. And so it was agreed—they would camp at 25,000 feet.

For the next one and a half hours they searched diligently at various levels for ledges sufficiently flat and wide to accommodate the two small tents. They failed. In the end they had to select sloping slabs and build up the lower parts with stones. At three o'clock they sent down the porters, then Somervell cooked a meal and they went to bed. It was only at this stage that they were able to take stock of the damage suffered by their bodies. Mallory's finger-tips were frost-bitten. This had almost certainly been due to his tight grasping of the axe when step-cutting, thus impairing circulation in the fingers. While cutting he had also exchanged leather gloves for woollen ones, which give a better grip on an axe-shaft; but wool is poor protection against wind. One of Norton's ears had been frost-bitten, so that he could lie only on one side in the double sleeping-bag that he shared with Mallory. Morshead was in much worse state than the others. He had been very badly chilled on the way up, almost certainly through not putting his windproofs on soon enough, and since reaching camp had been markedly unwell
and obliged to lie down. His fingers and toes were severely frozen.

As ever with this remarkable team of men, high optimism prevailed through the sleepless night. They had set a camp higher than any man had climbed before. In defiance of death-foretelling physiologists, they were alive enough to hope—positively to hope—that the summit might still lie within the range of a one-day climb. If only the weather would hold. . . .

Not even Mallory’s optimism was proof against the suspicion that all was not well with the weather. The wind had dropped in the evening as usual, which meant nothing in regard to the morrow. What troubled him was the relatively high temperature: 7° F. This was no colder than at Camp III, and fine weather in the Himalaya demands a bitter cold at night and a clear sky. Stars were indeed showing, but they shone feebly and not as the steady lamps of Tibetan story. Morning came with a patter of fine snow on the roofs and thick mist. It found them as tired as when they went to bed and stiff from hard lying in cramped positions. At 6:30 a break in the eastward clouds fetched them out of their bags. The weather almost looked like mending. At 8 a.m. they roped up and started, Norton leading.

They had gone but a step or two when Morshead stopped. He said quietly: ‘I think I won’t come any farther. I know I should only keep you back.’ He was too unwell to climb, yet well enough to look after himself in camp without help. Regretfully they untied him, and the three went on aiming to rejoin the crest of the ridge eight hundred feet above.

The night’s snowfall had covered the rock ledges to a depth of four to eight inches. This delayed them very little because the ground was an open and much broken face rather than the flank of a ridge; rock and stones cropped out of the snow and on these they were able to keep a rhythmical pace. Rarely did the hands have to be used, for steep pitches could be turned. The entire power of the body, all energy of muscle and brain, had become more than ever dependent on the efficient working of the lungs, and the lungs upon the consciously exerted will of the soul. The lungs had to be deliberately set to work and kept
working, five complete breaths to a step as against three at the North col. The breath had to be drawn and exhaled to a rhythmical beat, and once this was done the legs and arms moved without demanding conscious attention. The eye chose the holds and the limbs moved to them automatically.

Once every thirty minutes the party stopped to rest. At one of these halts Mallory felt a foot freezing and removed his boot. He was wearing four pairs of socks. As on a previous occasion he removed the outermost pair and had no further trouble. It is folly to impair the circulation by wearing too much wool. Not counting these halts, which were never of more than three or four minutes, they discovered their rate of progress to be working out at four hundred feet an hour. Supposing that this rate were maintained all the way, they could still not hope to reach the summit under ten hours. When allowance was made for halts, diminishing speed as they gained height, and the difficulties of rock-climbing nearer the summit, it became painfully obvious that no hope in fact remained.

Some goal lower than the summit had thus to be chosen, but their minds would fix on no particular point as being desirable. The human mind becomes devitalized by the oxygen-lack at great altitudes. It loses interest in events and objectives and must be spurred on by the will. And the will itself must be primed before leaving camp in the morning by imparting to it a settled determination to reach some chosen point. The priming cannot be successfully given at a later stage: the attempt when made is found to be too weak. So now, with the will deprived of its settled goal, the mind could take no interest in any lesser point—not even in the North-east shoulder. The climbers agreed that they must turn back at 2.30 p.m. This hour was settled by a calculation of the time required to return to Camp V and then to escort Morshead down to Camp IV before dark.

At 2.15 p.m. the ascent of a short pitch brought them on to gentle terrain where the rocks slope back four hundred feet towards the North-east shoulder. And there they stopped. No one had the slightest desire to reach the ridge or look over it to the unknown and maybe wondrous scene beyond. Mallory loved a mountain scene as much as any man, and could appraise
it better than most, but he admits that he no longer 'took
notice.' The view was restricted to the arc north-east to north-
west. All the valleys were filled with mists, and the great
North peak had apparently shrunk back into them until only its
dark head floated on the surface. From east to west no other
peaks showed through until the eye came to rest on the giant
twins Cho Oyu and Gyachungkang. The greater was Cho
Oyu, 26,750 feet, which seemed to be below them. They
reckoned their height to be 26,985 feet, but subsequent evidence
amends it to 26,700 feet.

Meanwhile they lunched on raisins, chocolate, Kendal mint-
cake, and acid drops. Since the wind was negligible they risked
a sip or two of brandy. Its effects were good, and best of all
on Somervell whom it inspired creatively. He stayed behind
to make a sketch while the others moved down. His effort at
that altitude was extraordinary, because even the use of a camera
is there not lightly undertaken.

At four o'clock they reached Camp V. They had thus
descended two thousand feet in one and a half hours, which was
four times less than the ascent. It is a valuable point to note,
for on easy Alpine ground the speed of ascent is usually not
more than halved on the descent. In the Himalaya there is a
much greater difference between ascent and descent in the de-
mands made on the body. Morshead now declared himself
well enough to move down, and the whole party set off for
Camp IV well assured that the remaining descent of two thousand
feet could be accomplished in little more than half the three hours
of daylight left to them.

In this estimation they reckoned without some of the human
factors. The party was now more tired than any of its individual
members at first realized; they were thus less alert than before,
their initial concentration of energy on turning to the descent
had been spent on the first stage; so that on this second stage
they gave less attention to detail, a certain carelessness being
further induced by the lack of any alarming abruptness in the
fall of the rock. They relapsed into a false sense of security.

They had dropped several hundred feet, still on the east side
of the ridge, and were traversing broken ground above a broad
snow-slope in order to regain the crest, when Mallory, who was leading, heard an unusual sound behind him. Just a minute earlier some premonition of danger had made him alert. He drove the pick of his axe hard into the snow, hitched the rope round the head, then threw his whole weight on to the axe to hold it down. He was just in time. The third man had slipped and pulled off the fourth, who was moving and unprepared. The second man checked but could not stop them and now all three were flashing down the slope, straight towards the East Rongbuk glacier three thousand five hundred feet below.

There is normally no hope of the first man stopping such a fall. The belay will be torn out by the jerk and the leader whipped into the air like a straw. For Mallory and the others there would be no alarm, pain, or terrible suspense, for a man's nervous system is then shocked out of action. Suddenly the jerk came. The rope gave, and gripped the axe-head. The pick held. Between the moving bodies below the rope tautened and stopped them. One man swore at having to climb back to the ridge. All danger was over.

They were saved because the weight of all three had not come on the rope at once. The second man had been checked while there was still some slack of the rope between each falling body, and he too had helped Mallory by checking the others at the final strain. No one had been hurt. They continued the traverse towards the crest, but moving now only one at a time across snow-covered ledges. Fresh climbers in fair snow conditions would have crossed that slope in fifteen minutes, but now it took seventy-five. They arrived on the ridge with an hour of daylight on hand: ample, they thought, to allow them down to camp before dark. But Morshead was now utterly exhausted. He could move only a few steps at a time, and that only with support. Frequent halts of two or three minutes and occasional rests of ten minutes were found to be essential. And so dusk fell and darkness gathered while far away to the west lightning flickered through the clouds.

A high wind would have killed them had it caught them at this stage. But a dead calm prevailed and the way was easy to find. No lantern was needed. Even in the dark the long line
of stones by the edge of the snowfield could be picked out—and avoided, for now it was less tiring to slither down on the snow. At last they reached the North col. Here there was need of light. The tents were only two hundred yards away, but crevasses, séracs, and ice-cliffs intervened. They lit up a candle lantern, then spent an exasperating hour or two trying to thread a way through the maze. Luckily Morshead was able to look after himself at this lower altitude, for every one had to keep well spaced on the rope so that two men would not land in a crevasse at the same time. Great delays occurred where they had to jump down a fifteen-foot ice-wall, and probably they were persuaded to jump only by the dim but encouraging glimpse of three tents in a neat row at the foot of the next tier. To reach the tents they had now to slide down a fixed rope, but for a long time the rope could not be found. It was deeply buried. The candle burnt out. To be held up thus so close to camp was the most mortifying experience of the descent (although worse awaited them inside the tents). They could endure the vain search no longer and with misgiving had begun the precarious descent, when suddenly someone dug out the rope. They raised a hoarse noise almost like a cheer, grasped the blessed strands, and in no time were down. At 11.30 p.m. they crawled indoors, and thanked God the day was done.

They were in need of food, but their bodies were so deprived of moisture by the day’s deep breathing that no food could be eaten without liquid. For example, it was impossible to swallow a biscuit; and so they searched around for the pots to melt down snow. And there were no pots. The porters, whom they had expected to find here, must have taken them down to Camp III. That Camp IV should have been stripped of its reserves in men and material while an assault party was still on the mountain can be understood only if we bear in mind that no one at Camp III had climbed in the Himalaya before. They were still in process of learning. Meanwhile in Camp IV brains were racked in vain to devise some way of melting snow without a pot. They went supperless to bed. Norton had wriggled into his sleeping-bag when he was visited by a creative vision. It appeared in the form of an ice-cream. And he bore witness
before his fellow men. Material lay to hand for transforming it into actuality. Tins of jam and condensed milk were opened and mixed, snow was stirred in, and the result wolfed down. It is not surprising that Mallory, when about to fall asleep, was seized by violent shudderings which he was powerless to control; his back contracted with cramp and breathing came so short that he had to sit up, propped on his elbows, and start deep breathing exercises all over again.

The descent to Camp III started at six o’clock on the following morning. The new snow lay much deeper below the col than above, the old tracks had vanished, and so a descent that should have taken less than one and a half hours dragged on into the baleful heat of the forenoon. The party, weary as they were, frost-bitten and defeated, remained so far in command of themselves that they deliberately hewed and kicked a safe staircase so that porters might be spared the effort and be able to go up again unescorted.

Strutt and Morris came out to meet them near the foot of the slope, and there too they met Finch, Wakefield, and Geoffrey Bruce setting out for the North col with oxygen. Wakefield at once returned with them to give first aid to their frost-bites, and soon they were in camp drinking enormous quantities of hot tea. Somervell was abstemious at seventeen mugfuls, but the others indulged themselves. Thus ended the first attempt on the summit of Everest. They had lost and they had learned —learned in that hard way of experience by which all loss is in the end transmuted into gain. And the gain is not only for themselves, but for all who follow after.
CHAPTER VI

 Finch’s Trial by Storm

George Finch recovered from his indisposition and arrived at Camp III on 19th May—just in time to hear that Norton, who should have been his climbing partner, had gone up to the North col with Mallory. It was a great disappointment; there remained no trained mountaineer to accompany him. By good fortune, however, he had Geoffrey Bruce, who was not a mountaineer, but none the less a man of high spirit and great stamina, and possessed of a natural talent for dealing with mountains, men, and oxygen apparatus. It was Finch’s opinion that he could not ask for a better companion save in this one respect, that being inexperienced Bruce would not be trained in the art of conserving energy by cutting all needless climbing movement, and so would inevitably tend to exhaust himself quicker than an experienced mountaineer, especially in bad weather emergencies. The third man of the party was Lance-Corporal Tejbir of the Gurkhas.

Immediately on arriving at Camp III, Finch and Bruce examined the ten oxygen outfits and to their dismay found that not one was gas tight. They had been knocked about on the journey across Tibet. Soldered joints and dry and shrunken washers were alike leaky. The gauges were out of order. The masks from which the oxygen had to be breathed had been fitted with too stiff valves, which threw excessive strain on a climber’s lungs when inhaling. The mask thus stifled the wearer, and moisture condensed under it and froze. Finch, however, is a man of foresight and inventive genius and contrived to make all repairs and remedies.

The apparatus consisted of a rack containing four steel cylinders in which oxygen was compressed to one hundred and twenty atmospheres. The rack was designed to be carried on the climber’s back. From the cylinders the oxygen flowed
through copper tubes to an instrument arm in front, then through rubber tubing to the face-mask. At the instrument arm were the pressure-gauges and valves controlling the rate of flow. The whole weighed thirty-two pounds.

Finch now cast out the useless masks and made new ones of his own. He made them from toy football bladders and glass T-tubes, which he had brought from Darjeeling for this very emergency. He cut the middle of the rubber tube connecting the copper tube with the mouth of the climber and let into it the glass T-tube, to the third opening of which he connected a football bladder. And that was all. It worked perfectly. When the climber inhaled, the oxygen flowed straight into his mouth and there mixed with the indrawn air of the atmosphere. When he exhaled, he bit the end of the tube and stopped the flow of oxygen, which instead filled and expanded the football bladder. On inhaling again, he opened his teeth, the bladder slowly collapsed forcing pure oxygen gently into his mouth, where it mixed once more with high-altitude air. The climber had only to time his biting action correctly, and this he could learn speedily; the process then became easy and automatic.

Bruce and Finch set to work on the other defects with hacksaw, pliers, and soldering iron. The work took four days, because the temperature was about and below zero F., and the tools could be handled only out in the sun. On 21st May there came a day of perfect calm. It was the first they had had, and the very day that Mallory, Somervell, Morsehead, and Norton were known to be attempting the summit. Finch's diary records that during the whole five weeks that he was on the mountain, 1st May to 5th June, there were only two fine, still days with no drifting at the summit. Other cloudless days came and went, but always with that bitter wind driving across the great faces and with snow smoking away from the summit ridge. Four times there were snowstorms lasting from one night to three nights and days.

Towards sunset on the 21st the Camp III party turned out to scan the upper mountain for signs of life. At last they saw four dark specks on the North ridge descending the lower snow-slope. Their utter exhaustion was observed. On this one day, at
least, the Goddess Mother of the World had shown to them that spirit of kindness that Mallory had implored of her.

To give aid to the four men at the col, to replenish stores there, and to make final trial of the oxygen apparatus, Finch, Bruce, Wakefield, and Tejbir set off with several Sherpas late next morning. They met the descending party at the foot of the first steep slopes. 'They were more or less in the last stage of exhaustion,' comments Finch, 'as indeed men who have done their best on such a mountain should be.' Wakefield and two porters went back with them; the rest continued to the North col. The modified oxygen apparatus worked splendidly. Without distress they went up in three hours. The Sherpas began to revise their opinion of 'English air,' as they called the oxygen. To demonstrate its virtues more impressively, Finch turned a stream of oxygen on to a lighted cigarette end, which flared high and white before the Sherpas' startled eyes. They came down again in fifty minutes. The performance augured well for their summit attempt, now fixed for the following days.

On 24th May Finch, Bruce, Tejbir, and Captain Noel (the latter bent on a photographic mission) all went up to the col using oxygen. The weather was good, and the morning of the 25th broke clear though windy. At 8 a.m. twelve porters started up the North ridge bearing a tent and camping gear, spare oxygen cylinders, and provisions. Finch, Bruce, and Tejbir gave them one and a half hours' start and then followed. Each carried an oxygen apparatus weighing thirty-two pounds, which was more than the porters' loads, and yet overtook the porters fifteen hundred feet up. This further proof of the merits of oxygen amazed the Sherpas and delighted Finch.

The party halted no more than a minute or two. Bad weather could be seen blowing up from the west and Finch hoped to climb nearly two thousand feet more. From the North col he had chosen a promising camp site at 26,500 feet, and the Sherpas had gone so well that they stood a fair chance of reaching it if only the weather would hold. They were in good spirits, too, and had welcomed Finch with broad, happy grins. Prospects were bright for a high climb. They continued up the snow-ridge and arrived on the rocks beyond at one o'clock. But the
weather had now broken. At 25,000 feet rapidly freshening wind whirled snowflakes round them. They pressed on until, at 25,500 feet, the weather had become so threatening that notice of it had to be taken out of regard for the Sherpas, who had still to go back to the North col. If camp were pitched immediately, the margin of safety, Finch reckoned, would be none too wide. Again, this was a hard decision to make; bad as the weather was it might have been possible to continue at least to 26,000 feet; but, like Mallory, Finch would on no account play with the Sherpas' lives. He loved dearly those smiling and willing men who placed such complete trust in all his decisions, however grim the future looked. At 2 p.m. he pitched camp on the crest of the ridge at 25,500 feet. He deliberately chose the crest, because the face of the mountain to windward would be more severely scourged by the wind. The Sherpas levelled off a little platform for the tent on a ledge, below which the twin faces plunged four thousand feet. The wind was still rising and now growing piercingly cold, yet Finch says that when at last the Sherpas went scrambling back down the ridge they were singing—chanting snatches of their native songs. 'What splendid men!' he exclaimed.

Bruce, Tejbir, and he hastened indoors and crawled straight into their sleeping-bags. Exposure to wind had chilled them severely and they huddled together for warmth. They brewed tea, but tea at 25,500 feet is not very warm. Water there boils at a low temperature, and even boiling water can be drunk without burning the lips. Outside a storm had broken. It was snowing hard and a fine, powdery drift was penetrating the canvas and thickly covering everything inside. In time it found its way into the sleeping-bags and through the climbers' clothing to the skin. At sunset the developing storm reached gale force, and then a hurricane burst upon the quivering tent. Dearly would the men inside have liked to rest. Instead they had to sit up for eighteen hours and fight for their lives. With such ferocity did the wind tear at the tent that again and again the sewn-in groundsheet and men on top were lifted off the ground at one side or the other. Their utmost vigilance and combined strength were required to hold the tent down. They dared not
relax for one moment. Already the door flaps had been stripped of their fastenings, and had the hurricane managed to get a grip of the whole breadth of the groundsheet, the guys would have been torn out and the tent hurled with its occupants down to the glacier.

Since the emergency was extreme the men were keyed up to give of their best. Finch said determinedly that they would still get to the top. Tejbir’s broad grin never left his face, and Bruce responded to this confidence with a good show of cheerfulness. The hurricane reached its climax at 1 a.m. on the 26th. Some of the guy-ropes tore out or worked loose, and the wild flapping of the canvas, says Finch, was like machine-gun fire. So deafening was the flapping and the shrieking of the hurricane round the tent that they were unable to speak to each other save by shouting mouth to ear. For a while time had no meaning for any one, but at length there came what by comparison might be called a series of lulls, each followed by terrible outbursts of the continuing storm. They took advantage of these lulls to go out in turn to secure the tent and to bind it down with their Alpine rope. But so fierce and bitter was the wind in these so-called lulls that no man could stay outside for more than a few minutes, and in even such brief exposure each one suffered deep-striking cold and exhaustion.

The roping down of the tent gave them a new sense of security and respite. But the dawn came grey and dreary and the wind showed no sign of abating until 8 a.m., when there was a lull of half an hour. Their hopes rose only to be dashed by the wind’s return in all fury and panoply of drift. Soon they had to go out again in turns to secure the guy-ropes and to build a little wall to windward, and to be dangerously chilled. As this dreadful morning dragged on Finch began to wonder how much longer they could stand the strain. They tried to prepare a meal, and the flames of the spirit-stove danced and flared so badly amid the flapping of the tent as to add a new anguish to their anxieties—a real danger that the thin canvas barrier between them and death might catch fire. Towards noon the hurricane’s fury mounted to a pitch still more awful. A flying stone cut open the windward wall of the tent. Their situation was now
desperate. Nothing could be done save hang on and pray for relief.

Respite came at 1 p.m. The wind dropped to a half-gale. Now was their chance: the chance to return to the North col, and to return in honour. But in Finch Everest had one of the very toughest of all her challengers. He proposed to the others that they should stay on for another night and try for the summit next day. He spoke cautiously, fearing that Bruce’s resolution must have been undermined by the dreadful experience of the storm. He need not have troubled. Bruce was ready, and Tejbir too.

Their greatest handicap now was lack of food. They had brought only one day’s supply: firstly, because they had not intended to stop more than one night in Camp V; secondly, because physiologists and other Himalayan experts had maintained that no man could stay overnight at 25,500 feet and live, and dead men eat no food; nor would dying men at such altitude desire it. Instead, they had survived one of the worst storms recorded at high altitudes and were ravenous. That evening they had a pitifully scanty meal, but no sooner had they settled down for the night than they heard voices outside. It was 6 p.m. Finch thought that he must be dreaming. Then they saw six porters, led by the smiling Tergio, at the door of the tent. They had come up to succour the party with thermos flasks of beef-tea, and to help them down. Finch writes of them as follows:

‘These splendid men had, of their own accord, left the North col that afternoon as soon as the storm had abated, and made the tremendous journey up to our camp just to assure themselves of our well-being. This is but one example of the many acts of brave, unselfish devotion performed by the porters of the 1922 expedition. Tergio, whose light-hearted gaiety, ready laughter, and merrily twinkling eyes, whose high courage, boundless energy, and perseverance had especially endeared him to me, now lies buried in the cold snows of the North col. He will never be forgotten. I should like to climb with him again. The porters expected us to return with them, and needed no little persuasion before leaving us.’
The hot beef-tea, however, was to virtually starving men not a sufficiently good substitute for solid food. The night began badly. The cold in their extremities was already creeping up their limbs, and to this, if it continued, there could be only one end. Finch realized what was happening and became seriously alarmed, especially about Bruce’s plight. Not only could Bruce not feel his leg—he could not even move it. Before too much time had been lost the reason was discovered. He could not move his leg because Finch was sitting on it!

Bruce promptly regained his freedom, but something had to be done to try to counter a cold that might soon deal death to them. Finch suddenly thought of oxygen. They fetched an apparatus into the tent and took whiffs all round. The effect was immediate. The drawn look on Bruce’s face vanished. Tejbir, who had lost his smile, smiled once more. Finch felt through all his limbs a tingle of returning warmth. Then they connected the apparatus so that all could breathe a small quantity of oxygen during the night. Thereafter they slept well and felt warm. Finch is in no doubt that the oxygen saved their lives. Their intake of food fuel had been too low. Their bodies, exhausted and famished, were no longer able to resist the onslaught of extreme cold. Without oxygen they would have died.

Finch had had the strength of mind to take his boots to bed with him, so that they were still soft in the morning. Bruce and Tejbir had taken no such stern precaution and now found their boots too hard frozen to pull on: an hour had to be spent softening them over lighted candles. The time thus lost was saved on the preparation of breakfast. There was no breakfast. By good fortune there was sun. The first rays fell upon them shortly after 6.30, when they set off. Bruce and Finch were each carrying more than forty pounds. Tejbir had fifty.

It was Finch’s plan to take Tejbir only as far as the North-east shoulder. Although the sky was clear a shrewd wind blew, not yet fiercely. Tejbir, undernourished and overloaded, collapsed at 26,000 feet. Since the descent was easy and the tent in full view, they sent him back to camp with a few cylinders.
The rest of his load they divided between themselves, and went on. To save time they wore no rope.

The wind rose steadily as the morning advanced; there were again ugly clouds to be seen, but too far off to cause alarm. They climbed a further five hundred feet, passing two good platforms on which future camps might be sited. The wind had now gained such force that a much longer exposure to it must have caused their collapse. They decided not to follow the ridges, which were receiving the full blast, but to go out on to the great North face. Finch made this decision with reluctance. The winds had swept the rocks of the North ridge clear of snow; footholds were good and no difficulties could be seen on the crest beyond the North-east shoulder, whereas the North face was shelving and slabby and covered in new-fallen snow. The rock strata on Everest dip down to the north at an average angle of thirty-five degrees, so that on that side the rocks slope like roof tiles, presenting to the feet no incut holds. Bruce and Finch felt this disadvantage the moment they left the ridge. More care was needed in placing the feet, which had to rely for their grip only on the friction of boot nails on slabs. The balance of the body had to be very correct. Unstable snow and scree patches had to be treated with respect.

They carried on steadily until half-way across the face, stopping once or twice to replace an oxygen cylinder and throw away the empty, which bumped down the cliff clanging like a church bell. At 27,000 feet they changed direction and climbed straight up towards the summit ridge. They had gained three hundred feet and Finch was on top of a steep thirty-foot slab when he heard Bruce twenty feet below give a cry. His oxygen supply had cut out. Finch scrambled quickly down and clapped his hand on Bruce's shoulder just as he was about to fall off backwards. Finch dragged him back to the rock. They struggled to a ledge where Bruce could sit down. Finch then connected him to his own apparatus and after a search discovered that a glass connecting-tube at the mask had been smashed. Finch had a spare part in his pocket and the repair was then speedily made.

Thus far Bruce had been climbing smoothly, but Finch now
saw that he had reached his limit of endurance. Until this incident Finch had taken it for granted that they would reach the summit. All was apparently going well. But in truth these two terrible days in Camp V had drained off their energies of body. They made a tentative effort to go on again, but after a few yards Finch saw unmistakably that if they persisted they would not both return.

It was almost exactly midday when Finch declared for retreat. Their altitude was 27,300 feet. They were within half a mile of the summit, and able to pick out individual boulders lying just under it. The only other mountain that met their eyes was Cho Oyu; the rest had either shrunk into insignificance or had been submerged by a mass of yellow-hued clouds sweeping in from the west. They returned to the North ridge and harried by the violent wind descended through flying mists to Camp V. They reached the tent in half an hour to find Tejbir fast asleep. They could hear porters coming up to fetch down the camp, so, waking Tejbir and telling him to wait for the other porters, Bruce and Finch continued alone. They received a most enheartening welcome from the Sherpas in passing. They climbed down unsteadily. Their knees repeatedly gave way, causing them to stagger and sit. But the wind had luckily died away and at 4 p.m. they arrived safely at the North col camp.

Noel was still there. Food supplies, however, were short and it was food above all that they craved, for their weakness was mainly due to the lack of it. Accordingly they decided to go on to Camp III. They had a snack of spaghetti first and even that reinvigorated them; after only three-quarters of an hour's rest they made the descent to Camp III in the surprisingly short time of forty minutes, Noel nursing them down from the rear. That night they dined on truffled quails and sausages, and never had truffled quails been so well earned, nor their presence on a menu so well justified.

On the following morning it was found that Bruce and Finch had frost-bitten feet. The damage to Finch was slight—only four patches on the soles—but Bruce's frost-bite was severe. Porters sledged them down the East Rongbuk glacier, then carried Bruce to Base Camp. They arrived there on 29th May.
CHAPTER VII

The North Col Avalanche

At the end of May all members of the expedition gathered at Base Camp for recuperation. If their strength and the weather allowed they were determined to make a third attempt. Signs were not wanting that the monsoon would arrive early. Everest was usually hidden by cloud from nine or ten o'clock every morning until evening. Occasionally storms swept down the Rongbuk glacier. The west wind was still holding its own on the upper part of Mount Everest, but elsewhere was already failing to counter the monsoon currents from the south. The west wind, formerly their chief enemy on the mountain, had become their friend.

As regards strength, casualties had been heavy. The only high climber whose condition was above suspicion was Somervell. His recuperative capacity was unique. All the others had found, on returning to Base, that instead of recovering strength during the first few days they felt weaker than ever. A full recovery required ten days. Mallory's heart had a 'thrill.' He felt lazy and weak at the least exertion. Norton too had overstrained his heart, and so had Strutt. Morshead was a hospital case with frost-bite and must be rushed as quickly as possible to India. Geoffrey Bruce was unable to walk; his toes, although not so bad as Morshead's, demanded his immediate return to a lower altitude and warmer climate.

By 3rd June Mallory's heart was pronounced sound. His recovery had taken thirteen days. Finch, on only five days' rest, was thought fit to go high again. Somervell was the strongest of all. It was now decided that these three, together with Wakefield and Crawford, should leave that same day for the East Rongbuk glacier. Meanwhile General Bruce arranged to send all his invalids back to Darjeeling under command of Dr. Longstaff.
The Lama of Rongbuk Monastery sent up a messenger to congratulate the Sherpas, and the sahibs too, on their safe return from the two attempts on Chomolungma. But the real purpose of his message was very different. He warned the Sherpas that he had experienced the vision of an accident and urged them to leave the mountain alone. General Bruce, however, could hardly be expected to act on such advice.

On the afternoon of 3rd June Finch, Mallory, and Somervell went up with a convoy of porters to Camp I. Short as the journey was, it proved Finch to be quite unfit for another climb. He could barely keep going and his efforts were distressing to watch. No sooner were they installed at Camp I than the monsoon broke. The west wind had stopped and for two days snow fell heavily. On 4th June Finch wisely went back to join the invalid party for home. Mallory and Somervell still hoped that the west wind would reassert itself and grant them a fair interval of eight or ten days before the monsoon became finally established. On the 5th the snow stopped falling and the sky brightened. They at once went on. Owing to the warmth of the monsoon current most of the fallen snow had already melted or evaporated. No more than six inches lay on the glacier up to Camp II, but near Camp III it lay eighteen inches, and wet. They found the tents half filled with snow and ice, and all the stores buried. It was a question whether they ought to go on. The labour and also the avalanche risk were at present excessive. They decided to wait on. At Camp III they could take quick advantage of any improvement in the weather and hardening of the snow.

The improvement came overnight. The morning of the 6th was gloriously sunny, and later in the day they were amazed at the speed with which the snow melted on the rocks and began solidifying on the open slopes. The west wind had returned in strength and was blowing the snow in clouds off the North ridge, which would soon be fit to climb. It was agreed that oxygen must be used. Without it they could no longer expect to go as high as before. Profiting by Finch's experience they proposed to carry abundant food supplies and pitch Camp V at 26,000 feet. They had five oxygen cylinders each, and their
At night hard frost gripped the mountain. In the morning they started out for the North col. Mallory considered an avalanche possible at only two points: one at the first steep slope, where it would do no harm, and one at the last steep slope under the topmost shelf. If the first slope held then the upper one ought to be safe too. Leaving Wakefield behind as supply officer, they started at 8 a.m. with fourteen porters. On the snowfields above camp the crust was not yet strong enough to bear them. They broke through to the knees at each step and spent two hours reaching the foot of the col. At 10.30 a.m. they proceeded up the first steep slope on four ropes. In the first party were Somervell, Mallory, a Sherpa, and Crawford, roped in that order. The following ropes were of four, four, and five Sherpas.

The first steep slope, although laborious, was safe. The deep snow was adhering so well to the ice that no cutting was required in the ice stratum. Steps could be stamped out and they held well. They even trenched the snow to induce it to come down if it would, but every such test gave a satisfactory result. In the end they felt that if the snow refused to slide here, where it lay on ice, then on gentler slopes above all would be well.

At 1.30 p.m. the leading party halted to let the three ropes of Sherpas catch up, after which they all went on together to a point six hundred feet below Camp IV. They were then on the gentle slopes of the corridor.

'The scene,' says Mallory, 'was peculiarly bright and windless, and as we rarely spoke nothing was to be heard but the laboured panting of our lungs. This stillness was suddenly disturbed. We were startled by an ominous sound, sharp, arresting, violent, and yet somehow soft like an explosion of untamped gunpowder. I had never before on a mountain-side heard such a sound; but all of us, I imagine, knew instinctively what it meant, as though we had been accustomed to hear it every day of our lives. In a moment I observed the surface of the snow broken and puckered where it had been even for a few yards to the right of me. I took two steps convulsively in this direction with some quick
thought of getting nearer to the edge of the danger that threatened us: and then I began to move slowly downwards, inevitably carried on the whole moving surface by a force I was utterly powerless to resist.'

The entire party of four ropes was engulfed. At first they slid down on the surface, until the rope between each man went taut, whereupon the snow poured in a great wave over his head and buried him. Each man continued struggling to keep to the surface layer; none had any sensation of speed; he was conscious of nothing save his own struggle amid tumbling snow. The lower part of the avalanche, which was travelling fastest and bore the two lower parties of Sherpas, cascaded over an ice-cliff straight into a great crevasse. The centre part, containing a rope of four Sherpas, and the upper part containing Somervell’s party, were travelling less rapidly. They felt the pace easing; the pressure round each man’s body increased, and the avalanche stopped.

The two upper parties were very little below the surface and eventually managed to extricate themselves. They hurried down to the ice-cliff and found a way round it. It was fifty feet high. The crevasse below was filled with the avalanche snow, and somewhere deep inside were nine Sherpas. The surviving parties set to work excavating snow with their hands and axes. One by one the bodies were recovered. On each of the two ropes, one man was found alive. All others were dead. One man could not be found at all—he was too deeply buried. The two Sherpas who had been dug out alive were able to walk down to Camp III. At the Sherpas’ request the seven dead bodies were not brought down, but left where they fell in the crevasse. At Camp III a cairn was raised in their memory. When the party reached Camp III a Sherpa was dispatched to Base Camp bearing news of the tragedy. He arrived there at nine o’clock that same night—a most extraordinary feat. General Bruce at once ordered Morris to evacuate all camps on the East Rongbuk glacier. The climbing party arrived back at Base on the 8th and 9th June. The monsoon had now most definitely established itself. The wind was from the south; warm air penetrated and disintegrated the snow-slopes; whole mountain faces began to
change; avalanches thundered down and séracs collapsed; the great ice-trough in the East Rongbuk glacier became a rushing torrent. Much equipment and large food supplies could not be brought away, despite Morris's best efforts, nor could the North col camp be struck.

General Bruce informed the Lama of Rongbuk about the accident. The Lama heard the news with intense compassion. Services were held in the monastery for the men who had died and all the Sherpas again received his benediction.

From misfortune we must always try to draw some future benefit. It is probable that nobody would have set foot on the North col slopes that disastrous day had Dr. Longstaff been able to be at Camp III. There was no one there of sufficient Himalayan experience to assess snow conditions. After a heavy precipitation it is not enough to allow the snow just one day of grace to come back into stable condition. The truth is that the monsoon air current has a more immediately devastating effect on snow and ice than could be appreciated by men of extensive Alpine experience; and just as the mountain scale is so much vaster than the Alpine, so must a longer time be allowed for snow to return to a safe condition. That it ever does return to a safe condition during the monsoon, on the North col slopes, is open to doubt.

The Sherpas were not long dismayed by the accident. For they hold that a man dies when his time has come and only where the gods decree. They informed General Bruce that they would be ready to take part in the next attempt on Mount Everest.
CHAPTER VIII

The Third Expedition

When the the third expedition was organized for 1924 all its members were completely confident that this time the mountain would be climbed, and that not just because 'third time's lucky.' They had excellent reasons. The party was exceptionally strong and they had hard-won experience upon which to estimate chances. The lessons of 1922 had been invaluable. The old mistakes would not be made again. The final, successful attempt was not simply a stage nearer but something they felt to be within their powers now. In trying to climb that last four thousand feet in one day, all realized (although still not fully) how greatly they had underestimated both the physiological trials to which men are subjected on the upper mountain, and the severity of wind and weather. Plans could be made accordingly, and in making them they could bear in mind the following data garnered in 1922.

With the exception of Howard Somervell, every climber who had approached 27,000 feet, whether or not he had used oxygen, had suffered a temporarily dilated heart. His ability to go high a second time had been adversely affected. Every one agreed that the overstrain had not been caused just by the effort of climbing movement in rarefied air, but by the numerous and exacting extras—fighting the ferocious west wind, step-cutting against time and trying to push on faster, and the many things that had to be done at camp sites, such as building platforms and cooking. At high altitudes there is a very great difference between establishing a camp and simply moving into one already pitched and well found.

In consequence of these troubles, neither party at Camp V had had enough strength to spare both to attain the summit and come down alive. Camp V had not been high enough for a summit attempt. In other words, two high camps were
essential: one at 25,000 feet and a second above 27,000 feet. And these camps should not be established by the men who were to attempt the summit.

In the five weeks of 1922 only two calm days had been observed above the North col, and these had been widely separated. It seemed unwise, therefore, to put four climbers into any one summit party and so risk losing their services by exhaustion all in one day. The climbing parties, it was agreed, should be of two men only. Several attacks could then be made and the odds in favour of the mountain winning with wind would at least be reduced. And two men travel faster than four. On the other hand there should always be a support party in Camp V to watch the progress of the Camp VI party, and to be ready to come to their assistance in need, and to protect their descent. Men coming down exhausted on Mount Everest find it desperately hard to move and judge faultlessly: as witness the narrow escape of Mallory's party.

It appeared to Finch that for most people (although not every one) true acclimatization stopped between Camp III and the North col. At Camp III (21,000 feet) they feel well and are able to recover energy, but not at 23,000 feet, where the loss in energy, and in muscle tissue too, is more than the gain in red corpuscles. The best policy seemed to be: advance slowly to the height of the North col, make excursions to it but sleep below it, and then when every one is acclimatized go all out for the top.

It was Finch's opinion that when oxygen was to be used men should acclimatize first to 22,000 feet and use the oxygen thereafter, increasing the dose as they make height. Mallory and Somervell thought that oxygen was not essential for reaching the summit. Finch thought it was. Arguments for and against have multiplied with the years, but to this day the point is undecided.

The North col had thus been found to be the dividing line between two worlds, and that not only in regard to acclimatization. Below the col the snow and ice were seen to be very like those of the summer Alps, and above the col like the winter Alps. So too with the wind: below the col the weather is not
usually severe, and never in relation to what happens above, for the col itself gives protection; but up on the North face high wind and polar cold are normal. This cold is felt the more because the climber has to breathe more heavily, exhaling a greater volume of air at blood heat, which being under low pressure is saturated with moisture. This results in a continuous and greater loss of heat from the body, and reduced resistance to cold wind.

As a counter-measure, ample food supplies would in future have to be carried to high camps, and since oxygen had been found to stimulate the appetite it should be carried even for that good purpose alone. However, if men were fully acclimatized (Bruce and Finch had not been), it was suspected that oxygen cocktails would in fact not whet the appetite. Several climbers have since shown that in their own experience the suspicion is well founded. A second counter-measure was the provision of adequate windproof clothing for all porters moving above Camp III. In 1922 that had not been done.

It was generally agreed that several layers of light clothing, such as silk and Shetland wool, had been found very much warmer than one or two heavy ones, and that windproof garments, to be effective, must allow evaporation of body moisture and yet be of exceedingly close weave and made in two layers of cloth. The boots used had not been found satisfactory. Leather conducts heat too well. It seemed that leather soles and uppers should be lined with felt and that the toes should be high to allow air space.

Another reason for the high hopes of 1924 was the presence in the party of four men who had gone high before—Mallory, Somervell, Norton, and Geoffrey Bruce. Even after the lapse of two years, men who have gone through the process of acclimatization before do so more rapidly a second time. Like most other bodily powers, corpuscle production improves with practice. This had been noticeable in 1922 in the case of Mallory, who had no innate gift for acclimatizing—as he testifies in recording his own trials and as Mr. R. L. G. Irving testifies when he says that Mallory had been mountain-sick on Mont Velan at under 12,000 feet. Mallory, none the less, had been
far fitter than any of the experienced ‘beginners’ at the start of the 1922 ascent. That the ability to acclimatize is progressive received more ample proof in 1924.

General Bruce was again appointed leader, with Norton as his second-in-command. Of the remainder, only Captain Noel had been on the previous expedition. His work was again photography. There were six newcomers: Bentley Beetham, whose remarkable Alpine record is said to include thirty-five Alpine climbs in six weeks with Somervell; J. de V. Hazard and N. E. Odell, likewise of great mountaineering experience (although Odell was a geologist his principal work on the mountain was that of a mountaineer); and lastly Andrew Irvine. Irvine’s inclusion was an experiment, for he was only twenty-two, but he came with a strong recommendation from Longstaff and Odell. He had been to Spitsbergen, ski-ed in the Alps, and climbed on home mountains. In Spitsbergen especially he had earned a high reputation for enterprise and stamina and for his unselfishness. It was on these particular grounds that he was selected for the Mount Everest team.

The transport officer was E. O. Shebbeare of the Indian Forest Department. Major R. W. G. Hingston came as medical officer and naturalist. Four Gurkha non-commissioned officers were lent to the expedition by the 2nd/6th Gurkha Rifles. Their services were highly valued because their devotion to duty was outstanding. They could be trusted as fully as any expedition member in all matters such as the care of the treasure chest. On the mountain they were to be employed in supervising the supply and maintenance of camps on the East Rongbuk glacier, in which duties one was destined to lose his life.

At the beginning of March the various members of the expedition began to arrive at Darjeeling. Three hundred Sherpa and Bhutia porters had collected from which General Bruce selected seventy. The selection had to be carefully made: the successful ascent of Mount Everest depends on these men. They are splendid people: but some are better than others. The right men for high mountain work had been proven by previous experience to be the lithe and clean-bred type. The big, heavily muscled Sherpa or Bhutia is fortunately not common; and he
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has never been found so reliable as the lighter and wiry man. A few heavy men were none the less chosen by Bruce, and it is interesting to note that none of them was later able to go high. It is important, too, to choose men of intelligent face and eye. The coarse-faced and stupid-looking porter is apt to crack up under the severe stress of high-altitude climbing. That is the general rule to which there are inevitably exceptions. A porter who brawls in his liquor and makes a thorough nuisance of himself on the march may turn out a better man on the mountain than one who is reserved and quiet. Yet the general rule is the contrary.

From the Sherpa people is drawn the corps of porters whose work in all parts of the Himalaya has commanded the utmost respect and admiration of mountaineers of all nations. Many Sherpas who have become professional mountain porters now live permanently in Darjeeling, which is only ten marches from their home country of Sola Khombu. In stature they are about five feet six inches, deep but not broad chested, the neck and shoulders well muscled but the arms not. They carry loads on a head-band whenever possible rather than the shoulders. The hair is dark and worn at the back in a pigtail, although the Darjeeling Sherpas have now taken to cutting the hair short. Their skin is a pale brown, not dark; in that respect many of them cannot be distinguished from a south European. They wear a toga-like upper garment and trousers of home-woven wool, and on the feet long Tibetan boots of dull red cloth, soled with hide, which come up almost to the knees. Round the neck they usually wear a little amulet into which are packed Tibetan prayers on paper. The Sherpas are Buddhists. They pray much and show the very greatest reverence to the lamas in the temples. Even in high camps the first thing I have often heard in the morning is the chanting of prayers from the Sherpas' tents.

Unlike the Gurkhas, the Sherpas will not serve as mercenary soldiers in any army. They are tough, and in dealing with people show the bold, frank manner of the true hillman. They make such excellent porters because they are born and bred in hill villages between ten and thirteen thousand feet. Thus they are acclimatized to these altitudes from birth. From early youth
they graze yaks on high pastures at fourteen thousand feet and over, and trade with Tibet over the Nangpa La, a pass of nineteen thousand feet to the west of Mount Everest. The pass is glaciated and snow covered. Thus they are accustomed to dealing with snow and ice, are familiar with it, not easily deterred, trained to be sure-footed, courageous, and to endure bitter winds and cold.

The trade with Tibet is their principal source of livelihood. In the fertile valleys of Sola Khombu they breed yaks, which are of great value in Tibet. They carry over vegetables, fruit, grain, cloth, sugar, tobacco, and many other goods which they obtain in the foot-hills. From Tibet they bring back great quantities of salt. In addition to this flow of traffic over the Nangpa La, great numbers of Sherpas make an annual pilgrimage to Rongbuk Monastery to be blessed. Between Rongbuk and Sola Khombu there has always been a close religious link. The Lama of Rongbuk occasionally visits Sola Khombu, and in the principal monastery there, Thyangboche, a throne specially reserved for him stands by the altar.

The Sherpa people are semi-nomadic. The different families have houses at different levels in different villages, and move up and down according to the needs of seasonal crops and grazing. It will thus be seen that they get much practice in acclimatizing. Their bodies in consequence adapt themselves to high altitudes much faster than a European's. For such various reasons the Sherpa performs better than other hillmen, who live lower. But there is more to it than that. He is not only tough and fit, he is also high spirited. He is a free and independent man, full of resource in his own way of life and schooled from earliest youth in self-reliance. Only a minority of Sherpas can read or write, but their life of trade and movement, village economy and travel, develop in most of them a keen intelligence. It was after meeting Sherpas that I realized the truth of Bernard Shaw's words, when he remarked that a very great deal of what we call education is no more than the substitution of reading for experience of life. Above all, the Sherpa can laugh. His sense of humour is broad and quick. He is cheerful by nature (being Mongolian) and that is a great help in mountaineering where
conditions are so often uncomfortable. The Sherpas are indeed the happiest people I have ever met. Time means nothing to them. In this they are more extreme than the Scottish west highlander, who says that when God made time he made plenty of it. To the Sherpa time does not seem to exist. Yet this way of thought is not taken as an excuse for idleness. He loves a life lived strenuously. If he has any vices, the first and foremost is an inordinate liking for chang and rakhsi. In short, he loves everything that tends to immediate happiness, and ignoring time often fails to foresee the penalty of the short cut.

It has often been asked why the Sherpas do not themselves try to climb Mount Everest and other peaks, and whether they are not better men for the summit party than Britons or Europeans. Sherpas have no strong will to climb mountains, because they are born and work all their lives among them. Mountain travel is for them no new adventure. Their way of life makes heavy demands on energy; they require no climbing by way of recreation. Just as a hill farmer in Wales or Scotland lacks both the leisure and inclination for mountaineering, so it is with Sherpas. They are always willing to act as professional porters, specializing in mountain work, but they do that for money first and foremost. Without the money they would not move; for they could not afford to move. Once they have made their agreement, they show no mercenary trait. (In this they are not superior to many other hillmen. Sherpas excel only above the snow-line.) They follow their leader and serve him as best they can, not only carrying loads, but pitching tents, kindling fires, preparing food, laying out sleeping-bags, often working unconcernedly round camp in an open-neck shirt while the mountaineer from the West is shivering in a sweater; they strive to go their very highest not for money but to give good service. They do need to be led well. Unless a man has firmly set his will on a mountain he will not go to it of his own accord, and if he goes under persuasion he must be firmly led. That is particularly true in emergencies and storms. Sherpas are not all equally resolute and they lack high technical skill; under severe trial some break down with disconcerting suddenness (as would men of any nation). The very best of them, those specially chosen to carry
the highest camps, very rarely give in, and in 1924 were nicknamed 'Tigers.'

The expedition left Darjeeling on 25th March. Early in the journey through Tibet, General Bruce went down with malaria and had to return, surrendering the lead to Colonel Norton. The loss of Bruce was deeply felt by every one, from Norton to the humblest porter. He instilled something of his own light-heartedness into all who journeyed with him, and no gloom of defeat or discouragement of difficulty could live in his presence. Norton, however, had all the qualities required of an Everest leader. One of his first acts was to hold thorough discussions with every one on the plan of campaign.

The most fateful decision arrived at drew its inspiration from the early arrival of the monsoon in 1922. It had broken on 3rd June, a week earlier than the alleged normal date. This time they planned to climb as early as possible, and calculated that the first attack on the summit could go in on 17th May. The detail of the mountain plan, for which Mallory was solely responsible, was to establish three camps above the North col: Camp V (four tents) at 25,500 feet, Camp VI at 26,500 feet, and Camp VII at 27,200 feet. Camps VI and VII of one tent each would be occupied on the same day by two parties of two men, one pair with oxygen and the other without. On the next day they would both try for the summit, independently, but ready to support each other if the need arose. Camp V would be occupied by four more climbers, also ready to give support, or to stay in reserve for a third and fourth attempt.

Every one was supremely confident that this plan would take the first parties to the top and that a second attempt would be unnecessary. The hopes held by every one are well expressed in a letter written at the time by Mallory. He and Irvine were to form the first oxygen party, Somervell and Norton the Camp VII party.

'It is almost unthinkable with this plan that I shan't get to the top; I can't see myself coming down defeated. And I have very good hopes that the gasless party will get up; I want all four of us to get there, and I believe it can be done. We shall be
starting by moonlight if the morning is calm and should have the mountain climbed if we're lucky before the wind is dangerous.'

On 28th April the expedition arrived at Rongbuk. They had brought with them an unusual gift for the Lama—a yak load of cement. He had especially asked for it in 1922 in order to effect repairs to the monastic buildings. Unhappily the Lama was ill and not then able to conduct the ceremony of blessing the porters. Next day they moved on four miles and began to establish Base Camp on the old site (16,800 feet) at 11.30 a.m. The time is worthy of note: so expeditiously were the stores handled that by dusk a hundred and fifty porter loads were ready. This was all the more remarkable because several climbers, including Norton, felt the altitude badly on first arrival. However pure the air, it dispensed not exhilaration but distress. And while they worked a whirling snowfall blotted out the dismal scene around. It has been remarked by an old charwoman that the only pleasure she had in life was taking off her boots; but even this simple joy was denied Norton and company—the least exertion caused panting.

To spare the Sherpas, Norton had engaged a hundred and fifty Tibetans to establish Camps I and II, and these went up next morning under charge of the three Gurkhas, Tejbir, Hurke, and Shamsher, two of whom had been out in 1922 and so knew the camp sites. Among the Tibetans were men, women, and boys. But they all carried their forty pounds. One of the women had a two-year-old child, whom she deposited on top of her load, and carried the whole to Camp II at 19,800 feet.

That night down at Base the expedition's quick and efficient start was celebrated with a five-course dinner and champagne. Such were the ancient glories of Everest expeditions. On 2nd May a note arrived from Tejbir saying that Camp II was established and fully stocked. This was great news. Norton paid off the Tibetans. Henceforth forty Sherpas would be used to carry from Camp II all stores and tents for Camp III and above.

May 3rd was cold and stormy. The first twenty porters set off from Base accompanied by Mallory and Irvine who were to
site Camp III and stop there to acclimatize, and by Odell and Hazard who were to open the route up to the North col. Three days later the second twenty porters went up. Behind them travelled Norton, Somervell, and Beetham, moving with deliberate slowness. They arrived at Camp II on the 7th to find a crisis rapidly building up. Such appalling weather had been met between Camps II and III—a wind of terrifying strength coming with a record low temperature of minus 22° F.—that the second Sherpa party had been routed. They had been quite unable to reach and supply Camp III, and on Mallory's orders had dumped their loads and fled back to Camp II for shelter. The consequence was that the first Sherpa party was stranded at Camp III with no more than the bare necessities to keep them alive.

That evening most (but not all) of the first Sherpa party staggered exhausted into Camp II. They had been pinned down at Camp III for two days with only one blanket each and a little barley. Unable to bear such misery any longer they had struggled down to Camp II, which had now double the number of men it could accommodate, many of them in need of first aid and nursing. It was a grave emergency and Norton took the only course. The food stores and tents for the four higher camps were at once broken open and used. Next morning Mallory came down to see what was happening.

The whole preliminary plan had been wrecked and only outstanding leadership could have prevented an immediate retreat back to Base. Norton rose to this occasion. He had wisely held a reserve of twelve Sherpas at Base, and these were now called up to help the tired but yet undamaged second Sherpa party to carry the dumped stores of food and bedding to Camp III, which would then be habitable for them. He dispatched messengers to Camp III and to Base, directing Hazard to return to Base and take charge, and directing Shebbeare to come up from Base to Camp II, where his knowledge of the men, the language, and the stores would be of highest value. The rest of that day he spent enheartening the porters.

On the morning of the 9th Norton, Mallory, and Bruce, who had arrived with the reserve of Sherpas, set off for Camp III
with twenty-six porters. Soon after they left snow began to fall and the wind rose to a half-gale. It was blowing a blizzard just before they reached Camp III. Norton sent back eighteen men, who dumped their loads on the glacier, and continued with the eight strongest men of the reserve. Camp III made a dismal scene. The porters remaining there were in wretched condition; their hardships had taken heavy toll of their energies, reducing them to apathy. They had ceased to cook meals. The eight reserves now helped them and set a good example.

So fierce was the wind that movement around the tents became impossible. The blizzard continued next day, and penetrating drift covered everything and every one inside. Mallory and Irvine were already showing the strain of the heavy work they had done during the last few days on the glacier, and went back to Camp II. It was no longer snowing, but the wind was tearing snow off the glacier and hurling it among the tents. Norton and Somervell took out porters and fetched up the dumped loads, and they both carried loads themselves. It was good work, for the wind was punishing every one severely. Bruce records that he had never before seen men so tired. Some of these porters had now been carrying loads for five successive days through violent snowstorms.

The storm heightened during the night, and the morning showed that the North col could not be climbed for several days at best. Odell and Hazard on their first arrival had made tracks for three-quarters of the way up, but this work had long since gone for nothing. A general retreat back to Base was now sounded. Many of the porters lay huddled in the tents not caring if they lived or died. They had to be persuaded at great length before they would move. The scene at the last lap, from Camp I to Base, must have seemed like a retreat from Moscow—a procession of men sick, lame, frost-bitten, snow-blind, one with a broken leg, one with pneumonia, another (the Gurkha Shamsher) almost insensible from a clot in the brain, and all without exception very weary. They all were down at Base by 12th May. Fortunately Hingston had returned from seeing General Bruce out of Tibet, and was now at hand to minister
to the sick. A porter, Manbahadur, had both his feet frostbitten up to the ankles; a few days later he and Shamsher died.

The weather continued bad. To restore the porters' morale it was arranged that the Lama should give his blessing to all members of the expedition on 15th May. The ceremony was carried out in a temple court on the second floor. The Lama sat beside the altar attended by twelve lesser lamas. All members of the expedition sat before him, went forward one at a time, and were touched upon the head with a silver prayer-wheel. The Lama gave a most impressive address, and the reverential awe displayed on the porters' faces showed how great was his influence over them.

That night the men were more like their old selves, smiling and energetic. Their innate sense of humour had made light of a new and discouraging mural painting at the monastery, which commemorated the avalanche of 1922, portraying hoofed devils pitchforking the climbers down the mountain into a hell of ice.

Next day the weather cleared. Everest at the valley's head stood shining white and undisturbed by wind. The advance was reorganized and by 19th May the glacier camps were again fully occupied, with Norton, Somervell, Mallory, and Odell at Camp III. The expedition had taken a beating, but not yet sufficient to rob them of the summit. They were beset instead by a great fear that the monsoon was going to break early. If it did they might have a short, calm spell very soon in which to make an attempt—provided that Camp IV was put on the North col in time. Hence there followed a series of desperate attempts to establish Camp IV in hopeless conditions and in face of storms that were thought to be the harbingers of the monsoon, but which in fact had nothing to do with it. The storms were discovered afterwards to be depressions forming to the west of Afghanistan and travelling the whole length of the Himalaya. They assailed Everest with hurricane after hurricane, and on these the expedition was to expend its strength without need and without knowing the true situation.
CHAPTER IX

To the Summit Pyramid

Norton, at Camp III on 19th May, felt time press him hard. Odell's route to the col was quite obliterated, so he decided that next day he, Mallory, Somervell, and Odell would go out to re-open it. This was a throwing-in of the Old Guard with a vengeance. They were the very climbers whose energies had best been husbanded for the summit. However, it had become of vital importance to pitch and supply Camp IV at once, and these men would succeed if it were humanly possible.

They started early on the morning of the 20th. While they were still in the west bay of the East Rongbuk glacier, Somervell had to return to camp with a recurrence of sunstroke, which he had contracted the day before. The others went on to select a route. The snow-corridor of 1922 where the fatal accident occurred was still visible, but could now be avoided and its top end gained by following the lower edge of a very long crescentic crevasse that lay to its right-hand side. The right-hand end of this crevasse could be reached by way of straightforward snow-slopes.

Norton and Mallory shared the initial plodding, stamping, and cutting. When they came on to the lower lip of the crevasse they found that a great bite had been taken out of it. They would have to climb to its bottom, then two hundred feet up the far side, using a short wall of broken ice topped by a long icy chimney. Norton remarks: 'Confronted with a formidable climbing obstacle Mallory's behaviour was always characteristic: you could positively see his nerves tighten up like fiddle-strings. Metaphorically he girt up his loins and his first instinct was to jump into the lead. Up the wall and chimney he led here, climbing carefully, neatly, and in that beautiful style that was all his own.'

The two-hundred-foot climb occupied an hour. Odell (who
was a slow acclimatizer and not yet in his brilliant later form) followed behind with a porter carrying spare rope and hollow wooden pegs. He ‘nailed’ the bad bits as he climbed and fixed ropes. Under the final shelf, where the tents were to be pitched, they came to a slope of two hundred feet at the highest angle on which snow will lie (that is, forty-seven degrees on an open slope, above which it will be ice). Mallory led straight up, then had to make a very nasty traverse across the top to reach the shelf. This would be a danger spot in bad snow, and required a two-hundred-foot run-out of rope from bottom to top. At three o’clock they reached the col and three hours later were back in Camp III, fatigued but well satisfied. As if to mock them the signs in the sky augured nothing but ill.

The morning came unduly warm, but Hazard went off to establish Camp IV with twelve porters. Somervell and Irvine went too to assist the porters up the chimney and up the last steep slope to the shelf, after which they were to return, leaving Hazard and his twelve men at Camp IV. Norton’s plan was that Odell and Bruce would follow a day later, sleep one night at Camp IV, and next day use the twelve porters to establish Camp V. The weak point in this plan, having regard to the disturbed weather, was the decision to leave Hazard alone with so many as twelve porters. But Norton was anxious to rest the other climbers, who were all in need of either recuperation from minor illnesses or further acclimatization.

Wet, soft snow began falling heavily, and the party found yesterday’s track obliterated throughout the upper half. At the long chimney loads had to be hoisted up by Somervell and Irvine, whose hands narrowly escaped frost-bite. Irvine’s splendid physique proved a great asset to the party. In the end Hazard and company were installed on the shelf and Somervell and Irvine returned. The snow continued falling all that night and all next day. It was out of the question for Bruce and Odell to reach Camp IV. The temperature fell to minus 24° F., a new record. The 23rd May, however, brought a fine morning and tempted Bruce and Odell to try again. But the snow at the big crevasse proved dangerous and they had to turn back. Meanwhile, down at Camp III, Norton could see Hazard’s party
beginning to evacuate Camp IV. They were moving slowly across the traverse just under the shelf, 'like flies on a white-washed wall,' said Norton, when a new blizzard trailed across the scene like a theatre curtain, blotting it out for the rest of the day.

Norton sensed that all was not well and was a worried man until Hazard arrived at 5 p.m.—with only eight men. The traverse below the shelf had been dangerous, Hazard had crossed first to test its condition, eight porters had followed one at a time—and then the last four had refused to come on: two had frost-bite and two were scared. They had gone back to Camp IV and would now have to be rescued. And they would have to be rescued with all speed because the snow was falling in soft, feathery flakes usually associated with the monsoon. At all events no climb above the North col would at present be possible, so Norton asked Bruce, Hazard, and Irvine to evacuate Camp III next day while he, Mallory, and Somervell tried to rescue the marooned porters. Odell was to stay at Camp III with a reserve rescue squad of six Sherpas.

Snow continued falling all night. Somervell and Mallory both had sore throats and bad coughs. In the morning it was thus doubly doubtful if the four porters could be reached. The rescue party found themselves wallowing in snow from a foot to waist deep. They summoned up all energy and spent it freely. They came to the last steep slope under the shelf. Somervell led up on a diagonal traverse, the others belaying the rope round their in-driven ice-axes. He was attacked all the while by most painful fits of coughing, and after one of them Norton reports: '... he leant his head on his forearm in an attitude of exhaustion, and so steep was the slope that the mental picture I have of him as he did this shows him standing almost upright in his steps with his elbow resting on the snow level with his shoulder.' Estimating the height of the slope by eye, Norton reckoned that if Somervell fell off with so much rope out, he ought to go right over the lip of the ice-cliff below before they could stop him.

Somervell came to the end of his two-hundred-foot rope, and further to complicate matters, was still about thirty-five feet short
of the shelf. The four porters had appeared above. They said that two of their number had frost-bitten toes and fingers, but that all were able to come down. Norton directed them to climb by themselves down to Somervell. The first two did so and were passed along the taut rope towards Norton and Mallory. The second two made the bad mistake of starting together. At once the snow collapsed under the too great weight and they went shooting down feet first on their backs. It seemed inevitable that they should fly over the cliff edge into space, but suddenly the snow piling under their feet bound itself to the slope. They stopped only several feet below and beyond Somervell.

Norton told them to sit still. He and Mallory unrope and held the rope end at arm's length. But Somervell had still not enough rope to reach the terrified porters. He too unrope and let himself down to the full stretch of one arm. He was then able to grasp each man in turn by the scruff of the neck and drag him back to the safety of his own axe-belay. He ‘fed’ them along the rope, where they slipped and slithered out of their steps, their nerve quite gone, saving themselves from further falls only by clutching the handrail. They had ruined the line of steps, but Somervell followed faultlessly, erect, and in perfect balance. The whole performance was an object lesson to men of undiscriminating goodwill who would like to have seen Sherpas in the summit party. Splendid men as they are, they have not the disciplined mind and nerve of a trained mountainer nor his technical skill. Physical toughness is not enough in emergency. Long after dark they reached Camp III, which next morning they completely evacuated.

Norton now disposed his forces in echelon between Base and Camp II, determined to attack whenever the weather relented, which indeed it promptly showed signs of doing. Meantime he took stock. Of the fifty-five porters only fifteen were fit in body and spirit to go to the North col and above. It was these fifteen men who were henceforth nicknamed Tigers. Of the climbers, Beetham had sciatica and had to be returned to Base. Bruce was fittest of all. Somervell's sore throat, although bad, was getting better. The blow to the porter corps demanded a complete revision of plan. A council of war was therefore
called at Camp I. The plan made corresponded to the state of
the expedition—it was a plan stripped to the bare bones. Oxygen
would be scrapped (too heavy and benefit doubtful), parties of
two would go up in succession from Camp IV, sleep at 25,500
and 27,200 feet, thence to the summit. Mallory and Bruce
would go first, Somervell and Norton second, Odell and Irvine
to support at the North col.

There followed five days of excellent weather—hot sunshine
and cloudless skies. On the first two they rested, then the
climbing parties moved to Camp III. On 1st June Mallory and
Bruce with nine Tigers camped on the North col, and next day
pushed up the North ridge and pitched Camp V at 25,200 feet.
Despite the clear skies they encountered high, keen winds that
nearly blew them out of their steps. They were thus stopped
three hundred feet short of their objective. Three chosen porters
had now to carry Camp VI two thousand feet higher, but the
morning found only one fit enough to climb. Bruce’s utmost
elocution failed to move the others. The winds had punished
them too badly; all the heart had been taken out of them—and
this on a cloudless day that from Camps III and IV had seemed
calm. In the end there was nothing for it but to go down.
Half-way back to the col they met Somervell and Norton coming
up with six porters. The two parties in passing exchanged news
in terse sentences, for the wind belaboured them like a flail.
Then Somervell and Norton moved on to occupy Camp V.
From there they sent down two men and kept four. Their
names were Narbu Yishe, Lhakpa Chede, Semchumbi, and
Lobsang Tashi.

Apart from the weather, which promised fair, everything now
depended upon the porters. Norton therefore visited the
porters’ tent to persuade them to eat a meal. He and Somervell
had found this duty of cooking peculiarly tiring and irksome,
and more unpleasant than climbing. Only with groans and much
panting does a man drive himself to crawl from his sleeping-bag
out into the cold to fill a pot with snow, and crawl back—out
and back several times—while his companion with equal labour
and distress opens tins and lights a stove. Tea and soups are
boiled. Biscuits and jam, sardines, or bully-beef, or pemmican-
follow. The sugared tea goes down well, but most solids are taken with a sense of nausea. However, one's duty is to refuel the body. And the duty is hateful. Hence Norton went to stir up this sense of duty in the porters. He found them torpid. He talked them into life and action, then discovered two of them wounded and bloody. Boulders had fallen from his own tent platform and split Lobsang’s head and gashed Semchumbi’s knee. Little could be done and Norton retired with forebodings for the morrow.

Somervell and Norton were up at 5 a.m. The morning was good, but what of the porters? Norton at once went to rouse them. Lobsang was sick and would not go higher. Semchumbi was lamed and his knee badly swollen. Lhakpa and Narbu were fit but reluctant to move. Using all his force of personality, Norton talked to the men at great length, urging them to strive for the honour that would be theirs if only they would carry loads higher than porters had ever climbed before. In the end he won, but it took him four hours. At 9 a.m. the three porters shouldered their twenty-pound loads and began climbing. Lobsang was able to make his way down alone.

Once they had started the porters carried splendidly. Semchumbi especially, despite his lameness and pain and consequent slow pace, was stubbornly cheerful and determined to do his best. At midday they passed the highest point reached without oxygen in 1922—and the day was still fine, the wind not violent. But progress was disappointing: Semchumbi had quite evidently shot his bolt. So at 1.30 p.m. a camp site was selected at 26,800 feet, below the North-east shoulder. The porters built the usual platform, pitched the tent, then departed for the North col. The lessons of 1922 had borne fruit in a much more comfortable and better stocked camp; Norton’s diary for the day ends with a shot betwixt wind and water for the physiologists: ‘Spent the best night since I left Camp I.’ He slept well despite the fact that he had taken into his sleeping-bag both his boots and two thermos flasks filled with tea, and that a cork had come out during the night.

They were up again at 6 a.m. and away at 6.40. It was a perfect morning, and windless. They had a choice of route:
either the North-east ridge or the slabs of the North face. Somervell and Norton strongly preferred the face route (as against Mallory who favoured the crest). The crest, however, was interrupted by two steep walls, now called the first and second steps, and the second looked about two hundred feet high and wellnigh vertical. Somervell and Norton held that such an obstacle could not be climbed above 28,000 feet. In consequence they decided to traverse about five hundred feet under the crest, following the line of a great yellow band of limestone, about a thousand feet thick, which stretches across the whole North face. Directly above the yellow band are two darker and very much steeper bands which break out on the North-east ridge as the first and second steps. Once he is well embarked on the traverse of the yellow band, the climber is effectively prevented from leaving it until he reaches the great couloir or gully. This occurs where the whole final pyramid and its lower plinth project beyond the great face of the North-east ridge and shoulder. The dark bands are here riven by the couloir, which provides the only hope of a way through them and so on to the final pyramid of seven hundred feet.

In one hour Somervell and Norton reached the bottom edge of the yellow band. Thus far they had been followed by choughs. Never before had living creatures been reported from anywhere near such a height. But these birds will go anywhere that man goes—in hope of food. The yellow band gave easy going at first on broad, parallel ledges, which were sufficiently broken to allow access from one to the other. Although it was sunny and windless, Norton felt the air so cold that he was shivering violently. He wore a woollen vest and pants, a thick flannel shirt, two sweaters, and two complete windproof suits. On his legs were Kashmir puttees; on his feet felt boots bound and soled with leather and nailed; on his hands two pairs of mitts—one wool and one windproof gaberdine; on his head a fur-lined leather helmet; around his neck a woollen muffler. Somervell was similarly dressed. Shivering thus, Norton began to think that he must have malaria and stopped to take his pulse. It was only sixty-four, quite extraordinarily low for the altitude, even though twenty above his abnormal 'normal.'
The pair felt like emaciated invalids as they slowly mounted and traversed across the band. Somervell's sore throat grew worse and worse. The cold dry air, deeply inhaled ten times to each step, had a calamitous effect on his larynx; time and again he was altogether stopped by fits of painful coughing. As they reached 27,500 feet Norton began to see double and had difficulty in placing his feet. This was a symptom of oxygen-lack affecting the brain mechanism, and not of snow-blindness. Since leaving the snow he had not in fact been wearing snow-goggles, wrongly thinking them unnecessary. But the penalty for that error was to be paid at a later stage. At every dozen paces uphill they had to halt and pant and 'look at the view,' which was not rewarding. All the neighbouring mountain ranges were far below and flattened out. All sense of distance was lost as their eyes travelled over the vast Tibetan plateau, until at last they detected a row of white and tiny teeth projecting over the curve of the earth—the tips of some unknown mountain range perhaps two hundred miles away. They kept grimly on and at noon were close to the great couloir and just under the top edge of the yellow band.

Somervell was there finally incapacitated by his throat trouble. He had reached his limit and urged Norton to go on alone. Norton at this point had to turn the bottom ends of two buttresses, following the top edge of the band upwards and into the couloir. The ground was here much steeper and the ledges only a few inches wide and snow-dusted. Norton went on, but twice had to go back and try alternative ledges. At last he made his way successfully into the couloir. He found it filled with powder-snow, which was too unstable to support him if he slipped, and yet was lying only on tilting tiles on which he had great difficulty in finding foothold. Sometimes the snow was waist-deep. He persevered and gained the far side. The rock on this east-facing wall of the couloir lay at a much higher angle than that of the yellow band: being indeed the way through the darker band above. The tiles sloped smoothly and steeply downwards. He strongly sensed the danger of the place for an unroped man; he was still seeing double on rock where his life depended on the friction of a boot-nail on slabs, and where
a slip would send him straight down to the Rongbuk glacier. He mounted cautiously and deliberately, until at the end of one hour he had gained three hundred yards in distance from Somervell—but only a hundred feet in height. He had still to climb two hundred feet on the rocks overlooking the couloir before emerging on to the north face of the summit pyramid, and the time was now 1 p.m. A quick calculation showed that the summit was lost. His own pace was too laboriously slow to allow the remotest chance of his reaching it and returning. The point at which he turned back was fixed later by theodolite as 28,126 feet.

The wisdom of his decision to go down was revealed still more clearly on his way back to Somervell. He had to spend another hour doing it, and the reaction from climbing so long and alone on treacherous rock had overstrained his nerve. Before he could cross some snow-dusted slabs beyond the couloir, he had to get Somervell to throw him an end of the rope, when in fact the slabs were very much easier and safer than those he had just left behind. He had come close to the end of his powers.

When he rejoined Somervell all was well, the time 2 p.m., and the weather fine. Norton records that he felt no regret at losing the summit so nearly. The effect of high altitude is to dull the mind to ambition, and the climber who turns his back on the top does so with heart-felt relief that the effort is ended. Norton did not think that he had come near to the limit of human endurance when he turned back—only to the limit of his own; and he was a man already much exhausted by the early and terrible fight with blizzards on the East Rongbuk glacier, and by the rescue operation on the North col, and by all the nervous strain of keeping porters on their feet and maintaining control of the whole organization in circumstances mostly adverse and sometimes appalling. In face of all these great handicaps his performance that day is one of the greatest ever yet given on Mount Everest, and the most inspiring for others. He declares: 'I still believe that there is nothing in the atmospheric conditions even between 28,000 and 29,000 feet to prevent a fresh and fit party from reaching the top without oxygen.'
They descended to Camp VI, collapsed the tent and went on. Passing Camp V at sunset Somervell was suddenly stopped by a bout of coughing which dislodged something in his throat. He could no longer breathe. Norton in front walked on unaware while Somervell sat down to die. He struggled for breath in vain. At the end, and in desperation, he gave his chest a tremendous push with both hands and the obstruction came up. It was a slough of the mucous membrane lining the larynx and its cause, frost-bite.

He could now breathe freely for the first time in days and soon made up on Norton. They continued by torchlight. Mallory and Odell met them at the col and guided them through the crevasse system to camp. Irvine had tea and soup at the boil, but they craved refuge and rest rather than food. An hour later Norton was smitten by complete snow-blindness. The pain was acute, and the affliction was to last nearly three days. On the following day, 5th June, Somervell descended alone to Camp III, bound for Base.
CHAPTER X

The Death of Mallory and Irvine

On the very day that Mallory and Bruce had come down to the col from their abortive climb, Mallory had resolved to try again. Bruce had strained his heart in helping to carry some of the porters' loads, and perhaps because of this Mallory now decided to use oxygen. But could porters be found to carry up the cylinders? Next day, 3rd June, Mallory, Bruce, and Irvine went down to Camp III intent on raising recruits and perfecting the apparatus. The excellent weather had greatly encouraged the porters and willing men were in good supply. In consequence Mallory, Irvine, and porters arrived back at the North col on 4th June, the same evening that Norton and Somervell came down from their great bid for the summit.

Mallory and Norton shared a tent that night. While they lay in their sleeping-bags Mallory told Norton for the first time of his decision to go up again with oxygen and to take Irvine. Norton was full of admiration for the man's nervous energy and strength of will, despite all the exhausting work of the last weeks. But as Norton remarked of Mallory it was almost impossible to know when he was tired. A fire of enthusiasm burnt in him. Perhaps it was this, and the fact that he always kept himself in good training, that made him look very young for his thirty-seven years.

Norton regretted only that Mallory had chosen Irvine, because Odell was immeasurably more experienced and was now showing the most remarkable powers of acclimatization. 'We had in him,' said Norton, 'a climber of unequalled endurance and toughness.' However, Mallory said he wanted Irvine for his peculiar talent in dealing with the mechanism of the oxygen apparatus. In this respect Odell was competent. We may assume that Mallory really wanted Irvine because he especially liked him.
NORTH FACE OF CHOMOLONZO (25,640 feet) from Pethang Ringmo (16,400 feet) in the Kama Chu
THE SUMMIT PYRAMID
from 27,200 feet

1. Rising route across slabs of yellow band   2. Wager gains crest here
6. Highest point reached, 28,100 ft. (1924 and 1933)   7. Great Couloir
WESTWARD VIEW FROM NORTH COL
Pumori at centre background  Lho La at centre
Rongbuk glacier directly below

NORTH RIDGE FROM THE NORTH COL
Camp IV
SWISS CAMP IV, WEST BASIN
at 21,150 feet, May 1952
In background, hitherto unknown glacier descends from West ridge
ROPE BRIDGE BETWEEN CAMPS II AND III
On the ice-fall of the Khombu glacier, Spring 1952
THE WEST FACE
from 20,000
feet on Pumori
1. North peak
2. North col
3. Lho La
4. Everest
5. South col
6. Lhotse
7. West Basin
8. Nuptse
THE KHOMBU GLACIER ISSUING FROM WEST BASIN
From the North-east col of Pumori
SÉRACS
on the East Rongbuk glacier
THE LAMA OF RONGBUK

ANGTHARKAY (in 1936)
SHEKAR DZONG
The ‘White Glass Fort’
Scene from monastery courtyard  Watch-tower at summit
THE NORTH PEAK
from above 27,000 feet
THE FINAL RIDGE
From the South Summit
HILLARY AND TENSING
On their return to Camp IV
The 5th June was a rest day, save for Odell and Irvine who made tests of and final adjustments to the oxygen apparatus. Odell records that the sun temperature was 105° at noon while the air temperature remained below freezing. The snow therefore remained very dry and wasted away by evaporation without melting. The weather signs could hardly have been better for the last attempt.

On the 6th Mallory and Irvine left at 8.40 a.m., each carrying an oxygen outfit of two cylinders containing gas under pressure of a hundred and twenty atmospheres. The weight was twenty-five pounds. With them went eight porters without oxygen, whose loads were also twenty-five pounds. Shortly after they left, Norton, still totally blind, was escorted down to Camp III by Hingston, Hazard, and two Sherpas. He stopped there, determined to await the result of Mallory's climb. Odell was thus left with two Sherpas to give the climbing party support.

The sky clouded in the afternoon and snow fell towards evening, but four of Mallory's porters arrived back on the col at 5 p.m. with a note for Odell: 'There is no wind here and things look hopeful.' Next morning Odell moved up to Camp V with one Sherpa, while Mallory and Irvine moved on to Camp VI. Very shortly after Odell arrived, a shower of stones falling from above disturbed his peace of mind. Following close behind them came Mallory's four porters and they bore Mallory's last message. It was written in pencil on a scrap of paper torn out of a note-book:

Dear Odell,

We're awfully sorry to have left things in such a mess—our Unna cooker rolled down the slope at the last moment. Be sure of getting back to IV to-morrow in time to evacuate before dark, as I hope to. In the tent I must have left a compass—for the Lord's sake rescue it: we are without. To here on 90 atmospheres for the two days—so we'll probably go on 2 cylinders—but it's a bloody load for climbing. Perfect weather for the job!

Yours ever,

G. Mallory.
Odell soon found the missing compass. He sent his own porter down with the other four and began to enjoy himself. He was perfectly acclimatized and was probably the first man really to enjoy a view from 25,000 feet. A hundred miles eastwards the snow-cone of Kangchenjunga floated alone in the heavens, and westwards Cho Oyu and its satellites were washed with the most exquisite tints of pink and yellow. Odell had been often by himself on mountains at the sun-settings, but he thought this the crowning experience of them all. After that he slept well and warmly, and at eight o'clock next morning began to climb to Camp VI. Mist banks were sweeping across the North face from westwards, and the summit ridge was hidden. None the less he could see a brightness there, suggesting that the upper two thousand feet of the mountain was clear of cloud. The wind too was light, the general conditions altogether favourable, so that Odell thought happily that Mallory and Irvine must now be well on the way to the summit.

Odell felt so energetic that he deliberately climbed a hundred-foot crag, which he could have easily avoided, in order to test his powers at 26,000 feet. Just as he reached the top the cloud screen lifted from the whole summit ridge. His eyes at once fell upon a tiny figure on a snow-slope directly under a rock step on the ridge. As he watched a second figure moved up to the first and then the first climbed the step. Immediately afterwards clouds swept over the scene and he never saw Mallory and Irvine again. It appeared to Odell that they were on the second step at 28,230 feet,1 but of this he could not be certain, and later evidence was to show that he must have been wrong in so placing them, for the second step is now considered unclimbable. It is more probable, therefore, that he saw them on the first step at 28,000 feet. In either event they were inexplicably late if we assume that no serious trouble had arisen earlier. The time was 12.50 p.m. and Mallory's schedule allowed of his reaching the second step not later than 8 a.m.

Odell could not see whether the figures were roped—they were six hundred yards away—and indeed could not have picked them out in the first instance had they not been outlined for a

1 See Appendix (p. 208).
moment against the snow. Much new snow covered the rocks on the north flank of the ridge, and it may be that it lay heavily enough on the crest to cause delay.

At two o'clock he arrived at Camp VI. The weather was now worsening. The wind had risen and a blizzard raged across the face. So thick was the weather that Odell could see no more than a few yards. It was obvious that if Mallory had not already turned back he would have to do so now, and would be likely to have trouble in finding the small tent which lay hard against a short crag. Accordingly Odell went out and climbed two hundred feet through the murk, whistling and yodelling in the hope that the climbers might be within hearing. There was no answer. He took shelter then behind a rock, and after one hour returned to the tent. The blizzard ended in two hours. The upper crags cleared and the great North face became bathed in sunshine. The fresh-fallen snow began visibly to evaporate. But of the climbing party there was no sign.

Remembering Mallory's injunction to be back at Camp IV in time to evacuate, Odell now placed Mallory's compass on the floor of the tent and went down. He kept to the crest of the North ridge and towards the end enjoyed a fast standing glissade of a thousand feet on hard snow.

Hazard had returned to the North col and welcomed Odell there with hot soup. Then they turned out to watch for Mallory and Irvine. It was a clear evening. Moonlight reflected from the summits of the West Rongbuk glacier floodlit the face of Everest. But the night wore on without sign or signal from above. Mallory had magnesium flares and an electric torch and would use these if he were in trouble. Down at Camp III a similar watch was being kept by Norton, who now had the use of his eyes. Morse signals had been arranged between camps and climbers. Thus a party benighted on the upper mountain, unable to reach Camp VI, had to flash an S O S to Camp IV, where it would certainly be picked up and answered, and relayed down. But no sign came from above.

At the North col next morning, 9th June, Odell and Hazard turned their field-glasses on the upper camps. They could pick out the tiny tents, but although they kept them under constant
observation, no movement could be seen. At noon Odell decided to climb back to 27,000 feet. He arranged a code of signals with Hazard. By day sleeping-bags would be placed out on the snow in agreed patterns; by night he would use simple flash-signals, which included the Alpine distress signal of six flashes per minute followed by a minute's pause (to which the answer is three flashes per minute followed by a minute's pause).

That same afternoon Odell climbed with two Sherpas to Camp V. A bitter cross-wind had been blowing all the way up; in the evening it rose to heavy gusts that rocked the tents on their platforms. The sunset was stormy and glimpsed only briefly through hurrying clouds and spindrift. As night fell the cold and wind increased, and Odell, fully clothed inside two sleeping-bags, was too chilled to sleep; likewise the porters, who in the morning were too sick to go on. Odell sent them down and continued alone.

A spare oxygen apparatus had been lying at Camp V and Odell used this in hope of maintaining his pace despite the high wind. But oxygen had no effect on him. It seemed that being fully acclimatized he had no need of it and so discontinued its use. Occasionally he had to take shelter behind a crag to try to restore warmth to his limbs before going on, but in the end he reached Camp VI. One glance inside the tent told him the worst. It was empty.

Nothing had been touched since his last visit. Mallory's compass still lay on the floor. There could no longer be doubt that Mallory and Irvine were dead. Injured or not no men could spend a night out on the uppermost rocks of Mount Everest, in that wind and in that cold, and not be frozen to death. Odell threw off his useless oxygen apparatus and set off up Mallory and Irvine's most likely line of ascent. He says: 'This upper part of Everest must be indeed the remotest and least hospitable spot on earth, but at no time more emphatically and impressively so than when a darkened atmosphere hides its features and a gale races over its cruel face. And how and when more cruel could it ever seem than when balking one's every step to find one's friends?'

He struggled on for two whole hours, but on that vast expanse
of broken rock his greatest efforts were foredoomed to failure. With a growing sense of dismay he slowed down and stopped, and at last turning his back on the summit made his way down to Camp VI. He waited there for a lull in the wind, and when it came dragged two sleeping-bags from the tent to a patch of snow above. He placed them on the snow in the form of a letter T. Hazard, watching through his field-glasses four thousand feet below, saw them there. The sign meant No trace. He sent the message to Camp III, where Norton, Bruce, Noel, and Hingston were still waiting; waiting and passing through every stage of suspense from high hope to anxiety and now to despair at the end of four days. 'And the memory of these days,' said Norton, 'is such that Camp III must remain to all of us the most hateful place in the world.'

On arriving back at the North col, Odell found that a note for him had already been sent up from Norton commanding him to return and not to prolong the search. Odell's performance had already been quite extraordinary, and remains unique in the saga of Mount Everest. He had been six times up and down between Camps III and IV (including two abortive climbs), once from the col to Camp V, and twice within four days to 27,000 feet. Altogether he slept eleven nights at 23,000 feet or higher.

By 12th June the surviving members of the expedition were back at Base Camp. Hingston examined them and found that every one without exception had suffered a dilated heart (Odell least of all). All subsequently recovered on returning to lower altitudes. Three days were spent packing up, and the hard work helped the men to accept in a rational spirit the acute sense of loss which they all felt, and which pressed down upon the camp like low cloud. Somervell and Beetham were given the task of building a cairn to the memory of the twelve men who had died on these last three expeditions. They raised it fifteen feet and carved the names on panels of stone: Kellas, Lhakpa, Narbu, Pasang, Pema, Sange, Temba, Dorge, Shamsher, Manbahadur, Mallory, Irvine.

1 See Appendix (p. 207).
On 15th June Hazard went off on detachment with the Gurkha surveyor Hari Singh Thapa to make a survey of the West Rongbuk glacier, in the course of which they climbed for the first time on to the Nup La at the glacier's head. The expedition left Base Camp on the same day as Hazard. It is one of the ironies of that year's attempt that the monsoon, whose possible early arrival they had striven to escape by establishing camps in the teeth of spring blizzards, until exhaustion robbed them of any chance of the summit, came late in the end, not breaking while a camp remained standing. It withheld itself until the day after they had struck Base Camp and had turned away.

They left behind them an Everest whose summit pyramid towered darkly through light veils of cloud, as inhumanly remote, as impersonal as ever, seeming more so now that it had a human secret to guard. What had become of Mallory and Irvine? Had they climbed to the summit? It was the general opinion of the members of the expedition that the most likely cause of their loss was a simple slip by either climber, whether on the ascent or descent no man could tell. It is most likely that the pair were roped, for although others had dispensed with the rope on these upper slabs Mallory was a firm believer in the good psychological effect of 'roping up.' He writes of another occasion: 'We tied it on now partly for convenience so that no one would be obliged to carry it on his back, but no less for its moral effect: a roped party is more closely united, the separate wills of individuals are joined into a stronger common will.' The last clause of that sentence contains an idea that would weigh heavily with Mallory on his last bid. But the sad fact is that if one man slipped on these tilting slabs, devoid of good foothold, the other could not expect to hold him.

The other possible cause of the loss is that they went on perhaps to the summit, deliberately courting benightment—and they would indeed be vehemently courting it if Odell saw them at the second step so late in the day as 12.50 p.m.—but if so it would not be in accord with Mallory's own declaration of policy: 'The party must keep a margin of safety. It is not to be a mad enterprise, rashly pushed on regardless of danger. The ill-considered acceptance of any and every risk has no part in the
essence of persevering courage. A mountaineering enterprise may keep sanity and sound judgment and remain an adventure.

In the light of these words would Mallory, accompanied by a man so much younger and less experienced than himself and for whom he had such high regard, 'push on regardless'? There can be only one answer to that. And in light of the later evidence showing that the second step is almost certainly unclimbable, the evidence becomes strong in favour of a slip as the cause of accident. In the last resort, however, no case can be proven and the death of Mallory and Irvine must remain a mystery.

They did not forfeit their lives in vain. But men will live in vain, however secure and comfortable their way of existence, if they allow the spirit of adventure to die in their souls. For such there can be no more progress in penetrating the strongholds of Nature and of the Spirit; they will live like fat cattle and die no better. 'Half the charm of climbing mountains is born in visions preceding this experience—visions of what is mysterious, remote, inaccessible,' declared Mallory. And on all the other planes of our life, it is this urge to explore, to realize the vision, to adventure far and go always a little farther, that alone justifies man's hope of all fullness of living: the unfolding and fulfilment of all the powers of his soul. This adventurous spirit must not be permitted to die if man's true way and end is not to be betrayed in a general softening of will and deprivation of purpose. And if the price we have to pay, in keeping alive in the world this dynamic spirit of adventure, has sometimes to be the loss of our bodily life—what of it? It is a loss to good purpose. To others we bequeath our free will.
CHAPTER XI

The Battle Renewed

For eight years the Dalai Lama withheld his assent to another expedition. Sir Charles Bell had died and no one else had access to his thoughts. The delay meant that none of the high climbers of 1924 was available when at last, in August 1932, news reached the Everest Committee that the Dalai Lama had relented, but had imposed the condition that all members of the expedition must be British. However, new men of recent Himalayan experience were ready.

These were F. S. Smythe, Eric Shipton, Dr. Raymond Greene, and Captain E. St. J. Birnie, who in 1931 had all taken part in the ascent of Kamet (25,447 feet) in western Garhwal. This was the first peak of over 25,000 feet ever climbed, and Smythe, who led that expedition, had also been a member of the international expedition to Kangchenjunga in 1930. He had great Alpine experience. Of the others chosen, in part for Himalayan experience, George Wood-Johnson had been with Smythe on Kangchenjunga, and Major Hugh Boustead had taken an expedition of his own to the Lhonak district of Sikkim in 1926. One veteran Everest climber was available in C. G. Crawford of the 1922 expedition, and Shebbeare was again able to come as transport officer. The remainder were new to the Himalaya: Wyn Harris, who had climbed Mount Kenya with Shipton; L. R. Wager, newly returned from his second Greenland expedition; and J. L. Longland, one of the best rock-climbers in England. These three had done much Alpine climbing, and some of it together. T. A. Brocklebank was at twenty-four the youngest member of the party. He was a keen Alpine climber and rowing blue. Dr. W. McLean came as medical officer, but also with a long list of Alpine ascents to his credit. In short, apart from Shebbeare, all those men had been chosen with the idea that if need be they could take part in the actual assault.
Hugh Ruttledge was leader. His wide knowledge of the Himalaya and its people came in part from five years' service as the district commissioner of Almora, in the central Himalaya. There he had done exploratory climbing and during his vacations had climbed in Switzerland. Aged forty-eight, Ruttledge would be able to go as far as the North col but was not expected to go higher. There was indeed no need of the leader in a higher position. The complete team of fourteen men was of average age thirty-four.

In the long interval since 1924 the problem of Everest had been carefully studied and the experiences of the three expeditions digested. Each expedition in turn had contributed to the further achievement of its successor. Each, standing as it were on the shoulders of its predecessor, had pushed its leading climbers higher on the mountain—27,300 feet, 28,100 feet—surely this time the summit would fall!

In 1922 the principal 'mistake' made had been the attempt to climb the last four thousand feet in one day (a failure of porters to go higher as much as any mistake by the climbers). In 1924 the climbers had exhausted themselves too early in a vain struggle with blizzards below the North col. So, in 1933, it was agreed that the climbers' strength should be husbanded. They should go out early but advance slowly to the North col, prepared for strategic withdrawals in face of blizzards, taking time to acclimatize; then, during the ten days of relatively calm weather before the monsoon broke they would put forth a concentrated effort, site Camp VI above 27,000 feet, and place a whole series of assault parties there with strength unimpaired.

A valuable result of the 1924 expedition had been the proof that Sherpas could carry a camp to 27,000 feet and that climbers could sleep at that height. Moreover, the Sherpas themselves had greatly gained in skill, experience, and morale since the early nineteen-twenties. They had travelled afar with mountaineers of many nations, and standards had gone up. There was thus no room for doubt that Camp VI could be put higher than 26,800 feet, which was still too low. There was grave doubt, however, that a seventh camp could be established. Nothing but Norton's strength of will had moved the Sherpas above Camp V
in 1924. Better things could now be expected of them, but three carries above the North col might be too much. Norton advised Ruttledge instead to get the porters to carry Camps V and VI each four hundred and fifty feet higher than before, for this they could certainly do.

Such a plan demanded prior knowledge of the monsoon’s approach, therefore a wireless receiving and transmitting set was taken to be operated from Base by two signals officers, E. C. Thompson and W. R. Smijth-Windham. Oxygen apparatus would accompany the party as a reserve force, but the climbers were not anxious to use it if the mountain could be climbed without. And all the climbers of 1924 were convinced that men could be so acclimatized to altitudes of 24,000 to 26,000 feet that they would be able to go to 29,000 feet without oxygen. Especially through Norton’s effort there had arisen a reasonable conviction that the summit could be won by men employing their own natural powers of body.

The expedition assembled at Darjeeling towards the end of February, and despite their early approach march had tolerable weather through Tibet. On 16th April they arrived at Rongbuk Monastery where Ruttledge, like all others before and after him, came under the spell of the Lama’s great charm and natural dignity, and was deeply impressed by the firm discipline with which he ruled his three hundred monks. The Lama blessed the expedition, and on 17th April—twelve days earlier than in 1924—Base Camp was established.

There had never been on Everest an expedition so well supplied and fully equipped. Great advances too had been made in the design and quality of tents and clothing. The now famed Grenfell cloth was used for windproof suits and for the tent destined for Camp VI; double-skinned tents were provided for Camps III and IV; new designs for boots and sleeping-bags had been evolved. These and many other things would afford climbers greater safety and comfort in riding out bad weather. It was Ruttledge’s ambition to stock Camp III so completely as to make it independent of Base for the supply of high camps, so that opportunities could be seized quickly. Tibetans were employed as hitherto to carry Camps I and II. But whereas the
first three camps had been pitched in a week's time in 1924, now the same work was spread over fifteen days: for the plan of strategic withdrawal had to come into operation. Repeated afternoon storms obliged the supply convoys to turn back. Always when possible they set out in the mornings, but the advance was never pressed when the weather broke badly. These tactics were successful. On 2nd May Camp III was established with time on hand and the party in good heart.

Smythe and Shipton were the first men to occupy Camp III. They at once reconnoitred the North col and saw that very great changes had occurred since 1924. The only possible route now lay straight up the centre, across a crevasse at one-third of the way up, and then higher still up a nearly vertical ice-cliff, which would have to be taken by frontal attack. At its lowest point this cliff was forty feet high. Beyond it steep slopes swept to the final shelf just two hundred feet under the crest. During the ensuing fortnight all attempts to put a camp on the North col failed in foul weather. On several occasions Smythe, Shipton, Wyn Harris, Greene, Wager, Longland, Birnie, and Boustead went out to open the route, always to be defeated by high wind or deep bad snow. And after each partial ascent blizzards wiped out the steps. On most days climbing was impossible.

The weather suddenly improved on 12th May. Smythe and Shipton at once went up to make the route. Wager and Boustead and Longland accompanied them to help with the work and put fixed ropes on the bad places. They found a snow-bridge across the crevasse, then climbed through a punch-bowl above towards the forty-foot ice-cliff. Smythe was fortunately the best ice man in the Alpine Club and attacked the wall determinedly. At the first blow of his axe the pick sank in without removing a chip. It was that tough and rubbery ice, not peculiar to the Himalaya but found there more often than elsewhere. It is tiring ice to work. The wall was so steep that after making one step Smythe could not stand in it without falling off backwards. Shipton had to support him. He then drove a ringed spike into the wall as high above as he could reach, passed his rope through the ring, and thus supported continued cutting—handholds as well as footholds. At length he
was able to get a foot on to the metal spike, and fortunately the angle slightly eased thenceforward so that no artificial device was required to hold him in balance. At frequent intervals he had to stop and gasp for breath, and beat his hands together lest they lose all sensation. The ice at last gave place to snow and he was up.

His own comment is: 'I was feeling pretty done and my heart was pumping as though it would burst, yet I remember a thrill of exhilaration. This was altogether different from the monotonous work we had so far endured; it was mountaineering.'

Shipton followed and they went on to the shelf. It was twenty feet wide and a good camp site, backed by cliffs. They descended to Camp III. Next day Wyn Harris, Wager, and Longland fixed a rope-ladder on the ice-wall, and the day after that Camp IV was carried up by twelve porters. Every one came down again to Camp III and that night a terrifying hurricane broke on the mountain. One of the big arctic tents, with several men inside it and heavy guy-ropes holding it down, was lifted bodily by a gust; plates of ice torn off the mountain slapped on the tent walls, and snow stripped in great sheets off the glacier was flung at high velocity through the camp. No one could sleep amid the crack of canvas and howl of the wind. In the morning not a step remained on the North col slopes.

None the less Camp IV was occupied that same day by Smythe, Shipton, Wyn Harris, Birnie, Boustead, and twelve porters. And there they remained for a full week, unable to move up. Snowfalls, blizzards, hurricanes, came and went; latterly two parties attempting to go higher were turned by wind. Ruttledge was at Camp III where a wireless message came in on 19th May reporting that the monsoon was active in the Bay of Bengal. This was not bad news, for a spell of calmer weather should herald the monsoon’s onset; the North col party had been up there for five days and ought to be acclimatized: now was the psychological, physiological, and meteorological moment to go for the summit.

Ruttledge went up to the col on the 21st. He could see dark monsoon clouds massing to the south still held at bay by the
west wind. No time must be lost. He found every one in excellent health. The porters were full of self-confidence; they said to him: 'Don't be anxious. We mean to carry those loads as far as we possibly can. You'll see to-morrow. Then it's up to the sahibs to climb the mountain.'

The morning of the 22nd was windless and sunny. Wyn Harris, Greene, Boustead, Birnie, and Wager went up with porters and pitched Camp V at 25,700 feet. Greene had to return that evening with a strained heart, for he had not had a chance to acclimatize, having spent only one night at Camp IV. Next day Smythe and Shipton went up to Camp V, hoping that the party there had moved up to Camp VI. Instead they found a gale at that level—and a full house. Since they were too exhausted to get back undamaged, Wyn Harris and Wager nobly made room for them by withdrawing to Camp IV.

The 24th was worse. Smythe says: 'There was some talk of setting off to Camp VI, but the wind settled that idea when it roared across the huge expanse of slabs and flung the snow it had collected upon the camp in a furious blizzard... we agreed that it was the worst weather and the worst camp we had ever endured. Yet, somehow or other, time passed. In this respect high altitudes are merciful. A man is too lethargic to feel bored, and lethargy is the keynote in high-altitude mountaineering. On Everest it is an effort to cook, an effort to talk, an effort to think, almost too much of an effort to live.'

In the night they experienced a hurricane that rivalled Finch's of 1922, and only the much improved equipment saved them from disaster. The camp could not be held, and the whole party fell back to Camp IV on the 25th. The damage sustained was serious. All the porters except Angtharkay were frost-bitten. He was a small man, aged twenty-five, of lion-like heart and tremendous stamina. Only he among those porters ever went high again. But there were now a hundred and seventy Sherpas working on the glacier from whom volunteers could be drawn. The damaged men were escorted down from the col by Ruttledge, Greene, Brocklebank, Crawford, and Boustead. This on the 26th. The remainder stayed to rest and to press on again when they could, for the monsoon clouds were banking up ever
more threateningly to the south-east and would soon be upon them when the west wind failed.

Conditions greatly improved. On the 28th Wyn Harris, Wager, Birnie, and Longland re-established Camp V with eight Tigers. The 29th dawned fine. Would the porters move? Now was their testing time. And at 5 a.m. the porters were ready to go on. Their names were Angtharkay, Da Tsering, Nima Dorje, Ang Tsering, Kipa Lama, Passang, Tsering Tarke, and Rinzing. They carried ten pounds each. Leaving Birnie to hold Camp V, the others set off up the North ridge, which they soon left and struck diagonally across the face towards the first step. On the treacherous slabs of this face the porters climbed with a skill that showed great advance upon previous years; hillmen by birth, they were becoming mountaineers as well. They came on to the yellow band and climbed half-way up it to pitch Camp VI at 27,400 feet. The tent was a Yak, made by Burns of Manchester from Grenfell cloth, weight ten pounds, and the best high-altitude tent yet designed. It was set on its platform at 1.30 p.m. about four hundred yards east of the first step. Wyn Harris and Wager moved in, having been condemned, as Longstaff would say, to try to climb the monster. Longland’s duty was to guide the porters down.

That he should have been chosen for this work was a great good fortune. He was (and still is) a man of abounding energy, very much alert, and one with a lively sense of mountain craft. Thus he decided not to commit his porters to those shelving acres of slabs on the descent, where their developing carelessness might lead to a catastrophe, but to make at once for the better defined North ridge. No sooner had they reached it than the summit was enveloped in blizzard and a snow-laden gale was screaming round them. Visibility narrowed to a few yards. Goggles iced up and were discarded. Then their eyelashes iced up. They could hardly see and began a long fight for their lives. They had passed the tattered remnants of Mallory’s last camp of 1924 when suddenly the appalling thought came to Longland that he had once seen a photograph showing Mallory’s camp not on the true North ridge but on a smaller ridge farther east. If so, he would be leading his men to their death on the
stark ice-slopes above the East Rongbuk glacier. No return was possible. The porters were already in need of shepherding and encouragement; some, barely able to endure longer the tremendous blast of the snow wind, tending to sit down when not urged onwards. For two dreadful hours Longland fought for their lives and his own, down the snow-sheeted rocks and icy scree until through the swirl of white a green tent emerged.

Smythe and Shipton were now at Camp V and Smythe writes of this moment: ‘The afternoon lengthened and a premature gloom gathered as the blizzard thickened. Suddenly we heard something above the roar of the wind. A dim figure showed through the murk, then another and another. There was a relieved shout and one by one the porters came scrambling down the rocks to the camp. Among them was Jack. He was unrecognizable; his eyebrows, his eyelashes, his moustache, were rimed and caked with snow and ice; icicles inches long hung from his nostrils.’

Longland and party halted briefly for food and drink, then pressed on to the North col where they arrived at dusk, utterly spent. Longland’s performance that day is outstanding in the annals of Mount Everest.

The disposition of climbers on the mountain was now exactly right for the attack if only the weather would hold. Wyn Harris and Wager at Camp VI, Smythe and Shipton with Birnie in support at Camp V, Longland, Crawford, and McLean at Camp IV; every camp fully stocked. Wyn Harris and Wager spent a wretched night and were up at 4 a.m. on the 30th to thaw out their boots on a Tommy cooker (a small tin stove burning solid methylated fuel, used only at Camp VI—primus stoves being used below). Their special task was to try to climb the North-east ridge and at all events to reconnoitre the second step, but failing a route there to follow Norton’s line.

They got away at 5.40, long before the sun cleared the North-east ridge. The cold was like a draught from outer space. Only the lightest breeze was blowing, but the need of deep and rapid panting caused such loss of body heat that they soon had reason to fear frost-bite. They took a course diagonally up the yellow band, and after an hour’s work met
the sun as it rose over the crest. At once Wager took off his boots and massaged his feet. Later they went on unroped to within sixty feet of the crest, and were some two hundred and fifty yards from the first step when Wyn Harris suddenly found an ice-axe lying free on the slabs. On the bright steel head was stamped the maker’s name: Willisch of Tasch. No one but Mallory and Irvine had ever come here before, and to one of these it must have belonged. The slabs on which it lay tilted at an angle of thirty-five to forty degrees and friction alone held it there.

They left the axe where they found it and went on to the first step, which they reached at 7 a.m. It took the form of a double tower which could be avoided by a traverse and the ridge regained beyond. But the ridge to the second step showed a narrow and jagged edge two hundred yards long, broken by fifteen- and twenty-foot clefts. The traverse of such a ridge at 28,000 feet was not to be contemplated except as a last resort, so they continued along the top of the yellow band, intending to climb direct to the second step when they came under it. On arriving under it they saw above them dark, smooth, unclimbable rock; nor was there any way of climbing the step itself from this side. But a further two hundred yards onward a shallow gully split the dark bands to the crest, which thereafter looked easy. At ten o’clock they reached the gully and roped up. Wyn Harris tried to lead, but failed: the rock was too steep and holdless. Norton was right and Mallory wrong. The ridge route was impracticable.

They now decided to go for Norton’s route. Following the top edge of the band for a hundred and fifty yards they came to the great couloir and rounded a most awkward and exposed corner on steep, snow-covered slabs. Then they entered the couloir. Fifty feet wide, and deep in unstable powder, it exacted the utmost caution. It is a sensational place, for the gully plunges ten thousand feet. On the far side the yellow band swells out as a buttress dividing the great couloir from a subsidiary couloir. On these rocks they traversed a hundred and fifty feet, slightly rising until they were fifty feet above the yellow band. Every ledge and crack was
choked with snow. They came to the edge of a snow-scoop. Wyn Harris tried to cross, but the snow showed every sign of sliding away, and Wager was too precariously balanced to hold him on the rope. At that he turned. It was 12.30 p.m. They had lost much time in reconnoitring the two steps. Even were they able to force the route ahead they could not possibly hope to reach the summit before 4.30, which would be too late for descent to Camp V before dark. Camp VI would accommodate two men only and Smythe and Shipton would now be there. Accordingly they turned back at 28,100 feet.

On the return they hoped to climb up to the foot of the first step and look more carefully at the second step. But they were nearing their limit of strength and found the ascent beyond them. They carried on towards Camp VI. En route Wyn Harris retrieved the axe found in the morning and left his own in its place, while Wager by a supreme effort climbed on to the ridge above. He is the only man ever to have looked down the vast ice-slopes of that South-east face. The flank of the second step was plastered with ice at an angle of sixty degrees or more. But whether the step could be turned on such ice at 28,200 feet was more than doubtful.

At 4 p.m. they reached Camp VI. Smythe and Shipton supplied tea and heard their tale, then off went Wyn Harris and Wager to Camp V for the night. Next morning on their way down to the North col Wyn Harris tried a short glissade on hard snow, but the slope took an eastward tilt and he found himself shooting down towards the precipice above the East Rongbuk glacier, and rapidly accelerating. He turned over on his stomach, grasped his axe with one hand on the head, the other on the shaft, and holding it at chest level gradually turned the pick into the frozen snow. Too quick a jab would have torn the axe from his hands. The pick ripped a deepening groove, throwing a jet of snow into his face—and stopped him at the very edge of the cliff. Exhausted and shaken he rejoined Wager. With many halts they made their way to the col. McLean examined them there and found that they both had dilated hearts. This was not unexpected; but for the meantime at least they were out of action.
The ice-axe they found has in later years and for brevity’s sake been generally referred to as Mallory’s axe, but in fact it might equally well have been Irvine’s. That it marks the scene of the accident is almost certain. It is important to remember that the axe must have been placed where it was found; had it been dropped it would have continued down to the Rongbuk glacier. When a man slips on such rock his companion must at once discard his axe to hold the rope with both hands. Indeed he has no choice. That they would be roped appears certain, for reasons given earlier. That one man could not stop the other once a fall had begun is at that point equally certain; the tilted slabs offer no definite foothold. The evidence all points to the fall having occurred on the ascent rather than the descent: once the second step had been seen or reached, and its hopelessness had become apparent, any descent would be made at a lower level of traverse than that on which the axe was found, for the lower is quicker, easier, and less wearisome because it is a descending route down the yellow band. Such a consideration is all important at high altitudes. These suggestions may be speculative, but are chosen as being sounder than the more highly speculative alternatives.

When Wyn Harris and Wager left Camp VI on 30th May, Smythe and Shipton had supper and settled down for the night. Supper consisted of Brand’s beef extract, biscuits, condensed milk, tea and sugar, and café au lait. The solid methylated fuel used for heating this food failed to bring liquids to boiling point. The evening was calm but they found sleep impossible, for the platform on which the tent was pitched had a downward tilt and was so small that the whole lower side of the tent projected without support beyond the platform. Smythe, having the upper berth, kept rolling down on top of Shipton. However, they had much to be thankful for. Smythe had one short glimpse of the sky between the tent flaps and saw ‘an appalling wealth of stars, not pale and remote as they appear when viewed through the moisture-laden air of lower levels, but brilliant points of electric blue fire standing out almost stereoscopically.’ All seemed well for the morrow. Before dawn a sudden wind shook the tents and snow soon began
drumming on the canvas. A snowstorm developed as the day advanced and no move was possible. This meant that two nights must be spent at 27,400 feet, and deterioration of energy and muscle tissue would proceed apace. Shipton felt his strength ebbing as the day dragged on, although Smythe imagined that his own rest did him no harm. Ruttledge’s plan of slow acclimatization had worked admirably. They had good appetites even at 27,400 feet and sighed for sausages and eggs instead of ‘slops.’ But through no fault of the leader’s they had now spent rather too much time above the North col and their acclimatization, excellent as it was, had become offset by deterioration of tissue. Longstaff has neatly summed up this matter of acclimatization versus deterioration: ‘The oftener he goes above 20,000 feet the better; but the fewer nights he passes continuously above 20,000 feet the fitter does he remain. At such heights most men lose a pound of weight every day, though individuals vary very greatly in their reaction.’

Late in the day the weather changed again and their second night was a repetition of the sleepless first, although this time the weather held. They had hoped to start at 5 a.m. So great was the cold and wind, however, that when the hour came a start was impossible without incurring frost-bite. Fortunately the wind died at 6 a.m. and they left camp at seven o’clock. The high winds had blown much of yesterday’s snowfall off the slabs. ‘Never,’ says Smythe, ‘have I seen a more utterly desolate mountainside. And above, still a weary way above, was the summit pyramid set squarely at the end of this vast rocky roof; a last tremendous challenge to our failing strength.’

Shipton’s strength did fail two hours from camp, when they were directly under the first step. Smythe, who was in front, heard an exclamation behind and turned to see Shipton leaning heavily on his axe. He felt very sick, and it is the rule on Everest that no man must go on until he collapses, for his companion’s safety is then jeopardized too. Shipton reassured Smythe that he could get back alone to Camp VI in safety, and encouraged Smythe to go on. Smythe did so, but he felt that his last chance of success had gone. In bad conditions the support of a second man counts for much.
On passing below the second step Smythe remarked that it looked like the sharp bow of a battle-cruiser. At 10 a.m. he entered the great couloir. He found the snow beaten hard by the wind and to his great surprise had to cut steps. Axe-work at 28,000 feet is not done without much painful gasping for breath and he reached the buttress beyond with profound relief. But the buttress now dealt with him as with Wyn Harris. It bore much more snow than two days ago and sometimes he sank thigh deep in it, being eventually reduced to shovelling it off with hands and arms. At length he was brought to a halt by labouring lungs and heart, and by a dangerous numbness in his hands. He feared now that his axe would slip from his grasp and was driven to continue by groping for holds with his feet only. This was dangerous practice on such steeply dipping rock, and to give some added security he wedged his axe-pick in a crack while he moved up. This saved his life. A foothold broke away, both feet slipped off, and he threw his weight on to the axe-head, which held. Instantly he recovered his footing and was safe. He went but a step or two farther and then realized he was beaten. He could not go on and still have strength to come back. The time was then 11 a.m. and he had reached approximately the same point as Norton, Wyn Harris, and Wager.

It was Smythe's opinion that if the buttress were clear of snow it could be traversed without excessive difficulty into the subsidiary couloir, which alone breached the upper dark band and which can certainly be climbed on to the face of the summit pyramid. He thought, however, that a still better route would be to traverse the great couloir lower down where the lesser one joins it. A long length of cord and some ringed spikes ought to be carried by the climbers, and ropes fixed to the steep section of three hundred feet in order to secure the descent. Any climber who reaches the summit by this route will have come to the limit of his strength, and every means must be employed to save his life on the descent. On this very difficult passage across the couloir and up through the black band, Smythe now felt convinced that oxygen should be used—not necessarily before it or after it (for an acclimatized man should be able to reach the
top without oxygen—Smythe here agrees with Norton and Wyn Harris), but assuredly on the bad passage. The apparatus could be dumped above the breach and later, during the descent back to the yellow band, its remaining oxygen used in large quantity.

Smythe turned back to Camp VI. Ever since leaving Shipton he had most strongly sensed the companionship of a friendly presence who kept watch over his safety. So powerful was this sense that he felt that he was roped to this invisible second man, and so used had he become to it that after recrossing the great couloir to the yellow band, where he stopped to eat some Kendal mint-cake, he broke the food in two and turned involuntarily to offer half to his companion. He was almost startled to find no one there. He continued then, but not until he was within sight of Camp VI did the strange sense of companionship pass away and he suddenly feel all alone.

A more peculiar episode occurred at 1.30 p.m. when he was just two hundred feet above Camp VI. He glanced towards the North-east shoulder and saw two dark objects like kite balloons hovering in the sky. They slowly pulsated. One had squat, immature wings, and the other a beak like the spout of a tea kettle. The in-and-out pulsation was very marked and slower than Smythe's own heart beat. He did not know what to think. Finally he was convinced that here was no optical illusion. He tested himself by looking away and back again, by identifying and naming peaks, glaciers, and valleys before taking another look; but always when he looked they were there, pulsing as if moved by some uncanny life-force. As he started towards the tent they became covered by drifting mist and never reappeared.

Shipton was waiting at Camp VI, but Smythe was too tired willingly to go down that same day. To give Smythe a chance of a good night's sleep Shipton decided to move to Camp V, and accordingly left at 2.30. He was barely an hour away when a terrific storm broke. Like so many of these Everest storms it broke out of the blue, without warning and at full strength from the first onset. Smythe, safely in his Burns tent of Grenfell cloth, was duly chastened by the thought that if there had been less snow beyond the great couloir and he had therefore been
able to go on towards the summit, this storm would have killed him.

Meanwhile it came near to killing Shipton. It caught him just where it caught Longland, at the top of the North ridge. It was the fiercest gale he had ever been out in; he could not stand against it and was content to crouch behind a rock and wait for his fortune, good or ill, to be dealt to him. After a while he was able to go down in short rushes, but in the blinding swirl of cloud and snow lost all sense of direction. Again he stopped. After a much longer wait the top of the North peak thrust through the cloud sea and he went on towards it until he arrived at Camp V. Birnie was ready there with huge quantities of tea. Birnie himself seemed in a bad way, frost-bitten and emaciated although remaining infectiously cheerful. The spare tent could not be unlatched in the storm: when Shipton tried his hands went numb and helpless. He and Birnie then perforce shared one sleeping-bag, and next morning, in improved weather, retired to Camp IV. Unlike Shipton down at Camp V, Smythe at Camp VI spent the best night he had had above the North col. He breakfasted at sunrise and set off. No sooner had he reached the North ridge than the Everest storm performed its hat-trick. Smythe's escape was positively providential. As he fought his way through the gale a deadly numbness in his limbs began to invade his body too. It is the last danger signal. Most unexpectedly he stumbled on to a ledge which was completely windless. He sat there, warmed by the sun until life slowly crept back into his body; and all the while the wind struck the rocks around with a terrifying boom, like the noise of an artillery barrage. The sun vanished, blizzard threatened, and he went on. His legs were weak and tottery long before he reached the col, and he began to stagger like a drunkard. Luckily he was seen, his condition noted, and Longland climbed a thousand feet to meet him with a flask of tea laced with brandy. The effect of this drink was so stimulating that he needed no other help in reaching camp. McLean examined him, and he was found to be one of the few men to go high on Everest without suffering a dilated heart. The point is worth noting: Smythe as a boy had a weak heart,
and as a man of twenty-seven had to be discharged from the Royal Air Force as medically unfit.

On 3rd June every one was down at Camp III. It was clear to Ruttledge that no one was fit to climb the mountain immediately, and that conversely the mountain was not fit to be climbed. The monsoon had broken so gradually that on no day could it be declared to have arrived. Now it was here, but there remained sufficient life in the west wind to support the hope that it might reassert itself for the space of a week or ten days. In that time the mountain could be climbed. Every one was grimly set on trying again. Meantime rest was essential and Ruttledge ordered the retreat to Base.

Base Camp was reoccupied on 7th June. A week later the expedition moved back to Camp III. Every day they waited there the snow piled deeper on the mountains. The sun lacked power to remove it; the west wind no longer blew on the upper mountain; the slabs had become unclimbable and the North col dangerously ripe for large-scale avalanches. Therefore on 21st to 23rd June Camp III was evacuated. Once again a defeated expedition arrived back at Rongbuk Monastery to say farewell to the old Lama, whose thoughts on the struggle between Man and Chomolungma would have been worth knowing.¹ The primary reason for this year’s defeat was the coincidence of an unusually early monsoon with an unusual continuance of western storms, so that the normal annual lull was denied the climbers who deteriorated while waiting for the mountain to come into a climbable condition, which in fact it never did. Smythe records that he was so thin on return to Base Camp that he could nearly encircle a thigh with the thumb and fingers of one hand.

The lesson of real importance that emerged from the expedition’s work was of a negative kind. They had made plans based on the experience of previous years that a two weeks’ lull in the west wind always occurs before the monsoon, and had assumed that a small deposit of snow would not render the slabs unclimbable. These reasonable assumptions had proved wrong. Yet, in face of so much and so prolonged misfortune, the four expeditions had three times placed men at 28,100 feet without

¹ See Appendix (pp. 208-9).
oxygen, and these men had seen no reason to believe that the last nine hundred feet could stop them, granted good weather and freedom from snow. Such good conditions on Everest had been so rare that if expeditions went out only at irregular intervals the whole adventure was in danger of becoming a mere gamble with fortune. The solution could now be seen more clearly: the expeditions should be cut in size and a smaller party sent out each year.

This ideal solution found no favour with the Tibetan Government.

While the expedition of 1933 was approaching Everest in April, the first aircraft flew over the summit. This Everest flight had been initiated in 1932 by Major L. V. S. Blacker. His plan had been approved by the Royal Geographical Society and
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the Air Ministry, and given financial support by Lady Houston. As with all expeditions, the motives were many. The paramount object of the Everest flight was stated to be 'the desire to increase the sum of human knowledge of Nature's greatest mountain stronghold.' This was to be done by a photographic survey, aimed not at producing a map of practical utility, but at demonstrating that inaccessible country may be surveyed by vertical strip photographs taken from extreme heights.

The second objective was a demonstration of the worth of British aero-engines. The altitude record had been held by the U.S. Air Corps with a flight to over 40,000 feet in 1930. But the American engine could not have carried the greater weights required for a flight over Everest. In England the Bristol Aeroplane Company had in 1932 produced a new Pegasus engine, which, it was believed, could both capture the altitude record and yet prove powerful enough for the Everest flight. These high hopes were shortly to be justified.

Two Westland planes were selected and fitted with Pegasus engines. The pilots chosen were the Marquis of Douglas and Clydesdale and Flight-Lieutenant D. F. McIntyre, the observers L. V. S. Blacker and S. R. Bonnett. The expedition's base at Purnea, in Bihar, was occupied in March 1933. On 3rd April, both planes passed over the summit. Everest was flying a plume several miles long and the pilots, quite unaware that an Everest plume is not just cloud, flew their Westlands straight into its heart. It met them with a staggering jet of wind, which flung fragmented ice on the planes with a force that cracked the windows of Clydesdale's rear cockpit. They cleared the summit by no more than a hundred feet.

The vertical photographs taken during the last forty miles of the flight had been spoiled by haze. A second flight was therefore made on 19th April (while the climbers were at work on the Rongbuk glacier). This time good photographs were obtained. These were not of a kind to help mountaineers. Since 1940 several unofficial flights have been made over and around Everest, but have proved of small value to the Everest expeditions. They have solved no problems related to the ascent of the mountain. Two photographs of the South-east ridge were to prove useful in 1951.
CHAPTER XII

The Last Efforts from the North

In 1934 there occurred a curious interlude between the more imposing acts of the Everest drama. A solo attempt on the mountain was made by Maurice Wilson, an Englishman of some thirty-seven years. He believed that by extreme but short-term asceticism a man could purify himself and thus greatly increase his powers of body and soul. His method demanded abstinence from all food for three weeks, at the end of which time purification would be effected, his true self or soul consciously realized, and the whole man reborn into the divine life. He further conceived that his life’s purpose was the conversion of the world to his doctrine, and his first act, to draw mankind’s attention to its merit by the ascent of Mount Everest.

Wilson, perhaps influenced by the Everest flight, decided that although he could neither fly nor climb he would crash-land an aeroplane on the mountain-side, go to the top, and then descend to Rongbuk. He proceeded to carry out this plan. He learned to fly, bought a small plane, and then took it out to India where it was seized by the authorities. He was not deterred. He went to Darjeeling and made plans to climb the mountain on foot. He engaged three of the 1933 expedition Sherpas, and disguising himself as a Tibetan travelled by night through Sikkim until he came on to the Tibetan plateau. There he could move more freely, for his baggage was small and attracted no attention. Early in April he arrived at Rongbuk. He made a good impression on the Lama, for his ideals were high and earnest, however immature his mind and faulty his method.

Leaving his Sherpas at the monastery he started off alone, fully confident of reaching the summit in a few days. He had with him a small tent and a little rice. He got as far as 19,500 feet on the East Rongbuk glacier, where spring blizzards forced him back. He had to rest for a fortnight after that, being much
exhausted. However, he started off again, this time with the Sherpas. They reached Camp III and discovered, half a mile beyond, a big food dump left by the 1933 expedition. This at least provided him with nourishment for the hard work ahead.

The Sherpas rightly refused to accompany him to the North col. He did not even know how to cut steps. He left them at Camp III and went on alone to the slopes of the col. It was a bitter disappointment when he discovered that the steps made in 1933 no longer existed: only bare, wind-blown slopes on which he completely failed to cut his own way. He had to retire to his tent at the food dump. The Sherpas left him in despair at his folly. In brief, they deserted. Day after day he returned to those North col slopes, but always to come away defeated. He refused to give up. Either he had a perfect faith in the divine purpose of his mission or else preferred not to survive the bitterness of failure. And so he died there, in his tent by the food dump, worn out by his effort and killed by the weather.

The reconnaissance expedition of 1935 found his diary giving the details of this story.

In London the Everest Committee were faced by two questions that demanded answers, more urgently now after repeated defeats. First, might not the monsoon or post-monsoon periods give better weather for the summit attempt? That idea had gained a measure of support from two Bavarian expeditions to Kangchenjunga in 1927 and 1931. There would certainly be much snow on the mountain throughout the monsoon; might there not be a period during the course of it when the snow grew firm? If so, the monsoon period would be a desirable alternative to spring, for the fierce west wind would be in abeyance. Ever since 1921, however, the Everest climbers had formed an opinion that snow falling above 23,000 or 24,000 feet remains powdery and therefore impassable on the slabs, regardless of season. Their correct observations had in 1921 been prolonged right through to the last week of September, but in other years not later than mid June. More evidence was required.

Secondly, since the technical difficulties near the final pyramid had been found much greater than anticipated, might there not
be a better alternative route up the West ridge, or through the still unknown West basin? The climbers of 1933, and Hazard in 1924, had been much in favour of the West ridge. It had looked to them a promising route.

The chance to investigate these propositions came in the early spring of 1935 when the Tibetan Government gave permission for another expedition, this time covering the full year June 1935 to June 1936. There was no time to organize a spring attempt for 1935, but the Everest Committee agreed on a monsoon reconnaissance to garner information. They asked Shipton to lead the reconnaissance and gave him five mountaineers and a surveyor. The mountaineers were H. W. Tilman, who in 1934 had with Shipton made the exploration of the Nanda Devi basin; Dr. Charles Warren, who had accompanied Marco Pallis to Tehri Garhwal in 1933, and had much Alpine experience; E. G. H. Kempson, whose twelve years of summer and winter work in the Alps had given him a wide knowledge of snow; E. H. L. Wigram, a medical student and fine mountaineer; and L. V. Bryant, a climber of great repute in New Zealand. The surveyor was Michael Spender, and his task a survey by phototeodolite of the Everest neighbourhood.

The main objects of the reconnaissance were to bring back data about snow conditions during the monsoon, to examine the West ridge, and if possible the West basin, and to try out new men for 1936. It is one of the difficulties in selecting men for Mount Everest that a man may be a brilliant Alpine climber and yet be unable to acclimatize to high altitudes. Men vary greatly in this respect. One man’s limit may be 20,000 feet, after which he becomes too mountain-sick to serve the expedition; another’s ‘ceiling’ may be 25,000 feet; and his limits may be fixed or extensible. It is thus impossible to tell who is the right man for the summit until he stands there. The odds against choosing the wrong man can be reduced only if each expedition contains a nucleus of half a dozen men with proved ability to go high.

The party gathered at Darjeeling in the last week of May, where they engaged fifteen Sherpas, including Angtharkay and several other Tigers. Shipton budgeted for a total expenditure of £1,400 from England back to England. This was a
great change from the £12,000 or more spent each time on the big expeditions. Travelling light and with no huge army of animals and porters they were received by the Tibetans into their own homes and made welcome. They learned from the Tibetans that the reason for the governors' hesitation in welcoming big expeditions was the unhappy effect upon the people of the large sums of money spent by these expeditions on food and transport, and the withdrawal of men and women from husbandry.

The party took a much more southerly route through Tibet than usual, in the course of which they explored the southern part of the Gyankar range. From several points there they saw Everest basking in sunshine, clear of cloud, and as free from snow as it ought to be in May enjoying perfect weather. The monsoon in fact did not break until 26th June. It must have been hard for Ruttledge, when he heard of this later, to maintain an unglazed eye.

They arrived at Rongbuk on 4th July to find the Lama in great good humour. He blessed the expedition and spoke highly of Maurice Wilson. Then they went on, not stopping at the old Base Camp but going straight on to the East Rongbuk glacier with forty Tibetans who carried five weeks' food to Camp II. Without any trouble they arrived on 8th July at Camp III. The weather had been perfect. The upper mountain was white with snow but no wind blew and the nights came clear and crisp.

The party continued a few hundred yards beyond Camp III towards the old food dump when they suddenly came on the body of Maurice Wilson. Apparently he had died in his sleep. The tent in which he lay had long since been shattered by storms, every fragment swept away by the winds. Only the guy-ropes remained, still tied to the boulders. They took his diary and buried the body in a crevasse.

The next move was to investigate the North col slopes. Since the avalanche of June 1922 these slopes had earned a bad monsoon reputation. The avalanche of that year had been caused, it was thought, by the strong west wind blowing fresh snow from the west side of the col over the col on to its east side, where it had packed down to form wind-slab, one of the most
dangerous forms of avalanche snow. But the month was now July; the west wind had not blown in force for a long time, and it seemed reasonable to withhold judgment for a close-quarter inspection.

For three days the party worked on these slopes, testing them section by section, and eventually feeling completely satisfied that all was safe. On 12th July—only six days out from Rongbuk—camp was established on the North col by Shipton, Kempson, and Warren, with nine Sherpas and food for fifteen days. At first sight the speed and ease with which this occupation was made would seem to point a moral—the great advantage in mobility possessed by the small expedition as against the large and cumbersome. And these advantages have been demonstrated innumerable times from one end of the Himalaya to the other. It must be remembered, however, that Everest is a very different proposition from most other mountains. These extra few thousand feet raise problems peculiarly Everest’s own. The higher camps have to be well supported, as past events proved, and the rapid advance to the North col in 1935 could only have been made in favourable weather.

Shipton’s plan was to put a light camp at 26,000 feet and go to 27,000 feet, if possible, in order to examine the slabs. These slabs were heavily snow-covered. It had hitherto been assumed that all snow at that height would remain as it fell, a dry powder, and so make the slabs impossible. On the other hand, if it had consolidated and become firm it would give at this season a better route than at any other, and the present expedition might yet astound the mountaineering world by winning the summit.

Unfortunately the weather broke. The party waited four days for a clearance, which showed no signs of coming. One day they climbed a little way up the North ridge but were soon turned back. It became obvious that retreat to Camp III must be made lest the party’s physical condition deteriorate. It was then agreed that they leave the food and tents up on the col and go down to climb on the peaks around the East Rongbuk glacier until the weather mended.

They began the descent on 16th July. Shipton and Kempson
went on the first rope with five Sherpas, while Warren followed behind with four. Just two hundred feet below the crest they were startled to find themselves on the verge of a new and sharp step in the slope, extending several hundred yards to either side. An enormous avalanche had peeled off the whole face to a depth of six feet and swept the line of their ascending tracks. Up on the col not a sound had been heard.

It made an alarming sight. Should they go on or back? Kempson and Warren wanted to go back. Shipton's sound mountaineering instinct warned him that further delay could only result in the development of further risks, whereas the avalanche track would be for the present a temporary line of strength. It was unlikely that another fall would occur immediately. He accordingly decided to carry on. This was a most wise decision and the party reached Camp III in safety.

Shipton went on to draw the correct conclusion—that none of the party was competent to judge monsoon snow conditions above 21,000 feet. On the ascent they had scrutinized that snow, worked up it for three days, and had been satisfied. He was confident from all visible evidence that the avalanche had not been caused by wind-slab. The most likely explanation, he thought, was that the warm monsoon air and the great heat of the sun, which in July at noon is quite close to the vertical and beats with fierce heat into the upper glacier basin, had affected the snow in depth although the surface had remained solid. This danger would prevail all summer and Shipton decided forthwith to abandon all tents and stores on the col and not return.

The party were now free to climb where they willed and made a use of their time that has never been matched in the Himalaya. In two months they climbed twenty-six peaks, of which Tilman and Wigram accounted for seventeen. The ascents were made around the East, West, and main Rongbuk glaciers, and later from the Kharta Chu. In the course of this work they were able to fulfil the original purpose of the reconnaissance. At least five times they climbed to 23,000 feet or over and obtained ample evidence that in the monsoon season snow above that altitude never consolidates, nor does wind blow
the rocks clear. In short, Everest could not be climbed during the monsoon by the northern route.

But what of the western routes? Early in August Tilman and Wigram climbed to the Lho La, the col at the foot of Everest’s West ridge, whence they could find no route southwards down to the Khombu glacier in Nepal. From the Lho La they climbed a peak of the Lingtren group and obtained a clear view of the West ridge. It was, they said, quite impracticable in its lower part.

Meanwhile, in order to view the West basin, Shipton and Bryant went up the West Rongbuk glacier (climbing three peaks en passant), and camped on the col north-east of Pumori. They had excellent views southwards across the mountain country of Sola Khombu, the homeland of their Sherpas whose hearts were rejoiced by the sight. They could see also the great ice-fall of the West basin issuing from its slit, but like Mallory and Bullock before them could see nothing of the upper basin or South col. Since there was no possible way of descending on to the Khombu glacier they had to come away without reaching any conclusion. In any event, further investigation there would have to be made from a base in Nepal, and the Nepali Durbar refused entrance to Europeans. The expedition returned to England in the autumn.

Tilman and Bryant, whom Shipton reckoned as two of the best men he had ever climbed with, having all the qualifications of skill and character best suited to an attempt on Mount Everest, were unable to acclimatize to 23,000 feet. They had accordingly to be turned down for the expedition of 1936. How uncertain are these decisions, and how unpredictable the adaptations of the individual man, may be gauged by the fact that in 1936 Tilman, debarred from Everest, climbed Nanda Devi, 25,645 feet.

Ruttledge having been appointed leader of the 1936 expedition, he chose the following eight climbers: Smythe, Shipton, Wyn Harris, Kempson, Warren, Wigram, and two newcomers in P. R. Oliver and J. M. L. Gavin, whom Smythe had taken to the Alps in 1935 and proved to be first-class mountaineers. Oliver had climbed Trisul in 1933; thus of these eight men only Gavin lacked knowledge of the Himalaya. Three others were
taken for specialist duties: C. J. Morris (transport), W. R. Smijth-Windham (wireless), and Dr. G. Noel Humphreys (medicine).

When the expedition arrived at Rongbuk on 25th April Everest was black from head to foot. It was in perfect condition, save that a mile-long snow-plume betrayed high wind. The whole party was blessed by the Lama and occupied Base Camp next day. The establishment of lower camps proceeded. Then, on 30th April, the first wireless report came in, warning of a western disturbance. That very afternoon cloud suddenly materialized out of blue sky and snow fell. Everest turned slowly white, and this unfortunate expedition was never to see it black again.

Camp III was occupied in force on 7th May. But the weather situation was unhealthily peculiar. No west wind blew. What wind there was came from the east. The mornings were unduly warm. And at last, on 10th May, there came a heavy snowfall. Conditions on the North col slopes were not yet dangerous, but were in course of becoming so. A track was made and Camp IV occupied by Smythe and Shipton with fifty porters on 15th May. Thirty-six of these men remained to carry the high camps. The Sherpas had again so advanced in morale and mountaineering resolution that they were confident of carrying Camp VII to 27,800 feet.

Deep snow high up on the North ridge forbade immediate further progress and the party settled down to wait. Three days later they were still waiting. The easterly breeze continued; two feet of new snow lay on the col itself; and since every one was growing stale and weary Smythe decided to evacuate on the 19th. When they came down Ruttledge withdrew the entire party to Camp I, where they received an alarming wireless signal. The monsoon had arrived in force off Ceylon. On the 22nd a still more startling report came in: the monsoon had struck the Darjeeling hills. In just four days it had swept up the full length of India. An advance so rapid had never been heard of in living memory. Next day the first monsoon snow fell on Everest.

None the less on the 24th the main party moved up again to Camp III. From Ruttledge's point of view the move was
desirable if only to let the more ardent spirits see how hopeless
the situation there actually was. A southerly air stream was
blowing over the Rapiu La. The days were warm and the
North col obviously in a dangerous state. After three days’
idleness they returned disconsolate to Camp I.

At once the weather improved a little. Thus encouraged they
hastened back to Camp III on 3rd June. A resolute attempt to
climb the North col was then made by Smythe, Shipton, Warren,
Wigram, Wyn Harris, and Kempson, with Angtharkay and other
porters. The snow looked avalanchy in places. Smythe, none
the less, made an audacious effort to avoid the danger area
half-way up by climbing a steep and ugly sheet of ice. The
snow above it, seen from below, looked worse than ever, and
Shipton, with vivid memories of 1935, revolted and withdrew
the porters to safety. Smythe in front knew well that if
the North col were not reached now it never would be this
season. But he saw for himself the folly of continuing and
came down.

Next morning brought a full gale. When it showed signs of
slackening Shipton and Wyn Harris proposed to Ruttledge that
they go just once more to reconnoitre the slopes and try to find
a safe way for porters. He agreed and Shipton and Wyn Harris
moved off.

They were delighted to find the lower slopes better than ever
before. One kick made a firm step. They mounted five
hundred feet with growing confidence. A traverse became
necessary. They roped up and Wyn Harris stationed himself
near the edge of a crevasse while Shipton led. The snow was
apparently excellent and Shipton’s boot-nails bit satisfyingly into
the hard surface. He had travelled perhaps forty feet, and Wyn
Harris had begun to follow in his steps, when a soft and horrid
 crunch came from high up on the slope. At once the surface
began sliding down towards a four-hundred-foot ice-cliff, break-
ing the while into blocks. Shipton was carried off. By a
desperate effort Wyn Harris sprang back to the edge of the
crevasse, plunged his axe deep into hard snow and hitched the
rope round the head. The whizzing coils crushed his hand
against the axe-head; for a moment he had to let the rope fly
free while he struggled for position, then threw his whole weight on top of the axe. The rope tautened, humming to the strain. Shipton stopped, but the mass of still moving snow piling up behind him put intolerable load on the axe. Very slowly it began to pull out of the snow, taking Wyn Harris with it. Then, quite incredibly, the avalanche stopped.

For several minutes Shipton could do nothing but pant and gasp. Then Wyn Harris climbed down and they both withdrew safely to Camp III. Ruttledge and Smythe had spent nerve-racking moments watching this scene through the flying clouds. Never again would they doubt that the North col slopes must be shunned from the day the monsoon breaks. There was no more hesitation. The expedition was called off. They withdrew to Base.

Before leaving the mountain Smythe and Wyn Harris made a close reconnaissance of the west side of the North col from the Rongbuk glacier. They reported that a route could be made there, and that in monsoon conditions it would be safer than the east side. However, the upper mountain cannot be climbed during the monsoon, and there is no purpose in forsaking the east side before the monsoon, when it is safe and better protected from the high west winds. The west side, however, would become a valuable bolt-hole if a party were caught by the monsoon above the North col. They could then descend direct, using fixed ropes, or climb down indefinite rocks depending from the flank of the North ridge.

On leaving Rongbuk for his last time, Ruttledge presented to his old friend the Lama a small (but empty) rum cask supplied by the Royal Navy. Filled with written prayers, it is now a prayer-wheel turned daily in petition to Buddha. The 1936 expedition will be remembered in Tibet if not in England.

At the end of these six expeditions mountaineers were found to be still hopeful that Everest could be won—even more so now that successive attempts had each contributed to the fund of knowledge, to building up the Sherpas' morale and standards of achievement, and to improved equipment, techniques of organization, and strategy. Suitable weather remained essential. The
only course open was to keep on sending expeditions whenever the Tibetan Government allowed.

The last chance of an attempt from the north came in 1938. H. W. Tilman was appointed leader and chose the following team: F. S. Smythe, E. E. Shipton, N. E. Odell, C. B. M. Warren, Peter Lloyd, and Captain P. R. Oliver. The newcomer here was Lloyd, an Alpinist of great skill and enterprise. In the interest of efficiency and economy, the expedition’s size had thus been cut to seven men. The lavish expenditure of the past had been much criticized following the great success of Tilman’s relatively small Anglo-American expedition to Nanda Devi in 1936. It seemed especially appropriate to try the same methods on Everest now that foul weather there had been shown to be the rule, and the mountain climbable only in such good conditions that the smaller party would be an adequate force.

The expedition was equipped with two types of oxygen apparatus: the first a closed-circuit type with a face-mask through which pure oxygen is breathed, weight thirty-five pounds, and the second (on Finch’s recommendation) an ‘open’ type of twenty-five pounds, supplying oxygen to the mouth through a simple tube which allows air to be breathed at the same time through the nose. No wireless outfit was taken.

On 7th April the expedition arrived at Rongbuk and all were blessed by the Lama. As in 1936 Mount Everest looked black. Thirty-one porters under Angtharkay established the glacier camps without incident and Camp III was fully occupied by 26th April. Severe cold and wind, sore throats, and high temperatures forbade an immediate attempt on the North col. Tilman’s plan was to launch an attack only when the pre-monsoon lull arrived, and his policy not to commit his men to action too early. Having time on hand, and a real need to recuperate, they crossed the Lhakpa La at the end of April and descended the Kharta Chu to 11,000 feet. Up on the mountains wind and cold prevailed. Heavy snowfalls began on 5th May and lasted a whole week.

They arrived back at Rongbuk on 14th May to receive a rude shock. Everest, white from tip to toe, flew a great and no longer familiar plume—blown reverse-wise by a south-east wind.
Henceforth the weather followed the pattern of 1936. The mountain never again became climbable and the lull before the monsoon never occurred.

The party returned to Camp III on 18th May. Clouds were pouring over the Rapiu La from the south; none the less a way to the North col was opened up during the following week, despite snowfalls and close weather, and it was duly occupied on 28th May by Odell, Oliver, Warren, and Tilman. The snow up there was still too soft and deep for any close approach to the summit, and Smythe and Shipton, being the most likely pair for any later assault, had accordingly retired to Rongbuk to rest.

An experimental effort to go up the North ridge was made on the 30th by Tilman, Warren, and Odell. Plodding through deep snow they reached 24,500 feet. One useful purpose was served by this climb. Warren tried out the two types of oxygen apparatus, and the closed-circuit type with the mask suffocated him. It was quite useless. The open type, on the other hand, worked well. For this full marks go to Finch, who persuaded the party to carry it against the advice of the authorities.

Every one now fell back to Camp I. It was agreed that the North col must not again be approached from its east side. The monsoon was upon them. Instead they transferred Camp III to the west side by way of the Rongbuk glacier. On 2nd June this west Camp III was pitched at 21,500 feet under the North col. The slopes there were a thousand feet high on the final steep section, and the first five hundred feet were of bare ice where an avalanche had stripped off. On 5th June they climbed direct up the ice and again reached Camp IV.

Over the last day or two wind had been chasing the snow off the North face. It began to appear at last that high camps might be established. The very next day Tilman, Lloyd, Smythe, and Shipton went up the North ridge with Angtharkay and six other Sherpas. The snow, recently so soft, was now hard and wind-swept. Defying a snowstorm they pitched Camp V at 25,800 feet. Seven Tigers stayed up with Smythe and Shipton; the rest came down.

The following day was too windy for work. On the 8th, Camp VI was carried in eight hours up snow-plastered rocks to
27,200 feet. With such conditions underfoot it was a splendid effort by the Sherpas, who arrived that night late and tired down at the col. Up at Camp VI Smythe and Shipton slept well. In the morning they started too early and were forced back by the cold. They tried again an hour later, but almost at once encountered thigh-deep powder. Little could be done, for the slabs thus masked were terrifyingly dangerous. They accordingly went down to Camp V and there met Tilman and Lloyd coming up for the second ‘attempt.’ Upon hearing Smythe’s story Tilman realized that the summit was out of the question, so he and Lloyd decided to try the North-east ridge instead and if possible work their way along it as far as the second step. With two porters they continued next day to Camp VI. Lloyd was using oxygen and thus able to travel faster than Tilman. But Tilman was going well. There was not a very great difference in pace between the two, and since Lloyd was in any event the younger man no conclusive evidence in favour of oxygen can be found here. The principal advantage conferred on Lloyd was less in pace than reduction of fatigue. The two porters went down.

Tilman and Lloyd started at 8 a.m. on 10th June. Like Smythe and Shipton they quickly found their extremities going numb and were obliged to return to camp. Not until 9 a.m. does the sun strike Camp VI. At 10.30 a.m. they once more set off, aiming straight up to the crest of the ridge. To try to keep off the snow they attempted a rock-wall of fifty feet. Excellent climber though he is, Lloyd found the rock impossible; thus they were forced into a snow-corridor to one side. The snow was thigh-deep. In half an hour they had ploughed through it only a rope’s length, and at that gave up. Persistence here would have been waste of time. They went down to Camp V for the night, and thereafter the evacuation of all camps began.

The last attempt from the north had been lost. The world was soon to plunge into war and the frontiers of Tibet to close.

‘How can I help rejoicing in the yet undimmed splendour, the undiminished glory, the unconquered supremacy of Mount
Everest?" exclaimed Mallory in 1923. There are many who will sympathize with that view, and I am numbered among them. But while the fire of the spirit still burns in man, as it did in Mallory, he will try again for the summit. The true greatness of this adventure will not be found at any moment of victory or defeat, but in the striving and discovering, for which man is made.
CHAPTER XIII

Mount Everest from Nepal

The Second World War and its aftermath put an end to Everest expeditions for thirteen years. In the late nineteen-forties renewed efforts to gain entry to Tibet met with no response from the Dalai Lama, and in 1950 Tibet was seized by the Chinese Communists. On her southern frontiers the Iron Curtain came down. But as one door closed another most unexpectedly opened.

The Himalayan Committee, which is the re-formed Everest Committee, had applied to the Nepali Durbar for access to Mount Everest. Although this had been refused, none the less they had been allowed in 1949 to send a small expedition (led by H. W. Tilman) through central Nepal to a mountain range eighty miles west of Everest; and in 1950 both French and British expeditions were granted access to western Nepal, where the French made the first ascent of Annapurna (26,493 feet), the highest mountain then climbed by man. At last, in the autumn of that year, an American party was allowed to approach Everest. The party was organized by Mr. Oscar Houston and his son Dr. Charles Houston (who had been on Nanda Devi and K2). With them went Mrs. E. S. Cowles and Anderson Bakewell. They invited Tilman to join them, and all five made the first visit by western people to the southern slopes of Mount Everest.

The party spent only six days near the mountain and were thus unable to make a useful reconnaissance. Tilman and Charles Houston travelled up the Khombu glacier until they reached 18,000 feet and could see the great ice-fall. But they saw nothing of the glacier's upper reaches and so added nothing new to our knowledge. It was not what they discovered but the fact that they were there at all that was so stimulating an event.

At first the Himalayan Committee made no move. Mallory's opinion of the West face, when he saw it in 1921, has already
been quoted. In 1922 he had added: 'The single glimpse obtained last year of the western glacier and the slopes above it revealed one of the most awful and utterly forbidding scenes ever observed by man.' Thirty years later, Dr. Michael Ward, Campbell Secord, and I were able to look at Mallory's own photograph (taken over the North-east col of Pumori) and yet arrive at a more optimistic conclusion. Where the light of hope can shine, the eye of faith may see and believe. And it shines no more in Tibet. But in Nepal a new day has dawned.

Our hopes were supported by three other photographs. One by Shipton taken in 1935 and another by Tilman in November 1950 showed the upper Khombu glacier flanked by the high West ridges of Everest and Lhotse, between which it poured level at a height of apparently 20,000 feet (it is in fact higher), then burst through the narrowing walls to the valley floor in an ice-fall of over two thousand feet. The photographs were substantially the same as Mallory's. They gave us good news of a negative kind: no reason to believe that the ice-fall was unclimbable. They did not, however, show the South col.

The third was an aerial photograph. It revealed the South-east ridge, which drops three thousand three hundred feet to the South col, as broad, snow-covered, apparently not difficult. It too showed nothing of the South col. This absence of information about the western slopes of the col seemed to demand a reconnaissance expedition, more particularly when the ground below and above bore no mark of impossibility.

The men who knew Everest best were most pessimistic about our finding a route on this west side of the massif. Moreover, from the top of the ice-fall the glacier seemed to run level into the upper basin. If this were so, then the South col slopes might rise six thousand feet in four miles. That is, the col would lie above the basin at the same height and angle as the Matterhorn's summit above the Schwarzsee. It is one of the few disadvantages of great experience that a man is apt to discover too many excellent reasons why an adventurous proposition should be impossible; and one of the advantages of inexperience (when high spirits go along with it) that he has an urge to attempt the impossible, which he will then achieve if Providence so disposes.
The dynamic urge was supplied by Michael Ward, whose Alpine experience was unadulterated by Himalayan. His correspondence and conversation, alike explosive, had highly desirable effects. He had a powerful abettor in Campbell Secord, who, in June 1951, put the proposition for an autumn reconnaissance before the Himalayan Committee. Since no other route was open to us, the committee sponsored the expedition. They were men wise in the ways of great mountains and so aware that in dealing with a complex structure designed by Nature, they might confidently expect the unexpected. They obtained from the government of Nepal permission for an expedition to Everest.

The party agreed upon consisted of Michael Ward, Tom Bourdillon, Alfred Tissières, and myself. Tissières's professional duties obliged him to withdraw, and then Eric Shipton came back unexpectedly from China. This was the arrival of the right man at the right moment. We asked him to lead the expedition because no one alive knew Everest better than he. Later on, when we reached Nepal, we were to be joined by two New Zealanders, E. P. Hillary and H. E. Riddiford. Ward and Bourdillon had first-class Alpine experience, were both in their twenties, and men of abounding vigour. We had the great advantage of knowing and liking each other for several years prior to the expedition.

Supposing Everest to be hopeless we should need a second objective, and for this chose Cho Oyu. In any event a reconnaissance of it would be made and the surrounding mountains explored so far as time allowed. In regard to Everest there were four questions to which we had to try to find answers. Could a way be found through the ice-fall? Were the slopes of the South col climbable? Was the South-east ridge as easy as it looked in the photograph? Was autumn a better or worse season than spring for an attempt on the summit? If we could answer the first three of these questions in the affirmative, then a new chapter would open in the history of Mount Everest.

The party assembled at the railhead of Jogbani in South-east Nepal on 23rd August. Angtharkay joined us there with fourteen Sherpas. Jogbani, it was said, gave a better viewpoint for Everest than Tiger Hill, Darjeeling; but alas, Everest
and all other peaks had long since been submerged in the cloud sea. We had arrived in mid monsoon with the prospect of a thoroughly unpleasant march in front of us.

As measured on the map our march to Namche Bazar, the Sherpas' headquarter village in Sola Khombu, was a hundred and forty miles, then twenty miles north-east to Everest. In the course of it we should rise from 300 to 18,000 feet at base camp on the Khombu glacier. We reckoned that the journey to Namche would take a fortnight, but in monsoon rain that time was destined to be doubled: river-flooding, the need
of detours, the recalcitrance of Tamung coolies—of such were the route's delays.

Our first stage went thirty miles by lorry to the road-head at Dharan, a journey of six hours. The road was a mud track driving straight across green fields of jute, where long-legged white birds waded in the marshes. At night the air was alive with fireflies. Dharan lay at the very base of the foot-hills. We stopped at the governor's empty house and there engaged some twenty-five Tamungs. Then we took to our feet.

Two days steeply up and across hill-ridges, one of 4,000 feet, brought us to the little township of Dhankuta. There our Tamungs deserted. They hated marching in the rains; this was their district boundary and they would go no farther. We lost two days getting new men. Dhankuta was a delightful little township stretched along the crest of a ridge at above 4,000 feet on a rising incline. Looking down, we saw a street of red dust and flagstones lined by green trees and domed temples with stone bulls outside, and by white houses whose verandas of bright green or blue were festooned with flowers. The entire village positively sparkled in the sun (when it shone) against a background of wooded hills.

Beyond Dhankuta we crossed a ridge of 6,000 feet and descended five thousand feet to the Arun River, which we crossed from east to west by means of a dug-out canoe. This was malarial country but safe enough when one takes Paludrine. The heat was intense: we marched stripped to the waist. At every opportunity we walked straight into the river and wallowed like water-buffaloes. Not once between Jogbani and Namche did we ever have to pitch a tent at night. Always Angtharkay found us lodging in house or hut. Usually we slept in the loft on top of corn-cobs, but occasionally down on the ground floor alongside a tethered calf. The hospitality thus shown to us was indeed a blessing; none of our tents could have withstood monsoon rain. If there are any unfriendly people in Nepal we never met them.

We travelled three days in the Arun valley. On the second day we climbed up to the village of Komaltar. Thus far we had had at rare intervals but fleeting glimpses of the high Himalaya.
Early in the morning we came out of Komaltar on to a little plateau. Deep beneath our feet lay the Arun valley and forty-five miles beyond were the snows. It was a perfect morning. The sun slanted low and golden over the foreground grass; the vast basin of the Arun brimmed with a pale purple haze; and far back, amid a white tangle of peaks, crouched the Everest massif, like a Titan Atlas supporting on hunched shoulders the whole blue heavens.

Next day we came to Dingla at 5,000 feet. Once again our Tamungs deserted, and this time we were held up for four days. The delay allowed Hillary and Riddiford to catch up with us. They had been climbing during the summer in western Garhwal and turned out to be excellent men. Henceforth we left the Arun and struck north-west to reach the Dudh Kosi, which would lead us direct to Namche Bazar.

This was the worst part of our journey. Rain fell incessantly; leeches everywhere abounded and their bites caused septic sores. We were now moving against the grain of the country and had to cross three passes of 10,000 to 11,000 feet. The rivers between were in spate. At one of these, the Inukhu Khola (a tributary of the Dudh Kosi), we had our first stroke of good fortune in finding its milky flood spanned by a three-log bridge, which within one hour of our crossing was swept away.

Our luck was countered by a swarm of huge hornets which attacked us on the far side. It is said that five stings from a hornet can kill a man. Several of our Tamungs received two or three stings and collapsed. They could no longer carry loads and had eventually to be discharged. Beyond this river we climbed our third 10,000-foot pass and so, after three weeks' travel, came down on the Dudh Kosi. We were now in Sola Khombu, the Sherpas' home country. On this same day, 20th September, the monsoon ended.

In all its lower part the Dudh Kosi is an open, sunlit valley spattered with villages. The Sherpas turned out and lined the route. Every household brews and distils its own chang and rakhisi, and at every turn we were waylaid by almond-eyed bowl-bearers, so that our progress up the valley tended to be slow and erratic. In its upper part the Dudh Kosi becomes a rock
gorge. Splendid snow and rock peaks rise to each side. Only a few miles up this gorge we broke out on the north side by a steep, pine-scented track, which in seventeen hundred feet brought us out at long last at Namche Bazar.

Namche is set in a bowl of the hills at 12,000 feet. Sixty houses and more are arranged round the amphitheatre in tiers, and the whole is backed by great snow-peaks. It is a notable fact that this village, and others even higher like Khumjung at 13,000 feet, are occupied all the year round, whereas in the central Himalaya villages at 11,000 feet are in winter buried right over the roofs by snow: the upper valleys have to be evacuated. It seems that in the Everest region the winter climate is relatively dry and the Sherpas can move about without undue inconvenience. Again, the rivers draining the huge mountain cirque from Cho Oyu to Everest and Makalu are remarkably small. One wonders how they can possibly be so small, especially when they drain southward-flowing glaciers, until one learns that the snowfall is negligible compared to that of the western Himalaya. The glaciers too, being lower than those on the north side, lose much of their substance by direct evaporation without melting. We found a rain-gauge at Namche. It had been set up some years ago by the Indian Survey and records are being kept by the Gorcha (headman). These records show the mean annual rainfall to be thirty inches. The only point to be verified is whether the Gorcha keeps them accurately. That he does so I was assured by G. N. Dutt, an Indian geologist who arrived while we were still in the village. (Yet I remain uneasy concerning this figure.)

Sherpa houses are quite unlike those of the Indian hills. They are solidly built of good stone in two storeys. Only the upper half is inhabited. The rooms are big and spacious, with high roofs and wooden floors and window-frames. A fire is kept burning against one wall and around the others are great shelves bearing huge, shining, copper gourds filled with grain or water; polished wooden churns, brass bound, for making Tibetan tea; tubs of chang; silver and china cups, and teapots. One of the elders swings a Tibetan prayer-wheel beside the fire, above which maize is drying on a bamboo mat. The floors are clean and there are no offensive smells. The houses have double
roofs, the inner of bamboo matting, the outer of heavy wooden slats.

We stopped two days at Namche to reorganize and engage Sherpas. On 25th September we set off on the last lap, twenty miles north-east to Mount Everest. That first night we stayed at Thyangboche Monastery. It is set on a hill-top at 13,000 feet, where the Imja Khola joins the Dudh Kosi. The traditional Chinese tent had been pitched for us on a four-acre meadow before the monastery. The Lama received us with great kindness. On this and other occasions he entertained us with Tibetan tea (a ‘brick’ tea churned up with a little fresh butter and salt, which we all liked), yak milk, boiled potatoes, and rakhsi. Forty monks lived at the monastery, occupying a dozen houses that flanked the central temple. The Lama allowed us to enter the temple and himself conducted us in. It was spacious and dimly lit, the floor of wood and the ceiling supported by wooden pillars. At the far end facing the door stood the altar, behind and above which appeared three huge figures of the meditating Buddha. To its either side were thrones for the Lamas of Thyangboche and Rongbuk. The walls were heavily decorated with tiny figures of the Buddha painted on a scarlet ground. Drums, cymbals, bells, long horns, and very old, painted scrolls (r’hankas) hung from the pillars. Before approaching the altar we had each to light a taper at an oil-lamp and then go forward with it, the Sherpas first prostrating themselves. To one side of the altar were a score of small brass bowls filled with water (symbol of holiness), with which worshippers are sprinkled during a rite. The wall behind the altar was lined with books of parchment. These were said to contain the Buddhist scriptures, the medicinal properties of herbs, and full observations on the life history of all creatures in Sola Khombu. We were very sorry to hear that the old Lama of Rongbuk had died just one year ago. His age must then have been eighty-five. He was a great man of Tibet. The new Lama of Rongbuk, a youth of fourteen, had recently visited Thyangboche.

Outside the temple courtyard we discovered hanging on a raised balcony an iron gong, which the monks beat in signal that village women working in the precincts must leave. On
examining this gong we found it to be an oxygen cylinder from an old Everest expedition. The Sherpas had carried it home over the Nangpa La.

When we looked out of our tent in the morning we all agreed with Dr. Houston and Tilman that Thyangboche was the most beautiful place we had ever seen. At the farthest fringes of the meadow a screen of silver fir, pine, and juniper-trees sloped down north-east into the valley of the Imja Khola, which ran straight to the South face of the Everest massif, the Lhotse-Nuptse ridge, on to which we now looked. It presented a huge, blank mountain wall without vestige of a route. Over its top we could see the summit of Everest, snow clad even on the steepest face. The meadow, lightly frosted, sparkled at the first touch of the sun—and the frost was no more. The light fired a ring of great and icy peaks, which just leapt out of the earth. Well to the right of the Everest group stood a vast and bluntly pointed mountain like the Mustagh Tower, all snow and ice. Its name, said the Sherpas, was Ama Dablam. Close at hand to the south-east were two great peaks, which they named Kangdekhha and Tamashumu, and to the north the white spire of Taweche. These mountains were all over 21,000 feet.

The temple of pale red colour, and the white monastic houses, fitted perfectly into this scene. Annually in mid November a religious festival is held at Thyangboche. In November two years ago a great company of Sherpas had gathered there when the Abominable Snow-man (called yeti by the Sherpas) is said to have appeared through the screen of trees. Sen Tensing, one of our Sherpas, who saw it, described it as five feet six inches tall standing on its hind legs. It had no tail and was covered in reddish-brown hair except on the face, which was bare and red.

We left at midday. Travelling four miles farther up the Imja Khola we turned north into the bleak valley of the Lobujya Khola, which drains the Khombu glacier. Stark and spiky mountains flanked it. We lodged in low stone houses at Pheriche and next day climbed on to the desolate scree of the Khombu glacier. Pumori, Lingtren, and the North peak of Everest dominated the head of the valley. That night we pitched our tents in hail and drizzle, lower than we should have liked. We
moved on in the morning but altitude was telling (our height was now above 17,000 feet) and progress was poor among a wild jumble of boulders. We camped beside a lake, only to find after reconnaissance that we were still too far from the great ice-fall. On 29th September we finally established Base Camp at 18,000 feet under Pumori. We faced the ice-fall across the glacier and our first impression was not too good. It looked more crevasse riven than even photographs had suggested, and was obviously threatened by avalanches from the West ridge of Everest.

In the morning we made our first reconnaissance of the ice-fall and West basin. Riddiford, Ward, and Bourdillon went to the ice-fall itself, while Shipton, Hillary, and I climbed up the east face of Pumori.

Shipton and Hillary followed a broad, rocky rib to 20,000 feet or more whereas I struck much farther north, a thousand feet lower, in hope of seeing both the flank of the Lhotse–Nuptse ridge and the right-hand half of the ice-fall. The former appeared to be free of avalanche menace, whereas ice avalanches
discharged from the West ridge of Everest had been raking the left-hand half of the ice-fall. A white corridor of debris could be clearly seen stretching out across the glacier to its centre at about two-thirds of its height. From my own vantage point, which was a good one, I could detect no way at all of climbing up the ice-fall by its right-hand half. It seemed that we were thus limited to a central line. If Riddiford and company failed to find a good route there, our reconnaissance would come to an early end.

A much more enlivening sight was the anxiously anticipated vision of the South col. I think that we were all fairly confident that somehow we should fight our way through the ice-fall. But the success of our reconnaissance and events of future years would more definitely depend upon what we saw between the upper basin and the col. Gradually these slopes disclosed themselves. They were straightforward, not too steep even when seen face on, free of stonefall from Lhotse, and they were obviously climbable.

From their higher position, Shipton and Hillary could see the western glacier rise from the top of the ice-fall in broad, level steps to the basin, gaining perhaps two thousand feet in two miles. The basin appeared to lie at approximately 23,000 feet, thus leaving some three thousand feet to the col. The best route up these slopes lay not by the direct line, which offered no tent platform and seemed too long and steep for a one-day climb with loads, but up a broad glacier on the North-west face of Lhotse to a height of 25,000 feet, whence a long and rising traverse would lead to the col.

It is very evident that before such a long traverse can be justified, the snow conditions must be indubitably good, otherwise the tracks thus cutting the slope will induce an avalanche. I could not help reflecting that when camps are established on the South col and higher, and the assault on the summit is launched, one night's snowstorm could cut off the party's retreat or at best make it an unusually ugly proposition.

Our more immediate concern, however, was the ice-fall. While we studied the upper mountain the others wrestled with the lower. Ward and Bourdillon tried the centre line and failed
to find a start. Riddiford and Passang Dawa had luckily gone much farther leftward and discovered a route slanting up to the centre. On this section they met few crevasses and had a relatively easy climb, but were slowed down by soft snow and the delays of route selection. They climbed nearly half-way up the ice-fall.

When we all met in camp that evening Riddiford reported that the avalanche corridor could be safely turned on the right. The upper ice-fall looked much more complicated and steeper than anything he had climbed, but he was sure that a way through could be found. Our Base Camp had proved to be two hours from the foot of the ice-fall, which was too far. It was agreed that we pitch an advanced base and then try to get through the ice-fall in one day. None the less, it was plain that the snow was in poor condition, and plain too that Ward, Bourdillon, and I were not yet acclimatized. In this respect Shipton and the New Zealanders had a great advantage over us. To allow the snow to settle and ourselves time to acclimatize, we agreed that after climbing the ice-fall we should break off the engagment with Everest and explore the mountains to the south and west, returning in two or three weeks. On 2nd October Shipton, Hillary, Riddiford, and Bourdillon moved off to their advanced base under the Lho La.

Ever since our arrival the wind had been blowing continuously from the south-west. It brought fair weather, the mornings being clear and the afternoons invariably cloudy. Most nights we had light snowfall. But on 3rd October it snowed all day long and the ice-fall party could do nothing.

On 4th October Ward and I explored the western range of the Khombu valley in order to seek a pass by which we might later break into the tangled mountain country beyond. Just a little way south we discovered a promising side valley and glacier leading up to inviting cols in the range. We returned to camp feeling fitter than ever before. Dusk fell shortly after six o'clock. We were in bed as usual about seven. At 9 p.m. we were startled to hear a commotion at the crest of the moraine high above the tents. We looked out and saw lights flashing. It was Passang and Danu clattering back at top speed from
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advanced base. At once I was convinced that an accident had occurred: nothing else could have brought them back at such an hour. Some time elapsed before we could sort out and sift their tale of events aloft and once again relax.

They had gone speedily up the first half of the ice-fall that morning, greatly profiting by Riddiford’s old steps. At his farthest point Bourdillon had fallen out, being not yet acclimatized. The second half had been more difficult. Their route wound its way through a maze of great séracs and crevasses. The snow was sometimes hip-deep. Late in the afternoon they were almost at the top of the ice-fall at a height of 20,600 feet. They crossed a deep crevasse above which a wall rose forty feet at a high angle, fell back as a shelving terrace, then steepened again to a short wall at the top. The total height of this obstacle was a hundred feet. They had climbed on to the shelving terrace, and Passang was leading a traverse diagonally rightward to avoid the final wall, when the snow avalanched. Shipton and Passang at either end of the rope leapt off the moving sheet on to stable snow. Riddiford in the middle was swept away, but Passang had the presence of mind to drive in his axe up to the head and whip the rope round it. Shipton stood firm and between them they stopped Riddiford, who was now upside-down near the edge of the crevasse.

This was all rather exhausting at over 20,000 feet, and by the time Riddiford was righted and order restored the hour was dangerously close to 5 p.m. They had to withdraw at once, which exasperated them when only thirty feet from the top. On reaching camp, where they had already been a day longer than originally intended, they found the cupboard bare save for two packets of Maggi soup and a little tsampa. Passang and Danu were thus dispatched back to Base to lessen the number of stomachs. At this not too unhappy ending to the tale we cared little that the ice-fall had not been climbed.

The ice-fall party returned at eleven next morning. We then heard the full story. A point worth noting was the persistence of cold on the glacier until late in the morning. The sun did not strike into the slit until nearly 10 a.m. In consequence, since all work was snow work, they were unable to keep their
feet warm. I was particularly interested to hear that Riddiford and Hillary, the two acclimatized men, had had to remove their boots and massage their feet to avoid frost-bite while the others had not been so obliged: thus seeming to support Howard Somervell's statement to the effect that risk of frost-bite increases pari passu with acclimatization, because the blood then becomes much more viscous through production of red corpuscles and so fails to pass into the smaller blood-vessels when cold contracts them. On the ice-fall and in the West basin the tardiness of the morning sun makes special precaution against frost-bite imperative.

That same day Ward and I climbed to nearly 20,000 feet on Pumori. I noticed that in the West basin, which looks a mile wide in its upper part, a great avalanche had fallen off the Lhotse-Nuptse ridge and the debris spread three-quarters of a mile across the floor. Camps there will have to be sited with care. The wind was still south-west and clouds of drift were blowing off Nuptse into the slit of the ice-fall. Were this drifting to continue, our chance of climbing on to the South col would become negligible.

We descended. Shipton and Hillary moved off to explore the mountains south of Everest, and in particular to try to find a pass near Pethangtse, which might lead down to the Kangshung glacier on the east side of Everest. We agreed to meet on the Khombu glacier 'some time after the 16th.'

**The Explorations of the Nup La and the Hongu Basin**

In the course of the next six days Ward, Bourdillon, Riddiford, and I, with six Sherpas, carried our food and gear up the side valley running into the western range of the Khombu. In the glacier basin of its right-hand fork we established camp under a promising 20,000-foot col. We had two main objectives in the country beyond. Sen Tensing had said that a pass at the head of the Chola Khola led into Tibet. According to the map our own pass must give access to the Chola Khola, and the pass at the head of the latter must lead into the West Rongbuk glacier. We wanted to cross this pass, and also to cross the Nup La. The Nup La had been climbed by Hazard and Hari Singh Thapa
in 1924, but no descent had been made on the Nepalese side. It was, therefore, not yet a true pass. We hoped to make it one and thus link the glaciers on Everest's Tibetan side with those on its Nepalese. If Shipton made his pass to the Kangshung glacier to the east of Everest and we made ours to the west, a close-quarter circuit of the mountain would for the first time be revealed.

Riddiford, Ward, and I climbed our initial pass on the 11th and tried to find to-morrow's route of descent. Our map was so inaccurate that we could recognize nothing on the far side. The valley below and its many tributary glaciers, the very mountain ranges from which these plunged, were not marked on the map, which showed instead a quite different valley and ridge system: apparently the figment of the map-maker's imagination. If there have to be maps at all, more maps of this kind would add to the joys of travel.

Before us spread a vast mountain scene. Ten miles to the north-west lay Cho Oyu. Directly beneath, a broad, stone-covered glacier flowed in a westward curve to join a still greater glacier five miles away and flowing north to south. We thought that this must be the Chola Khola, but soon realized that it was too far away. The true Chola Khola had vanished.

The descent was twelve hundred feet, the angle steep, and the rocks snow covered. We had difficulty in selecting a route, but finally chose a long rib on which three hundred feet of cutting had to be done in hard-frozen snow. The rib then became bare rock, easy but painfully loose. We prepared a staircase for the Sherpas in the upper snow-slopes and returned to camp. The tents were pitched on the bare ice of the upper basin. Although the Sherpas had newly arrived with seventy-pound loads they were now playing leap-frog on the ice and chanting songs.

The cold grew intense at sundown. I had to write my diary quickly before the ink froze in my pen. This was one of our coldest camps, yet the temperature inside the tents was no worse than minus 10° C. It is a curious fact that at no time this autumn, not even in November, did we experience cold as great as one meets in the central Himalaya at similar and even lower heights in May and June. Is autumn weather less cold in the
The Mountains of Sola Khombu
Everest region than in other parts of the Himalaya? Or did we chance on a freak season when the weather was milder than normal? The latter seems more likely, but no sure answer can yet be given.

The morning was sunny and the loads were carried eight hundred feet up the steep and stony pass in relays. We had feared great delays in roping the Sherpas down the icy snow-rib on the far side, but even with very heavy loads they quickly showed themselves competent climbers. We remember that day’s journey, and the next, without much pleasure, for the sahibs had to carry loads too (forty to fifty pounds). One had to breathe deep and rhythmically to avoid exhaustion. This was a hard day for the Sherpas, who had to make double journeys on both sides. Yet they came down that evil rock face in the late evening singing. The song echoed across the glacier and round the walls of splintered rock.

That night we again camped on bare ice. We did not know where our glacier led, but next morning struggled over its deeply furrowed face to the northern moraine, down which we sped westwards to the false 'Chola Khola.' A continuous stream of grey cloud was pouring up the valley and filling it from side to side. When we camped that evening at the confluence of the two glaciers we could see nothing.

The mist cleared in the night. The morning brought blinding sun. To our astonishment we found ourselves close under the shining, ice-clad flank of what was obviously one of the great mountains of the Himalaya. It could be none other than Cho Oyu's east face. And so it proved. We had arrived on the Ngojumba glacier—the main source of the Dudh Kosi. The missing Chola Khola must take its source not from the Tibetan frontier, but from the uncharted range that walls the south side of the glacier which we had yesterday descended.

We had now to climb the Nup La and reconnoitre Cho Oyu. If Cho Oyu were to be attempted in springtime, a route from the north, south, or west must be exposed to the north-west wind and an east face route thus highly desirable. But although we subsequently travelled the full length of Cho Oyu's ten-mile-long wall, not one chink could we find in its icy armour.
There remained the Nup La. The 14th was an off-day to rest the Sherpas. Ward and Bourdillon went north up the Ngojumba to find that the Nup La at its head was protected by a formidable ice-fall. We planned to take tents and three days' food up to this ice-fall next morning, spend the afternoon exploring its lower part, and then mount a full attack for the second day.

The scale had deceived us. The whole of 15th October was spent in reaching the foot of the fall. It rose abruptly. Its left-hand half was a tottering mass of seracs and cliffs, every ledge between being piled with debris. We had never seen such a ruin in ice. The right-hand half was only slightly less steep. We know of nothing like it in the Alps. The centre line up the Géant ice-fall is an afternoon's stroll in comparison, and the Everest ice-fall likewise.

We chose a safe start on the right-hand half and began moving up in crampons at 9 a.m. on the 16th. Riddiford led and Passang and Danu accompanied us. There followed one of the best ice climbs we have ever enjoyed. The ice was dry and we made good progress for a few hundred feet. Then we came in among the seracs which were big and broad and grew as thick as trees in a forest. Between them the great crevasses were bridged with ice often enough to let us through. But from the heart of the forest we could not see even outwards, far less ahead. So that route selection appeared always a chancy affair; never did we have the certainty of getting round the next serac. We traversed this way and that, sometimes on knife-edges between the plunging walls, sometimes on a chaos of ice-blocks choking a wide crevasse. Icicles hung in curtains from the seracs overhead, and flashed in the sunshine. Caves in the walls loomed green, and chasms beneath our feet yawned blue. Constantly to our ears came the crack and tinkle of ice fragments dropping into invisible depths.

At one o'clock we were close to the top of the fall and came under the last ice-cliff. It was split by a vertical chimney of forty feet. Passang led up. Above, we balanced along another thin edge and so came to level ground. We now discovered that far in front was still another ice-fall, as big as the first (which
was twelve hundred feet) but less steep. Beyond that again a long slope led to the col. We were thus less than half-way up to the pass. The rest would undoubtedly ‘go,’ but time forbade. At 2 p.m. we lunched and withdrew. Our conclusion was that to reach the Nup La from its base we should need three days. The date was 16th October and duty demanded our immediate return to join Shipton on Everest. (In the early summer of 1952 the Nup La was to be successfully crossed by the two New Zealanders, E. P. Hillary and W. G. Lowe.)

Before we left the Ngojumba, Riddiford, Ward, and Bourdillon climbed two passes from which they established the correct position and limits of the Chola Khola. After that we retired down the Dudh Kosi to Namche Bazar. The lower mountain slopes had by now taken their full autumn hues of bright red and gold—red from the blood-coloured leaf and berry of dwarf thorn, gold of the dying grasses. Ramchikors ran across the slopes, grey birds white in the chest, plump but of long neck which they stretch like geese on taking to flight. On the 25th we rejoined Shipton and Hillary on the Khombu glacier, and there we exchanged tales.

When they had set off nearly three weeks ago, Shipton and Hillary had planned to enter the Imja basin under the Lhotse-Nuptse wall, in hope of finding a pass at its eastern head into the northern head of the Barun glacier; thence over the watershed of the main range by a probable pass near Pethangtse. On arriving in the Imja basin, where a surprisingly small volume of ice flowed from such a great mountain cirque, they saw no pass over its east wall. Perforce they turned south and crossed a pass of 20,000 feet into the head of the Hongu glacier. It was a difficult pass and they had to spend much time hauling loads up the harder pitches. For this reason they carried only a light camp and three days’ food.

From the Hongu they broke east to the Barun by a pass of 20,300 feet. But they were now too far south. The watershed above the Kangshung glacier was twelve miles distant and they could no longer hope to reach it with such small resources. (Success there was to come in the following June, when the pass
was reached to the west of Pethangtse by Shipton, Hillary, Lowe, and Dr. R. C. Evans.) Accordingly, on 16th October, Shipton and Hillary turned back westwards and made a third pass from the Hongu basin over the south ridge of Ama Dablam, and so returned to the Khumbu glacier.

A benediction of good weather had accompanied all their labours, as it had ours, the western party's. Every afternoon cloud drifted up the valleys, and each evening dissolved. In mid October, when the moon was full, the white spears of an unnamed host invaded the night skies and encircled our many camps.

THE ASCENT OF THE ICE-FALL

Shipton and Hillary had arrived back at Everest five days before us. They had gone straight to the ice-fall and re-established camp at its foot on 20th and 21st October. Next day, with Angharkay and Utsering, they stamped a safe track up the first thousand feet of the fall. On the 23rd they went up again to complete the route to the top, but just beyond the previous day's limit they found that a very great change had overtaken the glacier. It looked as though an atom bomb had dropped on it. Over a wide area the séracs had collapsed in shattered ruins and the very surface structure of the glacier was threatening further collapse into a deepening and opening abyss.

On a hundred feet of rope Hillary made an effort to cut a way through the tumbled blocks. One of the blocks fell with a long roar into the underlying chasm and the area on which they stood trembled as though in an earthquake. The Sherpas threw themselves to the ground in terror. That the two sahibs remained standing, said Shipton afterwards, was due only to their having been brought up in the European convention.

They could see that beyond the devastated area countless new cracks had opened on the ice-cliffs and séracs as though an even worse cataclysm threatened. They withdrew and tried farther to the right, but here found a second and even wider shattered area. They returned to camp.

We heard Shipton's tale without any overwhelming dismay. All this had happened two days ago. If we gave it another few
days perhaps the glacier would have changed in our favour. Such optimism seems hardly accountable, and yet was to prove in some measure justified. On 28th October all six of us, accompanied by Angtharkay, Passang, and Nima, climbed the ice-fall. Just before the sun struck us we reached the danger area.

A small change had occurred and it was in our favour. The central collapsed part of the glacier had sunk between six and thirty feet more. The ice-blocks bridging an enormous chasm (the word 'crevasse' would misrepresent its indefinite character) had become more safely wedged. The upper glacier overhung this area. If the upper glacier were to move again the blocks would presumably become wedged still more firmly. But if the lower glacier moved first—disaster. It may be that I am wrong in thinking that the ice-fall moves thus in unco-ordinated jerks, but such was the impression it gave me.

Meantime there was no doubt that with careful rope-work the shattered area could be safely crossed. And cross we did without incident. A level stretch followed but the ice was shot through with innumerable cracks. An ice-axe thrust hard down was only too apt to encounter space. Otherwise all went well. None the less it was already clear to us that the ice-fall in its present state could not be used as a packing route to supply high camps.

Very soon conditions improved. We zigzagged back and forth among the cliffs and séracs, steadily gaining height, until at noon we came under the last big ice-wall where Riddiford had been avalanched. He and Ward and Passang attacked it direct by the old route, but as they neared the upper section it became evident that although the snow there was sounder than before it was still not trustworthy.

Bourdillon and Nima had meanwhile started on a route to the right, using the near side of the crevasse where its edge flicked up steeply to a high bridge. Since this edge was in fact a massive ice-cornice projecting over the depths, a better way should if possible be found. Shipton, Hillary, and I therefore tried leftwards without avail. In the end we had to choose Bourdillon's route or turn back. He had now spent an hour on his edge, clearing sugary snow and excavating a staircase in the solid layers beneath. At last he was up. The rest of us followed.
When Angtharkay and I were half-way up the whole structure gave a loud report, as if it were about to crack off. However, it held. We were up. The glacier flattened out. The ice-fall was climbed.

And yet we marched but a short way beyond the top to be confronted by the biggest crevasse that we had ever seen. At the widest point I judged it to be nearly a hundred yards across, at the narrowest a hundred feet. It split the glacier almost from side to side. There was no possible way of turning it on the right. On the left a tempting snow-corridor lay shining in the sun. From this we were at present cut off by impassable crevasses, but the corridor could certainly have been reached from a point a thousand feet lower down. Had we used it all difficulties below and above could have been turned. Unfortunately, it was the corridor made by avalanches falling off the West ridge. We judged that the selection of such a route would be bad mountaineering, for it would give us no reasonable chance of survival.

We were thus defeated. Despite the bad state of the ice-fall I think that we should have been able to carry up one light camp. A brief exploratory journey into the upper basin would have yielded most valuable information about camp sites and the chance of access to the South col slopes, and so helped a second expedition. But any idea of putting a tent on top of the ice-fall had now to be discarded. We had no means of coping with the great crevasse. It was a hundred feet deep. We could have roped into it and crossed the chaos of ice-blocks on the floor, but the farther wall was vertical and unbreached.

We returned to camp. A new question confronted us. Would an expedition next year be justified? We had found the ice-fall in such parlous condition that it could not possibly have been used to supply camps below or above the South col. On the other hand, ice-falls in the late autumn are notoriously at their worst. It seemed reasonable to suppose that after a winter’s snowfall had consolidated on the glacier a good packing route would open up. Further movement of the glacier might change in our favour the uncompromising shape of the great crevasse that stopped us.

The vast size of this crevasse is due to its position. It is sited where the ice-fall pulls away from the almost level glacier above.
Being thus a result of difference in rates of flow it will be a permanent feature. But there are bound to be considerable changes in detail as it goes over the lip and the new one opens behind. Fifty feet of drift snow in the bottom would make the opposite wall climbable. There seemed no good reason to believe that since it was impossible this year, so it would be next.

Thus a second expedition seemed to us all to be justified. From the West basin to the summit there is every sign of a practicable route. But what would be the better season? We saw the South col slopes at too long a range to be sure of the snow conditions there, but the glacier on the face of Lhotse was not heavily covered. In spring these slopes will probably bear more snow, and since they are above 23,000 feet such snow is likely to remain powdery. To me autumn seemed a better time to climb them, and also to attempt the summit. We saw no storms. Down at our own level the air was still and calm, although the west wind had lately been re-establishing itself and the rock walls under the summit were again growing bare and black. We could often see drift snow blowing around the summit ridges, but hardly with springtime violence. Often the familiar plume was there—but only a little plume—never the vast and appalling ostrich feather of May. In spring one may expect no more than one or two calm days in a month near the summit. Last autumn such days of calm were more frequent, and the cold was not excessive.

None the less, the lower ice-fall had been proved too open and unstable in autumn. We felt obliged in future to favour April and May when crevasses should be safely bridged by the winter snowfall and so likely to afford a good packing route. The point seemed decisive, because the ice-fall as we found it was not a practicable route.

Before leaving our ice-fall camp, Ward and Bourdillon reconnoitred the right-hand side of the ice-fall from a ridge near the Lho La. Shipton and Hillary went to the ice-fall itself. Neither party could detect an alternative route. On 30th October we packed up and next day arrived back at Namche Bazar.
Passes to the West of Everest

Work by day and revelry by night filled the first three days of November. The headman at Namche and Angtharkay at Khumjung both had us to dinner; on each occasion rakhsi and chang flowed freely, songs were sung, and we adjourned to a dance. The dance is the principal social function of Sola Khombu. Every village has one nightly. Light is supplied by pine-chips blazing on a metal tray on a stand. A dozen dancers link arms, men and women indiscriminately, and perform a shuffle step not unlike a pas de bas; at the same time they chant a never-ending song. There are no drummers. The time is given out from a many-stringed guitar, which is plucked. On the floor stand great tubs of chang, to which the dancers help themselves as they feel the need.

We had still important exploratory work to do westwards. Between the Bhote Kosi of Sola Khombu (which takes its source near the Nangpa La) and the Rongshar Chu, there stretched twenty-five miles of unexplored mountain country, which, for the sake of brevity, we called the Gauri Sankar range. Leaving Namche on 4th November, we travelled north-westwards into the valley of the Bhote Kosi. Riddiford and Hillary left us there, crossing the Tesi Lapcha pass into the Rolwaling gorge under the south wall of the range. Shipton and Ward continued to Chhule, turned westwards up the Pangbuk valley, and making a new pass (the Menlung La) near its head broke into the heart of the unknown territory beyond.

They descended on to a snow-covered glacier running south-west, and at 18,000 feet came on the tracks of yetis or wild men. Sen Tensing recognized them at once. At least two had left spoor. It did not resemble the spoor of any known bear or monkey. Shipton and Ward followed the tracks for nearly two miles down the glacier, finally losing them on the lateral moraine. Some of the prints were particularly clear and must have been left within the last twenty-four hours. Pad marks and toe marks could be distinctly seen within the footprints, which were twelve inches long, and where the creature had jumped the
smaller crevasses the scrabble marks of its nails could be seen on the far side.

During the next two days they followed this valley until they saw it swing north-westwards between Gauri Sankar and a still higher, sharper peak of white granite to its east (which they named Menlungtse), and then drop to the great canyon of the

Rongshar. They now waited below Menlungtse for Bourdillon and me, who had meanwhile travelled up the Bhote Kosi to the Nangpa La.

The Nangpa La (over 19,000 feet) is so far as we know the highest trading pass in the world. To the Sherpas it is both the trade route to Tingri and the pilgrim route to Rongbuk, and as such seemed to us a side door to the Everest country too important to be longer ignored. We have found no record of its ascent by a European from the Nepalese side. At some future date a knowledge of it might be positively useful in relation to attempts on Everest, and for the present it would serve as a reconnaissance point for Cho Oyu.
Bourdillon and I left Chhule on 6th November. Within a mile we passed the snout of the glacier and took to the old moraines of its left bank. At last we could see the Nangpa La (we thought), where scree-slopes at the glacier's head rose to a col exactly as marked on the map. Suddenly our track swung right (north) into what turned out to be the true continuation of the main glacier which falls from the Nangpa La. The map wrongly marks the Nangpa La at the head of the westerly branch, and does not mark in the very much greater eastern branch. In brief, the map-maker had not gone up to the Nangpa La. At last the moraines petered out. We had travelled nine miles in nine hours when we dropped on to the glacier and pitched camp in a stony hollow. We were now two miles short of the pass.

In the morning Bourdillon, Ang Puta, and I followed a track of yak dung through a mile-long mass of stone covering the glacier. Then we came on to the bare surface, in which yaks had trodden deep channels. No snow had fallen for many days; daily sun and nightly frost had transformed the surface into clear ice.

In four hours we arrived on the pass—a wide and spacious snow-field, full of sun and the stir of air. It was set about with splendid snow-peaks, many of which looked climbable. Far off to the north lay the warm brown hills of Tibet, roofed in shining blue. At the centre of the pass, a thick mass of tattered prayer-flags hung from a short pole. We sat by it and sunned ourselves. The snow-field stretched before us half a mile into Tibet at a gentle angle; then the Kyetrak glacier, stone covered and continuing still at a mild angle, curved eastwards out of sight towards Kyetrak, ten miles distant. The village, said Ang Puta, was occupied only by Sherpas, who use it as a trade depot.

A caravan of yaks and Sherpas passed us on the Nangpa La, south-bound for Nepal. The maps mark the pass 'Open May to August,' but it can in fact be used freely in the autumn. The Nangpa La is apparently crossed at all seasons, although not without loss of life in blizzards. We noticed that some of the Sherpa drovers carried short ice-axes, like slaters' hammers, with
which they cut hoof-holds for the yaks in steep or icy parts of
the glacier. Have Sherpas been cutting steps here, and yaks
using them, before the founding of the Alpine Club?

We now reconnoitred Cho Oyu’s north-west face, discovered
what we believed to be two good routes, and retreated. Three
days later we crossed the Menlung La. Like Shipton and Ward
we found the tracks of the yeti, and like them followed the tracks
for the better part of two miles (the animal had chosen the best
possible route), until, on our second day, we too had to take to
the moraine. On the evening of 11th November we discovered
Shipton and Ward. Thenceforth all four of us journeyed down
valley. Among the gravel flats below camp we saw the spoor of
wolves. We passed close under Gauri Sankar. The valley
narrowed, swung northward, richly coloured now in autumn
vegetation, then plunged. Through pines and rhododendrons
we dropped to the Rongshar. We turned south.

Dense-growing rose-bushes flanked the valley for several
miles: the sight and scent must in summer be unique and alto-
gether enchanting. Under a full moon we entered the true
gorge, whose shear walls towered four thousand feet above the
pine-tops by the track. Three days later we were down among
the cicadas and lizards, and the high Himalaya seemed utterly
remote. On 21st November we entered Katmandu.

**The Old and the New Routes**

Despite our disappointment in not reaching the slopes of the
South col, our reconnaissance had been successful in that we
had found answers to all the questions we had set out to answer,
and that these answers were for the most part favourable beyond
expectation. The western route proves to be a better one than
the old north route, over which it offers these five advantages:

First, the main difficulties occur low down, whereas on the
north route they start at 28,000 feet, where the climber com-
mands less energy.

Second, on the last three thousand feet of the South-east ridge
the strata dip northward, in favour of the climber, and so should
give better support for the snow, more tent platforms, and permit the last camp to be placed much nearer the summit.

Third, the route is protected from violent wind until close to the South col (about 25,800 feet).

Fourth, on the north side the snow above 25,000 feet refuses to consolidate, and by remaining powdery makes climbing impossible until it is cleared by the north-west wind; whereas the fact that snow lies always on the South-east ridge, despite wind, would imply that there it does consolidate and may give satisfactory climbing.

Fifth, the slopes above the South col are in sunshine from dawn, thus allowing climbers to make an earlier and easier start than from camps on the northerly side (where the old Camp VI was in shadow until 9 a.m.).

The disadvantages are less numerous.

First, at the narrows of the West basin there appears a threat of avalanche from the flanking walls not present on the East Rongbuk glacier. The threat, however, had less substance to it in the autumn of 1951 than we had feared. The threat would greatly increase if a party were so unwise as to remain in the upper basin at the break of the monsoon.

Second, the traverse from the face of Lhotse to the South col, although tactically good (granted good snow), is strategically bad. If the weather deteriorates while men are above the South col their safe return is unduly compromised; powder-snow falling in bulk on slopes so long and steep will create a dangerous situation. We thought it unlikely that the col could be climbed direct from below, because that line looked unpromising from six miles' range on Pumori, but have since been proved wrong.

Third, an aerial photograph of the summit shows that the South-east ridge becomes unpleasantly like a knife-edge along its last three hundred feet.

Prayers for freedom from wind near the top will have to be redoubled.
CHAPTER XIV

The Attack from the West

The Himalayan Committee had hoped to follow up the successful reconnaissance with an attempt on the summit in the spring of 1952. Instead the Swiss Foundation for Alpine Research was found to have made a prior claim to the mountain for that year, and to have in being a party fully equipped and organized. There being much goodwill on both sides, an effort was made to arrange a joint expedition. Both parties agreed to that idea in principle, but negotiations broke down on the difficult and delicate question of leadership. It was then agreed that the Swiss go first, in 1952, and the British in 1953.

The Swiss party comprised eight climbers and three scientists under the leadership of Dr. Wyss-Dunant. The climbers were René Dittert, André Roch, Raymond Lambert, Dr. Gabriel Chevalley, René Aubert, Léon Flory, Jean-Jacques Asper, and Ernest Hofstetter; the scientists, Prof. A. Lombard, geologist, A. Zimmermann, botanist, and Mme Lobsiger-Dellenbach, ethnographer. Oxygen was carried in two-pound containers. This was the ‘closed circuit’ apparatus from which the climber has to breathe his oxygen pure.

The expedition left Katmandu on 29th March and arrived at Namche Bazar in mid April. One hundred and seventy-five porters were engaged under the command of a pre-war Tiger, Tensing Bhutia, who had been on Everest four times from the north. On 20th April they approached the Everest massif, travelling up the Lobujya Khola (the valley of the Khomu) to establish Base Camp at 16,600 feet beside a lake at the edge of the Khomu glacier.

Dittert, Aubert, Hofstetter, and Lambert, with seventy-five porters, then established Camp I on the glacier between Pumori and the great ice-fall at a height of 17,220 ft. While this work proceeded a thorough reconnaissance was made of the ice-fall.
Dittert, Chevalley, Lambert, and Aubert tried twice to get through at the end of April, and each time they were defeated on the upper section below the highest point of 1951. After their second attempt, Roch, Flory, Asper, and Hofstetter, accompanied by Wyss-Dunant, passed through Camp I with Sherpas carrying fifty-pound loads. They pitched Camp II (seven tents) half-way up the ice-fall.

Next day Roch, Flory, Asper, and Hofstetter decided to climb the upper ice-fall by means of the avalanche corridor to its left or north. This route lies close under the West ridge, whose flank towers five thousand feet, bulges with hanging glaciers, and is scarred by avalanche grooves. The reconnaissance party of 1951 had accordingly rejected the corridor as not offering climbers and Sherpas a reasonable chance of survival. André Roch truly remarks, however, ‘...it is the only place where one can find a way through the séracs, for the numerous avalanches have filled some of the crevasses and allow one to pass.’ They climbed it until they were close to the level glacier beyond the fall, but there a last crevasse completely barred the way. It was sixteen feet wide. For more than two hours they tried to find ways and means of turning it, then gave up and retired to Camp II.

The following morning found them once more beside the crevasse. Asper was lowered at the end of a rope sixty feet into the depths, managed to swing across to the opposite wall, and then cut his way up to the top. A bridge was made from four ropes, baggage was successfully carried across by the Sherpas, and the loads dumped on the upper glacier. After this splendid effort they all withdrew to Camp II. That evening an ice avalanche fell on to the corridor.

The task of establishing Camp III was now taken up by Dittert, Lambert, Aubert, Chevalley, and nine Sherpas who carried loads of forty-five pounds. Some twenty-four Sherpas were working on the ice-fall, and Camp III was in full occupation by 6th May. The tents there were set upon a slanting terrace between crevasses and looked straight on to the north-west face of Lhotse, from which a broad glacier flows into the upper basin of the Khombu. To the left of the Lhotse glacier a great
coulour plunges from the South col. It is divided high up by a rocky buttress (which the Swiss named the Éperon des Génévois) to the right of which the route must go. On the south side of the basin is the vast and icy wall of the Lhotse-Nuptse ridge. Its crest of wildly riven snow sparkles high and remote against the intense blue of the sky, and beneath is the long, grim flank, heavily plastered in ice. This wall must be one of the most awe-inspiring scenes in the world.

The provisioning of Camp III continued. In ten days sixty loads were carried up the corridor and not one man was struck by falling debris, although both stones and ice had been falling from the face of the West ridge. On one occasion an ice avalanche fell on to the corridor just half an hour before the porters started from Camp II, and a second just half an hour after they reached the top.

Meanwhile the first camp ever to be set in the West basin was placed at 21,150 feet, slightly beyond the first south-sloping spur that drops into the basin from the West ridge. This Camp IV was still not close enough to the slopes of the South col. So a Camp V was pitched on the Lhotse glacier at 22,630 feet. Stores were carried up to the Éperon des Génévois and dumped near its foot; ropes were fixed between there and Camp V; and lastly Chevalley and Asper made tracks up the right-hand couloir between the buttress and Lhotse. Thus was the ground prepared for an attempt on the summit. The weather had been favourable and the monsoon showed no sign of arriving before its time.

On 24th May Dittert decided that the time for the attack had come. The first attempt was to be made by Lambert, Flory, and Aubert with seven Sherpas. They were given two objectives. First, to establish Camp VI on the South col and to send back three Sherpas that same day. Second, to establish Camp VII at 27,500 feet or more on the South-east ridge, and then make tracks beyond it as far as they could towards the summit. The Sherpas were Tensing Bhutia, Pasang, Da Namgyal, Phu Tharkay, Ang Norbu, Nygma Dorje, and Arjiba. They set off at 9 a.m. but were overtaken by bad weather and forced back to camp.

On the 25th they tried again, starting at 8 a.m. One hour
THE ATTACK FROM THE WEST

later Arjiba turned ill and had to descend. The rest arrived at the dump on the buttress at 11.30 a.m. The height was 24,600 feet, and their rate of progress just under 600 feet an hour. After one hour's rest they set off again, but the loads were heavy and progress was slow up the buttress and then up the couloir on the right. At approximately 25,300 feet Nygma Dorje and Ang Norbu began to feel frost-bite and went down. Their loads had to be divided, but no more could be given to the four remaining porters. Flory and Lambert each took a thirteen-pound tent and Aubert a sleeping-bag, which he dropped. It fell down the slope to be lost for ever. They continued. The sun sank behind Pumori. The wind rose and the cold greatly increased. They had now no hope of reaching the col that day. At seven o'clock they most fortunately came on a hollow in the snow. While Aubert held the rucksacks on the slope the others excavated platforms and pitched two tents. They all squeezed in, still roped and wearing crampons. It was impossible to unroll sleeping-bags or even to stretch the legs, but Tensing managed to brew some tea, and, still roped, handed it round with some food. Lambert, fearing that a gust of wind might blow the tent down the slope, drove in his axe to one side and passed his rope round it. The dreadful night that followed gave no rest, only further fatigue.

Dawn broke shortly before 6 a.m. At sunrise they packed up and moved on, their limbs stiff with cold, until at last they emerged on to a hump of ice at 26,000 feet, with the South col below them on the left. The crest was of wind-blown rock and ice. They descended and pitched camp in a wind so violent that no one could stand up. The party had arrived on the col a week or more too soon to catch the pre-monsoon lull. While erecting the tents they had to crawl about on all fours. At 10 a.m. all was shipshape, but the Sherpas were utterly exhausted by the too long carry from Camp V. They could not now go down to fetch up more supplies for the camp at 27,500 feet. However, that night every one gained some rest.

Next morning, 27th May, three sick Sherpas went back to Camp V. Tensing remained. He and the three Swiss set off up the South-east ridge in heavy wind. They started from the
foot of a rocky slope and climbed in two hours to a little col at 26,300 feet, which gave them a splendid view across Tibet and down into the Kama Chu. Above this col the slope became too steep for ascent. They accordingly traversed round the base of a spur into a wide couloir. It gave easy climbing until it narrowed, whereupon they found easy ledges towards the right-hand side. Lambert and Tensing, who were climbing together, stopped there to try the oxygen. It revived them but the good effects lasted only twenty minutes. They continued up indefinite rocks and snow. At 3 p.m. they had climbed to the top of the spur above the small col and so came on to the ridge of Everest itself. Thus far Tensing had been carrying one small tent. He suggested that they camp here and Lambert agreed. The height was 27,550 feet. Flory and Aubert went back to the South col while Lambert and Tensing settled down for the night—with no sleeping-bags, no mattress, no stove, and with nothing to drink save snow melted by candle flame. ‘We had a little food,’ Lambert tersely comments, ‘and we had the cold.’ The night was indeed a terrible one. By slapping each other they tried to maintain their circulation.

Although badly frozen they managed to start next morning at six o’clock. They carried three canisters of oxygen and some food. Great clouds rolled across Nuptse, blown by a west wind. Over Tibet the sky was blue, but mist and falling snow hindered their advance up the ridge, and only occasionally did the summit clear. They passed a succession of cornices where they sank up to their knees in snow and had to rest at every third step. As they neared the rocks under the final pyramid the weather was obviously deteriorating. They reckoned their height to be 28,215 feet and were unable to go farther. Their oxygen apparatus had not been a success, for they found it impossible to use while moving. While they were at the halt, and after breathing oxygen, Lambert recorded a deceptively pleasant sense of well-being. ‘When I stopped I felt magnificent,’ he said. ‘Everything seems to be going well and at precisely that moment one fails.’ That is, one fails on trying to resume the advance. When they turned they had climbed to a point probably higher than any man had reached before.
Camp 1 17220  Camp 4 21150
Camp 2 18370  Camp 5 22630
Camp 3 19350  Camp 6 25840
Camp 7 27550

British and Swiss altitude readings on the Icefall vary widely

Everest from the West. Swiss Camps, May 1952
They returned to Camp VI. Tensing lay in his bag there in a state of coma and had continually to be awakened and forced to drink. Next day they descended into the West basin.

No more heroic effort has ever been made to reach the summit of Everest.

On 29th May the second assault party went up from Camp V: Dittert, Roch, Asper, Hofstetter, and Chevalley. They were unable to raise more than five Sherpas, of whom only Mingma Dorje and Sarki would agree to stay up on the col. On their way up they passed Lambert’s party coming down, and as always hitherto after a bid for the summit these climbers had reached the limit of endurance. Dittert’s party continued, finding every step an exacting effort of will. When they halted they felt better and breathed easily, but when they went on found always that no strength had been recovered during the halt. Any interruption of climbing rhythm, such as a misplaced foot, caused prolonged panting. However, at 6 p.m. they arrived at Camp VI where they spent a sleepless night.

The morning came with a clear sky but a wind icy and violent. The great plume flew once again from Everest. Three Sherpas left for Camp V and the two who stayed would not go higher. Indeed they could not have gone higher. Not only was Sarki ill but the weather forbade. When Dittert went outside his hands became numb in a few minutes. He postponed the climb to Camp VII.

On the 31st it was blowing as hard as ever and Dittert decided to go down on 1st June. They dared not wait longer. That third night on the col, said Dittert, ‘drastically weakens the strongest of us.’ By good fortune 1st June was calm—a good day for the summit maybe—but now of still greater value in allowing seven men to get down alive. Deterioration of tissue had set in apace and the efforts demanded of them for the descent were even greater than those of the ascent. Had the weather been stormy, Dittert reckoned that they would have been unable to get Sarki down. It was 6.30 p.m. before they reached the dump on the lower buttress. Sarki could go no farther. So four men bivouacked there and three went on by moonlight.

In the morning all safely reached Camp V. On 3rd June the
whole party, including Lambert's detachment, left for Base Camp and three days later were back at Namche Bazar. The pre-monsoon lull then arrived, bringing, until the beginning of the monsoon on 17th June, a fortnight of calm, settled weather. And there was no climber left on the mountain.

The results of this attempt show that a much bigger reserve of porters is required in the West basin than was available to the Swiss in May 1952. At Camp V they were unable to raise a sufficient body of fit Sherpas to establish well-found camps at or above the South col. It was the experience of the British expeditions on the north side that a reserve of more than one hundred per cent was required at 23,000 feet to ensure the establishment of high camps. It is necessary to assume that fully half the men will become too mountain-sick to carry loads.

It has also been shown that another camp somewhere between the basin and the South col is essential. At that altitude a climb of over three thousand feet in one day is too much for laden men. The porters were utterly exhausted by the demands made on them and only Tensing remained fit to go higher. Such a camp site might best be found not in the great couloir but on the Lhotse glacier to its right. Unless such a camp be made the summit is likely to be forfeited.

The Swiss Foundation decided that a second attempt should be made in the autumn of that same year. Dr. Gabriel Chevalley was appointed leader and his team was Raymond Lambert, Jean Buzio, Ernst Reiss, Gustav Gross, and Arthur Spöhel. Prof. Dyhrenfurth joined them at the end of October. Tensing Bhutia again commanded the Sherpas.

They left Katmandu on 10th September with two hundred and fifty-one coolies raised from Tamang Lama. On reaching the Khombu district they found the route cut by the flooded Dudh Kosi, which forced them off the normal track on to high passes. The rain turned to snow and two of the Tamang coolies died from exposure. After a journey of nineteen days they arrived at Namche Bazar, whence they set out for the Khombu glacier on 2nd October.

Within one week, and employing nearly three hundred porters,
they established Base Camp at 17,225 feet below the ice-fall. Gross and Tensing then found a way through the upper ice-fall without having to use the line of the avalanche corridor. They climbed to the right of the spring route. The ice-fall had greatly changed and the new way was safer and easier. They used tree trunks for bridging one of the crevasses. By 26th October the climbers had occupied Camp V at the foot of the Lhotse glacier and every one was well acclimatized. The weather had been excellent.

As in 1951 October was found to be milder than May and to give much pleasanter climbing. None the less a roar of wind could often be heard on the high ridges. Unlike the previous autumn big avalanches were frequently falling from Nuptse, Pumori, and other neighbouring peaks. The Éperon des Génévois was deeply covered in snow and one large avalanche was seen to fall down the great couloir dividing the buttress from the Lhotse glacier.

Between 27th and 29th October Lambert, Gross, Tensing, and then Buzio began opening up the route on the slopes of the South col. The lower third was ice. Good steps had to be cut and a continuous rope fixed. On the 31st Chevalley and Spöhel left Camp V at 9 a.m. to test the Dräger oxygen apparatus. At 10 a.m. a block of ice fell from the séracs high up on the left-hand side of the Lhotse glacier. It shot down the great couloir. Spöhel and two Sherpas were then nearing the Éperon des Génévois and were out of danger. But Chevalley and two Sherpas were just below the bergschrund, and two ropes of three Sherpas each were just above the bergschrund, and all were in the line of fall. They crouched to the slope. The ice struck them. Chevalley was protected by his oxygen apparatus, but Mingma Dorje on the Sherpa rope above was hit on the face and chest and killed. The others had received no worse than bruises, when suddenly the second rope of three Sherpas fell off and slid six hundred feet down to the basin. Their injuries were light—a fractured collar-bone, bruisings, and damaged ribs—but they were out of action for the rest of the expedition.

Mingma Dorje was twenty-five. He was one of the best
The West Basin and Lhotse
Swiss Camp Sites, May and November

The dotted line shows the route taken by the Swiss expedition in the spring of 1952 (arabic figures denote camp sites); the unbroken line, the deviation from this route in the autumn of 1952 (camp sites in roman figures). The arrow above the South Col shows the approximate position of Camp VIII on the farther side.

X marks the scene of the accident in October 1952
E.G. is the Éperon des Génévois
Sherpas from Namche Bazar. On 1st November he was buried between Camps IV and V, on the very threshold of Everest.

Although such falls of ice are very rare in the couloir, and Mingma Dorje's death may be ascribed to ill fortune, nevertheless the attempt on the South col was re-routed after this incident. Camp VI was established towards the centre of the Lhotse glacier, Camp VII at its top far to the right of the couloir, and then a long traverse made across the upper slopes to the col. During the first fortnight of November all supplies for the South col and above were carried to Camp VII, the parties being constantly harried by violent winds, which rushed and roared down on to them from the col. Not until 19th November was Camp VIII pitched on the north side of the col by Lambert, Reiss, Tensing, and seven Sherpas.

Next day they set out for the South-east ridge. The wind was of gale force and came with a temperature of minus 40° C. In short, it could not be endured by mortal men and the party turned back at 26,575 feet. Two days later they finally decided to abandon all further attempt on the mountain. There no longer remained any chance of the wind and extreme cold abating, although in other respects the weather stayed fine.

It would seem that the expedition had arrived on the col two or three weeks too late to catch the lull at the close of the monsoon: the winds had renewed themselves in strength. The monsoon normally ends about the 20th September. How long does the autumn lull last? If it is no more than a fortnight (as in spring), and if no climbing is possible while the monsoon is in progress, then the climbers will have too little time to aclimatize before the high-altitude winds return, so that the autumn situation will be worse than the spring. But this point is not yet proved. It may be that the autumn lull sometimes lasts throughout October, which offers calmer and clearer weather than May.
CHAPTER XV

The First Ascent

When the Himalayan Committee met in 1952 to plan next year's expedition, they made two decisions on strategy destined to bring their long campaign to a triumphant close. In order to appreciate these decisions it is necessary to review the more important lessons from the past.

Was there any good reason to suppose that a new expedition might stand a better chance of the summit than before?

Reason there was, in the negative sense that the odds against success had been reduced. The earlier defeats had all been inflicted on the northern side, but the new route from Nepal gave more promise, being distinctly easier than the northern over the last thousand feet. This route had now been 'proved' by the Swiss to within eight hundred feet of the summit. That they had reached so great a height despite three major errors in tactics showed how great had been their strength and determination—and that high hopes might be entertained for the future. We have seen that the Swiss mistakes in spring were failure to catch the lull, insufficient porter reserve in the West basin, and the too long carry from there to the South col. If the British climbers were able to avoid these mistakes they ought to go higher, other things being equal.

An expedition leader who studies the history of the mountain over the last thirty-odd years will find many other ways of courting success.

From the very beginnings of Himalayan climbing up to and including the present day (and from one end of the range to the other), mountaineers have shown a tendency to underestimate their problems and to make their final assaults from a camp placed too low. That error has been made not only on the greatest mountains, but also on those of medium size. The result is that the assault party suffers defeat either from exhaustion or lack of time.
On Everest no high camp had ever yet been placed high enough. And there the very slow climbing movement imposed by lack of oxygen makes such a high placing supremely important. In 1950 the French expedition deliberately rushed Annapurna and brought off a brilliant success at high cost. But these tactics are not appropriate to Everest, where the additional three thousand feet of altitude causes peculiar physiological strains; climbers who try to rush the upper mountain are rapidly brought to a halt—unless equipped with efficient oxygen apparatus.

Not only had the highest camps not been high enough, but no parties had yet been able to occupy them whilst still fully fit for a last supreme effort. Always their energies had been drained in advance by trials other than those of straightforward climbing. For example, ill-found camps resulting from insufficient porter strength; the breakdown of porters, obliging climbers to carry loads themselves; the strain of managing porters and establishing camps: despite which seven men were known to have reached 28,000 feet or more. Every effort must be made to relieve the assault parties of such troubles, and until that was done they could hardly be expected to reach the summit.

The problem of the last six thousand feet of Everest boils down to getting the right men high at the right time. That simple statement covers a complicated situation. What is the right time? Obviously it is the lull before or after the monsoon. But sometimes the lull does not occur; in any given year its spring arrival may fluctuate a fortnight or more to either side of the first of June; and even during the lull a calm day near the summit is rare. Accordingly, annual efforts are required to make the best of this unpromising state of affairs. And now at last that annual effort has been permitted.

We have not, however, fully examined the difficulty of 'catching the lull.' If the assault parties arrive too late at 23,000 feet, and find the summer monsoon approaching, or the high west winds renewing themselves in autumn, they are then forced to make a rapid ascent, are under acclimatized, suffer the torments of the damned, and lose the summit. On the other hand, if they go above 23,000 feet too soon and have to wait for the lull, or wait for good weather, then although they may be
splendidly acclimatized they are overtaken by deterioration of tissue before the final attempt. It is essential that these two dangers be somehow or other avoided. Good planning can help, but more than good planning is needed. The most simple way of avoiding the dangers is to supply oxygen in large quantity.

The meaning of the ‘right time’ may now be apparent, but what of the ‘right men’? We have seen that not all mountaineers, however excellent they may be as Alpinists, can be expected to acclimatize to high altitudes. One man’s limit may be 20,000 feet, another’s 23,000 feet, and so on. And we have seen that these limits may be extensible from year to year according to the peculiar powers of the individual man. Thus one can hardly tell who may be the best man for the summit party until one has a nucleus of climbers who have been above 26,000 feet. In the nineteen-thirties such a nucleus was available in Britain, but there was no such nucleus in 1953. Thus the odds against the right man being chosen are considerable if oxygen is not used. It becomes very clear that if oxygen is used these odds will be much reduced.

It was in light of such considerations that the Himalayan Committee arrived at their two decisions on strategy: first, that the hope of an early success on Everest must depend on their making available large supplies of oxygen—supplies large enough to be fully sufficient for the leader’s tactical plan; second, that the party’s size should be determined by the nature of the assault plan and the weight of oxygen required to support it.

These principles having been laid down, the rest followed. Thus, the question whether the party should be large or small did not arise—it would have to be large. And in order to handle the planning of a big expedition, with all that that implies in vast supplies, constant supervision, and detailed organization, a leader of staff-officer ability and experience was required. In September 1952, the Committee appointed Colonel John Hunt as leader. He had climbed widely in the Alps and Himalaya. His qualities as a leader, administrator, and as a man inspired the very highest confidence.

His plan of action was ready for the Committee in October. For the final assault he envisaged three teams of two climbers, N
who, with the necessary supporting parties, would use oxygen while climbing above the West basin, and use it while sleeping at or above the South col. It would be essential in advance to give the climbers practice in using it on lower mountains, when they would incidentally be brought into good physical training. From the detail of that plan he was then able to estimate the oxygen supplies required and to select his party of eleven mountaineers.

The great difference, then, between the strategical plan of this expedition and that of its predecessors, is found in the decision whole-heartedly to employ oxygen. Previous committees, leaders, and most climbers had consciously aimed to achieve the summit without oxygen, or to use it only as a last resort when there remained no other possibility of upward progress.

In the spring of 1952 some of the Swiss climbers ventured the opinion that the summit could not be won without efficient oxygen apparatus. They may well be right and a number of knowledgeable English mountaineers support that view. On the last thousand feet the climber is drawing on his last reserves of energy, and his state of mind and will are as important as his state of body. Every upward step is taken with reluctance and involves a struggle of will no less than of limb. His interests and aspirations are deadened as energy fails, and it may be that an artificial oxygen supply can alone keep them alive. It would appear that 28,000 feet may represent the limit of man’s endurance.

None the less a large body of mountaineers advocate the earlier attitude, and it is important that their case should be stated. The Swiss opinion is held to be suspect because the supporting evidence is inadequate: indeed the evidence suggests that the Swiss may not have been fully acclimatized by the standards of 1924 and 1933, while the Englishmen supporting their view were not those who had gone without oxygen to the summit pyramid. It is important to note that none of the English climbers who reached 28,100 feet on the north side turned back through oxygen-lack: to the contrary, they expressed their confidence that the summit could be won without oxygen.

If they are right, then it would be best to try to attain the summit without oxygen when first-class mountaineers with proven ability to go high are again available. The summit thus
won would be a much more satisfying reward. It has been asked: 'If you employ without question such aid as boots and axes, why should you question oxygen?' But the difference is fundamental. The other aids are instruments of the craft of mountaineering, to be used with skill, and without them no ascent can be made. But the use of oxygen is a bolstering up of the natural powers of the body—those vital powers that a man desires to test against the mountain. Moreover the oxygen is probably not indispensable. Its use is thus more analogous to the taking of drugs than to using the tools of the craft.

For fully thirty years it has been known and stated that if Everest were of Alpine size and situation but of precisely the same shape, it would have been climbed long since—probably last century. Its unique defence is altitude and rarefied atmosphere; its unique problem the question whether man’s own powers of body and will can endure long enough to let him attain the summit. That was the challenge accepted by Sir Francis Younghusband, and which first and foremost inspired him to raise the earliest expeditions. The large-scale employment of artificial oxygen supply removes the Himalayan problem, substituting for it an Alpine or even sea-level problem of relatively little interest, for the inevitable answer is known in advance. An ascent made with oxygen apparatus solves a technical problem of light engineering but leaves the essential problem of Everest quite untouched. The end result must be that men who share the spirit and ideals of Younghusband will in course of time return to Everest, and take up again the challenge that has been evaded.

Such are the arguments against oxygen.

We have heard the arguments in its favour, and these, already weighty, gained additional urgency after the Swiss defeat in the summer of 1952. And so the die was cast. The Himalayan Committee had still to seek an answer to the technical problem of storing and administering the gas effectively. The apparatus had to be not only light but highly efficient, and no such apparatus had yet been provided for an expedition to Everest. The results obtained from the use of oxygen in the past had been most disappointing. It is worth noting that only twice was it used for an attempt on the summit from the north side—by Bruce and
Finch in 1922, and by Mallory and Irvine in 1924. On other occasions the apparatus was carried on to the mountain but failed to win the climbers' confidence—it leaked, it broke down, it was too heavy; more positively, it was deliberately discarded by well-acclimatized men who felt no need of it and derived no benefit when they tried it. In the closed-circuit design it induced suffocation, and the Swiss system in 1952 suffered from this same defect.

The work of contriving and producing new apparatus was entrusted to Peter Lloyd, who dealt principally with the open-circuit system, and to Dr. Bourdillon and his son Tom who dealt with the closed-circuit. Help was received from many other professional sources, including the Medical Research Council, Normalair Ltd., Siebe Gorman & Company, and the Ministry of Supply. Their work was co-ordinated by Lloyd. They drew much benefit from developments in the light engineering trade during and since World War II; thus they were now able to use Duralumin bottles storing a fifth of their weight in gas as against the cylinders of 1922 storing a tenth. The bottles held eight hundred litres, weighed eleven pounds, and each open-circuit set carried three. The complete set weighed more than thirty-nine pounds. At first sight the weight seems to compare ill with thirty-two pounds for the apparatus used by Finch in 1922. But the weight decreases as bottles are discarded and the new set could supply oxygen at four litres a minute for ten hours—double the quantity ever breathed on a mountain before.

The closed-circuit apparatus required only one bottle, but weighed thirty-four pounds, the heavy weight being largely accounted for by some twelve pounds of soda-lime required to absorb the carbon dioxide exhaled from the lungs. Theoretically this is the better apparatus, for it conserves oxygen while yielding it at a greater pressure. In practice, however, the much simpler open-circuit system had always given better performance at high altitudes, and so the greater reliance was placed on it.

In October Colonel Hunt chose his team. They were G. C. Band, T. D. Bourdillon, Dr. R. C. Evans, A. Gregory, E. P. Hillary, W. G. Lowe, C. W. F. Noyce, Dr. M. P. Ward, M. H. Westmacott, and Major C. G. Wylie. They were to be accompanied by Dr. L. G. C. Pugh as physiologist and by T. Stobart as
photographer. This team made an excellent balance of youth and experience. Its youngest member was Band, aged twenty-four. Of the mountaineers, only he and Westmacott lacked Himalayan experience, but they possessed first-class Alpine records and ranked with the best of the younger English climbers. Bourdillon, Hillary, and Ward had all taken part in the Everest reconnaissance of 1951, and the first two, with Evans, Gregory, and Lowe, had accompanied Shipton on the Cho Oyu expedition of 1952. Ward was now appointed medical officer. Noyce had in previous years organized expeditions of his own to Garhwal and Sikkim and was a climber of exceptional skill and great Alpine experience. Wylie was the party's organizing secretary and spoke fluent Nepali—an invaluable asset in handling Sherpas; to his credit stood innumerable Alpine and Himalayan climbs.

Hillary and Lowe came from New Zealand. There could hardly be a better training ground for the West face of Everest than the New Zealand Alps: the mountains are heavily glaciated, and the glaciers carry enormous and difficult ice-falls. Mountaineering there develops outstanding skill on ice, and a tough determination in dealing with its more intimidating complexities. Hillary's performance on and around Everest in 1951 had been most impressive to witness.

It has not been usual in the past to describe an expedition's Sherpa sirdar as a member of the climbing team. But the Sherpa engaged as sirdar for 1953 was Tensing Bhutia (sometimes called Tensing Norkey), who had climbed with Lambert to 28,200 feet. Tensing is an outstanding man in any company, and as a mountaineer he is one of the elect. He could not be regarded simply as the porters' sirdar, and in 1953 he was from the outset included as a member of the climbing team. He had now taken part in five Everest expeditions (1935, 1936, 1938, and twice in 1952), and his activities had ranged far and wide over the Himalaya. The Sherpas although sure-footed and nobly tough are not technically skilful climbers; in this respect Tensing is one of the exceptions. He was born and bred in Nepal at the village of Thami in Sola Khombu, but has lived at Darjeeling since he was nineteen. His age in 1953 was thirty-nine; that of Hillary,
his destined partner on the mountain, thirty-four. The climbing team thus comprised twelve men including Hunt.

No previous expedition had ever gone out so well equipped as this one. It was supplied with wellnigh every conceivable aid to the ascent of high mountains: a gun for lobbing bombs on to unsafe slow-slopes, and so clearing the route by inducing an avalanche—portable radio telephones (walkie-talkie)—extensible metal bridges for crossing crevasses—rope-ladders—and many another exotic item of equipment.

The more normal mountaineering equipment included a wide range of new designs and materials, all of quite exceptional quality. The windproof clothing was woven from nylon thread and cotton. The high-altitude boots, specially designed by Mr. Robert Lawrie, were of supple leather lined with opossum fur and soled with felt and moulded rubber. Light-weight 'assault boots,' for use on the last few thousand feet, were made of glacé leather, between which and a thin waterproof inner lining was enclosed a thick tropal insulation. The sole was of thin, ribbed rubber with a felt undersole. Everything, in short, was of the best.

The basic food supply was the Army 'compo' ration, while hermetically sealed 'assault rations' were reserved for use in high camps. These stores weighed seven and a half tons and three hundred and fifty porters were required to lift the loads from Katmandu.

True mountaineering is a recreation. It will be seen that the attempts on Everest itself are not a recreation. Whatever a mountaineer may feel about the means now employed to reach the summit, it is at least clear that normal means will not suffice. The climbing of Everest is more than a mountaineering problem, hence the opening sentence of this history. Mount Everest ranks with the North and South Poles, and the attempts on it should not be confused with mountaineering proper.

The odds against this particular expedition remained heavy. As always hitherto, no expedition however strong and energetic could hope to attain the summit unless it were aided by three major strokes of good fortune, which must all concur: freedom from high wind near the top; no deep powder above the South
It has often been remarked that the old approach march across the high Tibetan plateau held great advantage over the relatively low route through Nepal, in that climbers arrived at the base of their mountain possessed of a higher degree of acclimatization. This could be true, but the remedy is simple and was taken. The southerly and more sheltered approach allowed the expedition to make an especially early start—10th March from Katmandu. They planned to reach Thyangboche monastery with almost a month on hand to devote to preliminary climbing on neighbouring peaks. They would accordingly be fully trained and partly acclimatized when they turned in May to the attack.

The eastward journey from Katmandu runs across the grain of the country, giving the traveller much climbing over the hill ridges, and before reaching the Dudh Kosi culminates in three passes of 8,500 feet, 12,000 feet, and 10,000 feet. The march out is always a most valuable phase in an expedition if unhurried and favoured by tolerable weather. The climbers grow daily fitter and their digestions settle down to the new diet. On this occasion further advantage was wrung from the ground and good weather by accustoming the climbers to the use of the oxygen apparatus, which was worn for a short spell each day. On the twelfth day the expedition descended to the Dudh Kosi and journeyed north three days to Namche Bazar. They camped above the village. The weather remained brilliant and Everest displayed a face largely free of snow. This was not yet an invitation to any close approach, for the notorious west wind was blasting a mile-long plume from the summit.

The whole party moved up to Thyangboche monastery on 27th March, where they made their base camp for training work. Firstly, and following the tradition of the old expeditions, they arranged a ceremony at which the Sherpas received the blessing of the head Lama. Then the training began. This was planned in two spells of eight days. Three parties of four climbers, accompanied by Sherpas, went to the ranges on either side of the col; and the right man high at the right time. Good fortune of that very special kind had graced none of the ten previous expeditions.
Imja Khola. They climbed to heights of 19,000 feet. They tested the open-circuit apparatus, which proved most successful—a flow of three litres a minute allowing them to climb two thousand feet an hour. During the second trip selected Sherpas were given practice both in using oxygen and ice-climbing. It appears certain that this well-judged training work played no small part in the final result. All men became really fit; and still the weather was fine.

At the opening of the second training bout on 8th April, Hunt decided that a party of four should now visit Everest and reconnoitre the ice-fall. He chose Hillary, Lowe, Band, and Westmacott, who set off next day with a large party of porters. New snow had fallen before they reached the Khombu glacier, and that fifteen-mile journey to the foot of the ice-fall took four days. On 12th April they pitched their tents at the site of the Swiss Camp I (diagram page 175). Here Base Camp was later established, at 18,000 feet.

Next morning they began work on the ice-fall. It proved to be even more complicated than in 1951. The ice was fearfully and most wonderfully riven; its speed of change since the Swiss visit five months earlier being shown by some of their route-marker flags, now standing in apparently absurd situations above gigantic crevasses on top of ice-blocks or cliffs; strewn around them was the wreckage of fallen séracs. On that first reconnaissance the party was unable to reach the Swiss Camp II, which is half-way up the ice-fall, but succeeded next day, and on the day after (15th April), pitched tents there.

Meanwhile, Hunt, Bourdillon, Ward, Noyce, and Tensing had come over the south-west ridge of Nuptse from the Imja glacier basin to reinforce them (map page 157), and they were shortly followed by the remainder of the parties and stores from Thyangboche. Hunt planned to allow one month for the establishment of the higher camps, and decided that by 15th May all must be ready for the attempt on the summit.

The preparation of tracks up the ice-fall proceeded. The mornings remained fine, but all work above Camp II was being held up by afternoon snowfalls, which covered the track daily several inches deep. Below Camp II the ice-fall continued
changing with disconcerting rapidity. This further increased the difficulty of porterage: new crevasses had opened, and, fortunately when no one was there, masses of ice had collapsed on to the track. Thus, six days after the pitching of Camp II, Camp III remained unestablished, and no one had been able to go beyond the top of the ice-fall to see whether some impassable crevasse might not bar the way into the basin.

Hunt himself went up to Camp II on 23rd April, and with Hillary and Band climbed the rest of the ice-fall next day to the proposed site of Camp III. Beyond it they saw the glacier to be barred by one great crevasse, and by chaotic ice that tended to force them into a dangerous situation below unstable ice-cliffs hanging from the left-hand wall (as one looks upwards). The crevasse at its narrowest point was fifteen feet wide and could evidently be bridged by a metal sectional ladder. Having probed the upper basin's last defence, they withdrew.

Immediately afterwards, Camp III was established at 20,500 feet and stocked daily by parties of eleven Sherpas, each party led by a British climber. The first two of these parties, in charge of Gregory and Noyce, had tough journeys, for the afternoon snowfalls were continuing. Almost nine inches fell on the 25th April, when Hunt, Evans, and Tensing joined Hillary at Camp III. That same evening they bridged the big crevasse with three sections of ladder. The way into the West basin was clear. In the morning they pushed forward to the site of the Swiss Camp IV at 21,200 feet, where Tensing dug for and uncovered the Swiss food stores. Here, they decided, would be the best place for advance base camp. Henceforth, Sherpa teams carried forty-pound loads up to this site from Base Camp in the Khombu valley.

On the first of May, Hunt, Evans, and Bourdillon moved from Camp III to the site of Swiss Camp V (22,600 feet) at the foot of the Lhotse face (diagram page 179). Their urgent task was now to reconnoitre the Lhotse glacier and discover its condition, and the kind of work that would have to be done before a route could be forced up it to the South col. Their attempt to climb on the Lhotse glacier next morning encouraged no pleasant dreams for the future. The weather was bad and snow was falling. The
slope on which they climbed had a steep surface of bare ice alternating with deep new snow in unstable condition. These imposed on them a painfully slow climbing movement, so that after one and a half hours they had progressed only four hundred feet. At that they gave up.

Evans and Bourdillon were back again next day with Sherpas and managed to set up tents at the Swiss Camp VI, at approximately 23,000 feet. On descending to the basin they were given the task of reaching Swiss Camp VII at 24,000 feet with the support of Ward and Wylie. They returned to the slope on 4th May. The flow of the Lhotse glacier down that westerly face forms a series of sloping terraces divided by short ice-walls, and these latter were now found to be technically difficult. Several fixed ropes had been left by the Swiss, but these were no longer secure and every precaution had to be taken on unsafe snow. The going was again slow and heavy. From Camp III onwards the party had been breathing oxygen from the closed-circuit apparatus. When they stopped for the night at Camp VI they discovered some charged oxygen cylinders left behind by the Swiss. They were able to attach these to their apparatus and so passed a comfortable night, breathing 'Swiss air' at low pressure. On 5th May they reached 24,000 feet and withdrew, retiring on the 6th back to Base.

Their report was that before the Lhotse face could be safely traversed by loaded men it would have to be carefully prepared. Several days would have to be spent in stamping out the track, in step-cutting on the ice, and in fixing ropes on the ice-pitches between terraces. No high winds had troubled the party, except sometimes in the afternoons.

Down at Base Camp, Hunt was now in a position to make his plan of attack. After Camp VIII had been pitched on the South col and advance base stocked with food and bedding and fuel sufficient to maintain thirty-six men for at least two weeks, a double assault would be launched. Evans and Bourdillon would try first from the South col using closed-circuit apparatus, their principal task being to reach the 'south summit,' which is a pointed hump on the south-east ridge at approximately 28,700 feet. Once there, they should be able to bring back most
important information about the last three hundred feet to the true summit, which no one had yet seen at close quarters. If their oxygen apparatus was found to be working well, if the weather were favourable and the ground permitted, and if they found themselves with time available, then they were to go on and try for the summit. However, the closed-circuit apparatus had neither been tested so thoroughly as the open-circuit nor been giving wholly satisfactory results; therefore it could only be assumed that the main attack would have to be made by the second party.

The honour of making the second assault fell to Hillary and Tensing. They were to start from the South col accompanied by two British climbers and four Sherpas. The support party would pitch Camp IX at 28,000 feet (if they could) and from that tent Hillary and Tensing would next day try for the top. If they failed, then the expedition would withdraw for ten days' rest before mounting a third attack in which Noyce would take part—always assuming that the monsoon had not broken.

The weather had been very mixed since the beginning of May, but despite the afternoon winds and snowfall Everest had not flown a plume since the expedition's first sight of it from Namche Bazar. There seemed no likelihood that the lull (if it came) would come before the last ten days of the month. Much hard work had already been done on the mountain, so a number of the climbers went six miles down the Khombu valley to the green pastures of Loje, and there rested for a day or two.

The final attack was tentatively planned for 23rd and 24th May, and work on the Lhotse face began again on the 11th. The brunt of this work was borne by Lowe, aided at first by Band and Westmacott and later by Noyce, Ward, and Ang Nima. They spent a week preparing the route in face of heavy snowfalls, which came as before daily in the afternoon. Their progress was further delayed by severe cold and wind, and by sickness in the party. On the 17th Lowe and Noyce pitched the first tent at Camp VII (24,000 feet), and climbed some six hundred feet above it before retiring to Camp VI, where Noyce was relieved by Ward. After the most strenuous efforts on the face no one had been able to make the great upward traverse towards the col.
But the route was now prepared to a high point on the face and all had freely spent themselves to help those who followed. Not until the 20th did Lowe return with Ward to the West basin.

By 14th May all members of the expedition had assembled either at Camp IV or higher. At length there came several fine days unmarred by wind or snowfall, but still no Camp VIII had been set and provisioned on the South col, which indeed had not been reached by anyone. Colonel Hunt began to feel some anxiety. His plan was several days behind schedule and this fine weather appeared to be going to waste. A more powerful effort to force the last stage to the col must be made at once.

Hunt decided to send up sixteen Sherpas in two parties of eight under the lead of Noyce and Wylie respectively. Noyce started from Camp IV on the 19th May and arrived on the 20th at Camp VII. On the morning of the 21st he found only one Sherpa, Annulla, fit to go on at once. It would obviously be of enormous psychological benefit to the others, not so fit, if the South col could be reached by some party before they were asked to make the venture too. Noyce decided not to wait for the morrow but to make the attempt now with Annulla. They put on open-circuit apparatus and set off, traversing far rightwards to avoid a vast crevasse. They had difficulty at first with the route selection on the upper face and spent two and a half hours reaching the last terrace of the glacier. They began the left traverse into the couloir leading to the crest of the Éperon des Génévois. Four and a quarter hours after leaving camp they had climbed two thousand feet and looked down from the Éperon on to the South col, now two hundred feet below at 25,800 feet. The scene was one of the utmost desolation; the col, a wide plateau swept by ferocious winds, which had stripped off the snow to expose great fields of blue ice. A flutter of orange rags marked the ruins of Swiss tents.

Hunt, watching events from the West basin, saw with mixed feelings the advance and return of these two, small figures far above him. He rejoiced that at last the Lhotse face had been climbed, but regretted the failure of porters to carry up loads; he deeply admired the splendid effort made by Noyce and Annulla, but felt anxious for the morrow. What was the state of
health and morale at Camp VII? He could not know, for at this juncture wireless communications with Camp VII had broken down. (The radio telephones had worked splendidly below.) During these last few days there had gradually been arising a state of crisis in the expedition's work; too much time was being lost; it might well be that victory or defeat hinged upon this day's work and to-morrow's. Wylie's party was already on its way to Camp VII, which that night would be filled to overflowing with men and loads. Would Wylie's Sherpas also need a full day's rest before further action? Were Noyce's men now in a fit state to go on? Noyce himself would be too tired to make a second climb to the col next day.

For all that Hunt knew to the contrary, the Sherpas up there might require some additional stimulus to heighten their resolve and set them moving. After consulting Evans and Hillary and carefully weighing the contingencies, he decided that Hillary and Tensing must be sent up. It can be imagined with what reluctance he thus committed his second assault party, perhaps to the prejudice of their coming attempt. But save for Gregory there was no one else available. Evans and Bourdillon were due to start to-morrow for the first attempt, and the others required rest. Further delays at Camp VII could no longer be risked.

Hillary and Tensing started off at 12.30 that same afternoon, 21st May, and joined Noyce and Wylie at Camp VII in the evening. Hunt stayed down at advance base, but with the fate of the expedition depending on events above he turned out early in the morning to watch for movement. At 6.30 a.m. he saw the first tiny figures begin to climb up from Camp VII. More and more followed. At last seventeen men were strung out across the slope, the two leading men, obviously Hillary and Tensing, soon drawing away from the others. Behind them came Wylie and fourteen Sherpas. And by three o'clock the last man had vanished over the top. Thus was Camp VIII established, and well-found with more than five hundred pounds of stores. At any time now the assault could be launched—this very evening, indeed, the first moves could and should be made.

Before long Noyce and Annulla arrived back in the West basin.
They had made a splendid contribution to the expedition's success. Then Evans and Bourdillon, supported by Hunt, Da Namgyal, and Ang Tensing moved up to Camp V aided by closed-circuit oxygen. Shortly after their arrival there Hillary and Tensing appeared with a few of the most indomitable of the South col Sherpas. They had had no food all day save for a mugful of tea in the early morning; although extremely weary they remained high-spirited, sustained by knowledge of a hard job well done. It is noteworthy that among them were Dawa Thondup, aged forty-nine (the oldest man on the expedition), and Gompu, aged seventeen—the youngest.

Evans and Bourdillon, with supporting party, continued next day to Camp VII, and to Camp VIII on the 24th May. During these last two nights the wind had been rising and blowing hard in gusts, which were deflected down on to the tents from the face of Lhotse. In consequence the tracks from Camp VII to the South col had been largely obliterated, and this last stage of their climb imposed on them eight hours of most exhausting work, at the end of which they faced a gale on the col. The erection of two tents cost them a full hour's fight.

Evans and Bourdillon had been scheduled to make their attempt on the 25th, but the whole South col party was now too exhausted to contemplate such great effort without a day's rest. The 25th turned out to be relatively calm, so the delay involved a risk both of losing the weather and of suffering deterioration of body. However, they had no choice in the matter, and in any event the second assault group would also have to delay as a consequence of the climb made by Hillary and Tensing on the 22nd. While they were resting here, Hillary and Tensing were moving up from Camp IV to VII, accompanied by Lowe and Gregory and by eight Sherpas, three of whom would remain at the col to carry Camp IX. They made this ascent in just three and a quarter hours. That they were still able to maintain such pace indicates how effectively the use of oxygen had halted deterioration. That night they again used 'sleeping oxygen' and enjoyed good rest.

Hunt’s own purpose up on the col was not only to lend support to the first assault party but also to carry stores up the South-east
ridge to 28,000 feet for the second assault party. Evans and Bourdillon were to start at 6 a.m. and Hunt and the Sherpas an hour later. Instead, Evans was held up for an hour and a half trying to unfreeze the valves in the closed-circuit apparatus. For a while it looked as though the first attempt would fail, and that Bourdillon, one of the most militant advocates of oxygen, would be hoist with his own petard. At 7 a.m. Hunt and Da Namgyal set off alone, being obliged to leave Ang Tensing, who was no longer fit.

The final peak of Everest rises three thousand feet above the South col. To a party of climbers who have already expended so much energy and time in reaching 26,000 feet, it appears to loom formidably into all too tangible reality, a new and sudden encounter for which they had hardly been prepared. In short, it has a sobering effect on any man who might feel elated at treading the South col. The ridge running downwards south-east from the top diverges eastwards away from the col and becomes in its lowest, inaccessible part a rocky buttress on the col's eastern side. To reach the crest of the ridge one has to climb a thousand feet up its flank by way of a snow couloir. As seen from the South col the top of this ridge would appear to be the summit, but is in fact the so-called 'south summit' at approximately 28,700 feet. And this latter was to-day's goal for Evans and Bourdillon.

They succeeded in getting away at 7.30 a.m., and moving at almost Alpine speed soon passed Hunt and Da Namgyal, and kicked and cut their way up the couloir (demonstrating more conclusively oxygen's prevention of deterioration). Hunt and Da Namgyal followed much more slowly, carrying a tent and food and fuel in addition to their own oxygen apparatus. They were heavily loaded, and the oxygen tube in Hunt's apparatus became blocked with ice. He had to fight for breath and found every step a struggle. It accordingly became impossible for them to carry the loads to 28,000 feet as planned. However, they carried on to the crest of the ridge, where, most surprisingly, there were still to be seen the forlorn remnants of Lambert's tent of a year ago. Hunt reckoned the height of this camp site to be 27,150 feet. Despite gathering clouds and snow driven by a rising wind, they climbed two hundred feet higher and dumped
their loads, together with their two oxygen bottles. They returned to the South col without oxygen. This achievement by Hunt was a very great one; he had already given unsparingly of his energies in all the exhausting work of planning and organizing a heavily equipped expedition, and then directing its operations on the mountain, while by the force of his example educing from his whole team a unity of effort and self-sacrificing co-operation never surpassed on a Himalayan expedition, and perhaps not equalled since the great Bavarian attempts on Kangchenjunga led by Paul Bauer in 1929 and 1931.

Hunt and Da Namgyal, distressed and exhausted, were welcomed back to the col by Hillary and Tensing, who had newly arrived and were soon to be followed by Lowe, Gregory, and the Sherpas. On their way up from Camp VII they had been granted a glimpse of Evans and Bourdillon disappearing over the south summit at 1 p.m. Then clouds had swept over the scene. The Sherpas had thought the south summit to be the summit of Everest and were highly excited. In any event, Evans and Bourdillon had now climbed higher than any other human beings, and they had made astonishingly good time. There still remained a long chance that the true summit might fall to them—or that its nearness might tempt them to jettison sound judgment and press on in unfavourable conditions . . .

To everyone's relief they were sighted again at 3.30 p.m. at the near crest of the South-east ridge. An hour later they were back in camp. They had not gone on to the summit. Time, weather, and ground conditions were against them. They had seen the final ridge and could say without hesitation that although it presented a thin and technically difficult edge, the climbing of which might involve nasty situations and problems—yet it was climbable. The south face of the south summit had proved to be a steep snow-slope of four hundred feet, which in bad snow conditions had been a most dangerous place. A little below this slope they had left two oxygen bottles for Hillary and Tensing. It is easy to overlook that moment's thoughtfulness by victorious yet defeated men, a small incident which in fact is of utmost importance; it exemplifies the unfailing co-operation between the different units of this team, their constant regard for each other's
different units of this team, their constant regard for each other’s welfare and prospects: this particular act was to have considerable bearing on the great event now drawing nigh.

It is incalculably harder to break new ground on a mountain than to follow where others have been before. Virgin rock and snow wear an aspect of impregnability, apt to dismay the heart of the pioneer, who must go on without knowledge of what awaits him. It is easy for his resolution to become undermined in discouraging weather. The South col parties of 1953 had gained greatly in confidence from their knowledge of the two Swiss ascents, and now the bold foray to the south summit refuelled that confidence, which gathered head and redoubled itself. All that night the col was scourged by cold, high winds, which continuing into the morning of the 27th May made the second assault impossible. However, it was not so bad but that men might go downward, and even although they had been much weakened by yesterday’s efforts, Hunt, Evans, and Bourdillon departed for Camp VII. One of Hillary’s three Sherpas was unwell and had to go down with Hunt’s party, thus leaving the assault team with only two porters to carry Camp IX.

All day long and with undiminishing fury the wind blasted across the col. The climbers eventually prepared their loads for the morrow, but this they did despairingly, seeing no reason to suppose that the wind would fall away rather than heighten. During the night it still blew violently. In the early hours of the morning it quite unexpectedly slackened; a start became possible.

Then it was found that of the two remaining Sherpas only Ang Nima was able to go on. The assault climbers had now no choice but to carry loads themselves—one of the very situations that in the past had so often told against success, and which this year’s heavy organization had been designed to prevent. To abandon the attempt was unthinkable. So they repacked the loads and lightened them by cutting down the number of oxygen bottles. Lowe, Gregory, and Ang Nima set off first, at 8.45 a.m., carrying forty pounds each. Hillary and Tensing followed at 10 a.m. with fifty pounds each. All were using oxygen at four litres a minute.

Once again it would seem that none of the climbers had suffered muscle deterioration as a consequence of the additional night
spent on the South col. After the two parties had reunited at Lambert’s camp they went on to Hunt’s dump at 27,350 feet and divided the extra burdens among themselves. Ang Nima’s forty pounds remained unaltered, but the others took loads of fifty to sixty pounds and more. They continued up the ridge, which grew steeper yet remained easy to climb since the inward dip of the rock strata provided good foothold. Loose snow demanded care.

Four hundred feet higher they began to look for a camp site, but the ridge at this point is unbroken and forced them to go slowly on. They had been travelling four hours from the South col, troubled by the excessive loads on their backs, and were now nearing exhaustion. They began to despair of ever pitching Camp IX. Fortunately Tensing knew the ground and already had in mind a possible camp site at 27,900 feet, which he and Lambert had noted on exactly the same date a year ago. At the appropriate moment he invited the party to make a left traverse. And so they came on to a patch of sloping but relatively level ground beneath a crag. The time was 2.30 p.m. The support party were too tired to render further assistance and at once began the descent to the col.

Hillary and Tensing were now alone. They had much work to do. They devoted two hours to clearing snow from the rocks and constructing a most uneven platform, on which the tent was at last pitched, its guy-ropes having to be tied to rocks and to oxygen bottles buried in snow. Dehydration of the body is one of the prime causes of defeat on high mountains; so they boiled down snow and brewed up great quantities of lemon water, and then coffee and soup. They dined on sardines, biscuits, tinned apricots, dates, chocolate, jam, and honey. The necessity of cutting down loads for the ascent had left them with a reduced oxygen supply, sufficient only for four hours’ sleeping at one litre a minute. Thus they were able to get some sleep—in a temperature of minus 27° C. While breathing oxygen they could doze almost comfortably, but cold and wretchedness supervened when supplies ran out.

At 3.30 a.m. on 29th May, Tensing lit the Primus stove and began making large quantities of lemon water and sugar. They
breakfasted on sardines and biscuits. The weather was wellnigh perfect and at four o’clock they caught sight of Thyangboche monastery fifteen thousand feet below. Its hill-top projected out of the still darkened valley, ringed by great ice peaks shining in the first light of the sun. They prepared for the final climb.

Hillary, who unlike Tensing had left his boots outside his sleeping-bag overnight, found them now frozen like rock. Tensing had to relight the stove to thaw them out. At 6.30 a.m. everything was ready. They set off with open-circuit apparatus weighing thirty pounds. Tensing led up to the crest of the ridge at 28,000 feet, which here becomes a knife-edge of soft snow, unsafely poised. Hillary took the lead and was soon forced off the crest on to the left flank, where the snow bore a thin, breakable crust, which gave them several nasty moments. A few hundred feet up they were much relieved to find in a hollow the two oxygen bottles (each one-third full) left by Evans and Bourdillon. These were essential for their safe descent and were accordingly left where they lay. Thus far they had been using oxygen at the rate of four litres a minute, but supplies were short and their intake would soon have to be cut.

Immediately afterwards, they came on to the steep face of the south summit. The snow was in a highly dangerous state and here they took risks that they would not have accepted in the Alps. They shared the strenuous work of stamping out the trail until firmer snow near the top allowed them a free climb in crampons. At 9 a.m. they stood on the south summit. They now had time in hand—if only the difficulties ahead were not excessive. They looked anxiously up to the last and yet virgin ridge of three hundred feet. Like unclimbed rock on all difficult mountains it impressed and frightened the eye. Raw-edged cornices thrust like great claws outwards over the east face. On the west side, sharply tilted snow-slopes fell to a rock wall, which continued the plunge to the West basin. Hillary decided to try that western or left-hand side along the line where snow met rock. At that point the snow looked firmer.

They were now able to cast off empty oxygen bottles and reduce the weight of their apparatus to eighteen pounds. This left them each with one full bottle (eight hundred litres), which
used at three litres a minute would allow them four and a half hours to reach the top and get down to the reserve bottles under the south summit. On starting out they were delighted to find the snow firmly frozen—not at all powdery as might have been feared from past experience of Himalayan work above 23,000 feet. Two or three axe-blows made a step. To experienced climbers this was safe ground, but they took no chances and moved one at a time from axe-belays. Their method of procedure up this last ridge was for Hillary to cut some forty feet of steps while Tensing belayed him; then Hillary would thrust half his axe-shaft into the snow and take in the rope round its upper half while Tensing moved up. Upon reaching the line of cornice-claws they found it possible to turn each at its base by cutting down leftwards on to the rocks and then edging up and onwards with the aid of hand-holds cut into the snow above.

An hour of steady, continuous work brought them to an obstacle that in any different conditions might have stopped them altogether, and which would probably have ended an attempt by men suffering muscle-tissue deterioration. This was a vertical rock step of forty feet. The rock itself was smooth and holdless, but to its eastern side clung a great cornice, arching over the Kangshung glacier ten thousand feet below. Between this impossible rock and impossible cornice lay a narrow crack. Praying that the snow-mass would not break outwards, Hillary began forcing his way backwards up the crack, his cramponed feet kicking into the snow wall behind and his hands taking whatever holds they could get on the rock. He reached the top and collapsed on the snow, panting for breath. After resting he brought up Tensing, who collapsed in his turn. When fully recovered they moved on, using the west flank as before. Hillary made the experiment of trying to climb in crampons without cutting but quickly desisted; the high angle of the slope and the extreme altitude allowed too small a margin of safety. They were both feeling very tired and Hillary, who bore the burden of step-cutting, began to wonder how long he could keep going. They were passing over the top of one snow-hump after another, while the ridge took a gradual eastward curve. And always a new hump rose beyond. While he was cutting round one more
of these interminable bends Hillary suddenly saw that instead of rising as ever the ridge fell abruptly to reveal the East Rongbuk glacier. The last gate of Everest had opened.

'A few more whacks of the ice-axe in the firm snow,' writes Hillary, 'and we stood on the summit. My initial feelings were of relief—relief that there were no more steps to cut, no more ridges to traverse, and no more humps to tantalize us with hopes of success. In spite of the balaclava, goggles, and oxygen mask all crusted with icicles, that concealed Tensing's face, there was no disguising his infectious grin of pure delight as he looked all around him. We shook hands, and then, casting those Anglo-Saxon formalities aside, Tensing threw his arms around my shoulders and we thumped each other on the back until forced to stop for lack of breath.

'I glanced at my watch: 11.30 a.m.'

The summit was a cone of snow, which could afford standing room for only two or three men. Some twenty feet below it lay a flat space sufficiently large to take a small tent. The weather was irreproachable and the mountain world spread all around like a gigantic relief map. Tensing says: 'My first thought on reaching the top was a sense of gratitude to God that after having failed so often he had blessed me with fulfilment of the desire I had held so long... I could not kneel because of my clothes and equipment, but I offered a silent prayer in my heart.'

He made a small hole in the snow and inside it laid offerings to Buddha—sweets and biscuits, and a blue pencil from his daughter.

Hillary looked for any sign of Mallory and Irvine. But there was no trace.

Within a few minutes of arriving Hillary had taken off his oxygen apparatus, and for nearly ten minutes suffered no ill-effects. He took photographs down all the mountain's ridges, and of Tensing on the summit holding the flags of Nepal, India, the United Nations, and Britain. At last he found himself becoming slow and clumsy and replaced his oxygen set. Notwithstanding their free use of oxygen beyond Camp III, they had evidently achieved a fair degree of acclimatization. But the diminishing supply forbade a halt longer than fifteen minutes. At 11.45 a.m. they began the descent.
In the natural reaction that follows success they felt exceedingly weary, although by no means exhausted, and appreciating that psychological effect they exercised the greater care. In just one hour they were back on the south summit, and moving cautiously down the long and dangerous snow-slope picked up the two oxygen bottles beyond and continued down to Camp IX. The time was then 2 p.m. The afternoon winds were strengthening and some of the tent’s guy-ropes had already torn loose. They stopped just long enough to make lemon drinks and then, packing their bedding and abandoning all other camping gear, started down. They were now using the two bottles left by Evans and Bourdillon. These could provide a flow of two litres a minute for just long enough to let them reach the col.

All went well to the top of the last couloir leading down off the ridge. The high winds there had obliterated the steps and only a steep hard surface remained. They took the cutting in turns while sudden gusts almost blew them off the slope. Towards the foot the snow softened again and steps could be kicked. Two hundred feet above camp, Noyce and Lowe met them with hot soup and oxygen. By 4.30 p.m. they were lying back in their sleeping-bags, listening to the purring of Primus stoves. On big mountains a man’s thoughts are firmly held to the simple things of climbing and camp life that keep him warm and alive. The environment does not favour the striking of heroic attitudes.

All descended next day to advance base. And there, out on the blazing snows of the great glacier, Colonel Hunt heard that his team had triumphed.

The sky that day was appropriately blue, the wind light, and so the weather remained for another fortnight. Had the need arisen the expedition could probably have taken a ten days’ rest and launched their third assault. Weather of such constant excellence had never before been experienced on Everest, nor imagined possible, and to it success must in great part be attributed. That thought implies no withholding of full credit to climbers and leader for the way they seized the opportunity so timeously presented to them.

A like consideration applies to the extraordinary success of the
THE FIRST ASCENT

oxygen apparatus. For the first time, on the upper mountain, it worked. The technical difficulties of the last climb were thus brought close to Alpine standards, and granted good weather success begins to appear an inevitable result. The old and essential problem of Everest remains—a Riddle of the Sphinx awaiting its Oedipus—if there still lives any man audacious enough to venture the solution. Oxygen smoothed the way. But we must remember to attribute its success to its human sponsors: in the first place to the Himalayan Committee, the makers of policy, who took the vital decision; in the second place to Peter Lloyd and to Dr. Bourdillon and his son, who translated decision into action and devised the improved equipment; and thirdly to Colonel Hunt, who took the Committee’s decision and the scientists’ product, and from them brought forth much fruit by a tactical plan that was bold and thorough and left nothing to chance. From start to finish the strategy and tactics of oxygen-use were properly dovetailed, and we see the consequence in the arrival at 26,000 feet of eight British climbers out of eleven, and in assault parties and supporters climbing above the South col as fit men, moving with pace, and able to carry heavy loads when Sherpas failed them. So, for the first time in the history of Mount Everest, the last camp was placed high enough.

That Colonel Hunt was able to plan with such wisdom and thoroughness, he in turn owes to the great accumulation of knowledge and experience won in the face of every kind of adversity by the climbers of ten preceding expeditions. But the judgment and efficiency with which he drew on that fund were his own.

The successive expeditions of these thirty-three years were in reality the developing phases of one great assault to which countless mountaineers contributed. They were inspired by unusual singleness of mind, enabling them to devote their energies selflessly to a common purpose. That good tradition was nowhere seen to better advantage than in 1953, when the greater factor in success is revealed in the perfect team-work and unity of the party. Mountains are climbed by men, not by equipment.

Throughout the course of the Everest saga we have seen repeatedly enacted on the mountain one of the common mysteries of earthly life: that in suffering defeat the beaten man conquers;
likewise the victor in his victory. For they conquer themselves and none other. Therefore let us not say that Everest has been conquered. Rather should we say that the summit has been won; and remember at the end that fifteen men died for it. I feel a need to repeat what I said earlier. The true value of these expeditions will not be found at any moment of victory, nor do the attempts on Everest serve a useful purpose in any material sense. While recognizing these facts, men simultaneously and almost universally recognize and honour the greatness of the adventure. It is indeed for striving and exploring and discovering that we all are made.
Appendix I—Notes

CHAPTER I. The Height of Mount Everest

(1) The commonly accepted story that the height of Everest was first discovered by the Bengali chief computer, Radhanath Sikhdar, is not correct. Radhanath Sikhdar was transferred from Dehra Dun to the Surveyor-General's office in Calcutta in 1849, and was at no time employed in computing the heights of Everest and neighbouring peaks. The computer responsible for that work was an Anglo-Indian named Hennessey, who was assisted by many other computers in the field office at Dehra Dun. They arrived at the figure of 29,002 feet for Everest in 1852. The traditional story of the computer's rushing into the Surveyor-General's room with the news is unsubstantiated, but may be true.

(2) The difficulties of calculating the height of Mount Everest as stated on page 2 have been over-simplified and avoid the still controversial matter of calculating the difference between the geoid and the spheroid under the mountain. An informative contribution (for the layman) to the literature of this highly technical subject will be found in an article by B. L. Gulatee, Director of the Geodetic and Training Circle, Survey of India, in the 1952 volume of the Himalayan Journal.

CHAPTER I. The Name Chomolungma

The document from Rongbuk Monastery referring to Chomolungma is dated the Water-Ape Year (1932). Excerpts and commentary may be found in Everest: The Unfinished Adventure, by Ruttledge (publisher Hodder & Stoughton).

CHAPTER I. Dalai Lama's Pass

'The Five Treasuries of Great Snow' are the five tops of Kangchenjunga.

CHAPTERS VI AND X. Memorial Cairn

Finch's porter Tergio, who was killed in the North col avalanche, was also named Pema. It was the latter name that appeared on the memorial cairn, which has now been destroyed by persons unknown.

CHAPTER X. The First and Second Steps

The bases of the first and second steps are at 27,950 feet and 28,140 feet respectively. On page 104 the heights given are thus for the tops
APPENDIX I

of the steps. The second step is 80 or 90 feet high; the original estimate of 200 feet (page 98) was an error of judgment. The step being vertical and not climbable under half an hour if at all, it would appear that Odell saw Mallory and Irvine neither on the second nor first step, but on some lesser step below them.

CHAPTER XI. The Lama of Rongbuk

Since writing the passage on page 125, in which I wondered what might be the thoughts of the old Lama of Rongbuk on the struggle between Man and Chomolungma, I have received from Mr. E. O. Shebbeare some extracts from the Lama's journal, called the Namthar of Lama Ngag-dwang-baten-khsin-norbu. I quote here a few passages from that extract, which reveal at least a few of the Lama's thoughts. They refer to the 1922 expedition. Remarks in brackets, and the punctuation, are mine:

'Again during the third Tibetan month, thirteen European gentlemen and about one hundred coolies with three hundred transport animals arrived here and halted for one night, pitching tents... to-morrow we will meet at the big verandah in the Ngag-khang, as I am not keeping well to-day.

'In all three Sahibs and an interpreter came to see me. The chief Sahib presented a photograph of the Dalai Lama of Tibet and a bundle of Kinkaf silk. When I had served them with tea and rice, I asked them: "Where will you go?" I was told: "This mountain is the highest in the world. If we can ascend it and reach the summit, then the British Government will give us big pay and a title." [This remark must have come from the interpreter, Karma Paul, and not General Bruce.] I replied: "The country is a very cold one; only those who come for religious purposes can live here—it is difficult for the others. Moreover the deity of the place is a very terrible one, so please take care of yourselves as much as possible." When I said so to them they thanked me, and asked me also to help them. They wanted permission from me to get firewood for their use. So that they may be able to have it they promised not to hurt wild animals; also they swore that they have no other things [weapons] except knives to cut the wood. After they left me, one complete body of sheep, a brick of tea, and one basin full of flour was sent to them as a return present for their visit, and as the custom of the country. Then they left, and they pitched their big tents near the mountain, where they pitched seven tents in a row towards the hill: so it was told by the people. For about six weeks they tried to climb the mountain with
great difficulty, taking iron pegs, chains, and plates, and other things with them, when two of the Sahibs suffered frost-bite on their limbs and left the mountain. Afterwards I heard that their limbs came off altogether. When the remainder of the party tried to climb the mountain they succeeded in reaching a third of the way. At the time there was a very tremendous loud noise made by snow falling from the hill, when some of the men fell down with the snow.... Then somebody was sent to me by the chief Sahib with 15 Ngoosangs [a coin then valued at Rupees 15] for the funeral benediction and blessing for the dead, which was received by me. I performed the service with great keenness, thinking also that these souls suffered such great untold difficulties for the sake of nothing. So I took pity on them and performed the service.

‘After that the whole party were supposed to return, and so eight Sahibs with all the coolies have been permitted a general meeting with me. The chief Sahib asked me whether I did receive the 100 Tankas for the deceased coolies’ funeral benediction, and a magic hearth [a stove]... I asked him: “Did you suffer much?” He replied with a little sad face saying: “No, I am quite well, but some of our men died.” I sent him a tray full of sweets with a gold image of the goddess Tara, with my fervent prayer: “In the time to come may he with all the parties be a follower of the precious religion of the Victorious One.”’

CHAPTER XIII. Post-war Visits to the North Col

Two solo climbs have been made on the north side of Everest since the Second World War. The first was in spring 1947 by Earl Denman, a Canadian, accompanied by Tensing Bhutia and Ang Dawa; the second in spring 1951 by K. B. Larsen,1 a Dane, also with Sherpas.

Like Maurice Wilson before them, Larsen and Denman both travelled in disguise without passes, both were defeated at the North col, but (unlike Wilson) returned alive. Their efforts were inspired by the true spirit of adventure and show courage and great enterprise, but they add nothing to our knowledge of the mountain, for the negative lesson had long since been learned. (Denman’s journeys have been published by Collins under the title Alone to Everest; notes on Larsen’s appear in The Mountain World, 1953 edition, published by Allen & Unwin.)

1 Larsen approached Everest not from Darjeeling, but by crossing the Nangpa La from Sola Khombu in Nepal.
Appendix II—The Abominable Snow-man

The statement that ‘wild men’ live among the snows has long been made by those hillmen of Tibet, Nepal, and India who themselves inhabit the high Himalaya. These different peoples have different names for the same animal—*metohkangmi*, *mirka*, *yeti*, *sogpa*, *mi-go*, and others. Save for the first, these names are not translatable.

*Metohkangmi* is the Tibetan name, and the translation of that word after the Everest expedition of 1921 first brought the animal the honour of public notice. It should be noted that the discovery of the tracks on the Lhakpa La (see page 40) in September 1921 at 22,200 feet, had no fewer than thirty-two witnesses—Colonel Howard-Bury, Mallory, Bullock, Wollaston, Morshead, Heron, and twenty-six porters. Howard-Bury sent a report to England, and after the return of the expedition a Mr. Henry Newman questioned some of the Everest porters at Darjeeling. They again called the ‘wild men’ *metohkangmi*. *Kangmi* means ‘snow-man’ and *metoh* ‘filthy’ or ‘foul,’ but Mr. Newman, in making a report to one or two newspapers, translated the words as ‘The Abominable Snow-man.’ At this the world’s press swooped down with cries of joy. The too excellent label attached to the animal has tended to obscure the fact that it does exist. The true problem is whether it is of known species or unknown.

Since 1921, many similar reports have come from the Himalaya throughout a fourteen-hundred-mile length of the chain. It has become necessary to marshal this evidence purporting to establish the existence of the Abominable Snow-man, to examine its worth, and to arrive at some provisional conclusion. In marshalling the evidence known to me, I shall exclude all reports that have appeared in the press unsigned, on the assumption that these are the fabrications of journalists. I admit here only the signed reports of travellers or scientists of international repute, and the evidence of Sherpas whom I have met face to face and found trustworthy.

The 1921 report was not, as has usually been supposed, the first made by an Englishman; a still earlier account was given by Colonel L. A. Waddell in his book *Among the Himalayas*, published in 1898. Colonel Waddell travelled into north-east Sikkim in October 1889.
and approached the Donkya La (18,100 feet) on the Tibetan frontier. He came upon the tracks a thousand feet below the pass at a spot called Jarwa. He writes: 'Some large footprints in the snow led across our track, and away up to the higher peaks. These were alleged (by the Tibetans) to be the trail of the hairy wild men who are believed to live among the eternal snows. . . . The belief in these creatures is universal among the Tibetans. None, however, of the many Tibetans I have interrogated on this subject could ever give me an authentic case.'

As mentioned on page 51, General C. G. Bruce was in 1922 informed by the Lama of Rongbuk that five metohkangmi lived in the upper Rongbuk valley. It has become evident in the course of the years that the snow-man is well known to the people on both sides of the Everest massif, especially to the Sherpas of Sola Khombu (as described later), and that the signs of its life—tracks, occasional depredations, and even physical appearance—have become accepted as being in the natural order of events and not the supernatural; this without prejudice to its honoured place in local legend.

The animal has not yet been seen by a European, but that valuable evidence is possibly supplied three years later by a member of the Alpine Club, Mr. N. A. Tombazi, in the account of his photographic expedition to the southern glaciers of Kangchenjunga. His account was published privately in Bombay in 1925. While encamped at 15,000 feet under the peak of Kabru, Tombazi caught his glimpse of what may have been the Abominable Snow-man:

'Intense glare prevented me seeing anything for a few seconds, but I soon spotted the object referred to two or three hundred yards away down the valley—unquestionably the figure in outline was exactly like a human being, walking upright and stopping occasionally to uproot some dwarf rhododendron. It showed dark against the snow and wore no clothing. Within the next minute or so it had moved into some thick scrub and was lost to view.

'I examined the footprints which were similar in shape to those of a man but only 6 to 7 inches long by 9 inches wide at the broadest part. Marks of five toes and instep were clear, but trace of heel indistinct. I counted five at regular intervals from 1 to 1½ feet. The prints were undoubtedly of a biped.'

The next report comes ten years later from the well-known traveller, Ronald Kaulback. In 1935 he journeyed into the upper reaches of the Salween River, which lies in extreme west China or farthest east Himalaya. He found the tracks in December near the
La Gen (16,350 feet): ‘As luck would have it the next day was clear and sunny, the one bad point about it being the tremendous glare off the snow, which gave us slight headaches even though we were wearing dark goggles the whole time. Quite close to the La Gen, at 16,000 feet, we saw a line of tracks running straight down the side of the valley at what seemed to be an incredible angle, and went over to investigate. Unfortunately there was a thin layer of snow on top and they were not very clear, but in size and everything else they looked exactly like the prints of a bare-footed man—or men, rather, for there were five sets of them . . . the four coolies swore that bears were unknown in the locality. Two of them were in favour of their having been made by snow-leopards, going slowly, the hind paws just overlapping the fore to make a long imprint; and this was conceivable, although I had previously never heard of these animals moving in company. The other two said that they were the tracks of a party of Mountain Men—fearsome creatures who live high up in the snows. They all agreed that the Mountain Men did exist, and the oldest (a man of 45) declared that he had seen one some years before near that very place. . . . He described it as being like a man, white skinned, naked, and with long fair hair on the shoulders, arms, and head. . . . I should very much like to spend some time in that neighbourhood to find out definitely what the beast could have been.’

It remains to be added that during five months’ travel in the region Kaulback neither saw nor heard of monkeys.

These first reports were all from the eastern Himalaya, but now two come from Garhwal, five hundred miles to the west of Everest. Wing-Commander Beauman recorded seeing the tracks near the source of the Ganges, while Eric Shipton saw them on the Bireh Ganga glacier and likened their shape to an elephant’s spoor—so that presumably melting had occurred. In 1937 fresh reports came from five hundred miles still farther west. In that year Shipton and H. W. Tilman were running their survey expedition in the Karakoram. In August, Tilman and the Sherpas Sen Tensing and Ila crossed the upper basin of the Biafo glacier, called the Snow Lake, and here saw tracks that Tilman describes thus:

‘While contouring round the foot of the ridge between these two feeder glaciers, we saw in the snow the tracks of an Abominable Snow-man. They were eight inches in diameter, eighteen inches apart, almost circular, without sign of toe or heel. They were three or four days old, so melting must have altered the outline. The most remarkable thing was that they were in a straight line one behind
the other, with no stagger right or left like a bird’s spoor. A four-footed animal walking slowly puts its hind foot in the track of its forefoot, but there is always some mark of overlapping, nor are the tracks immediately in front of each other. However many-legged it was, the beast or bird was heavy, the tracks being nearly a foot deep. We followed them for a mile, when they disappeared on some rock. The tracks came from a glacier pool where the animal had evidently drunk, and the next day we picked up the same spoor on the north side of the Snow Lake.

‘The Sherpas judged them to belong to the smaller type of Snowman, or Yeti, as they call them, of which there are apparently two varieties: the smaller, whose spoor we were following, which feeds on men, while his larger brother confines himself to a diet of yaks. My remark that no one had been here for nearly thirty years and that he must be devilish hungry did not amuse the Sherpas as much as I expected. The jest was considered ill-timed. . . . They were not the tracks of one of the many species of bears which seem to haunt the Himalaya. . . . There was no game of any kind, nor grass, within fifteen miles, and the nearest village was forty miles away. A few days later, lower down in the Cornice glacier valley, bear-tracks were common and were recognized as such by the Sherpas and myself.’

Just a few months later, but more than a thousand miles eastwards, Major John Hunt (now Brigadier Sir John Hunt, who led the 1953 Everest expedition) tried to make the first crossing of the Zemu Gap in west Sikkim. This ‘Gap’ is a col at 19,000 feet between Simvu and the southern tops of Kangchenjunga. Hunt afterwards wrote the following letter to Tilman:

‘I went up to the Gap in November last year (1937) and you will be interested to hear the following. When we went up there were distinct tracks up the final slopes on the Zemu side—I thought at the time that they were both up and down as the tracks were double. From the top, moreover, steps had been cut down the slope on the Talung side to where it ends in the ice-cliff. I used them myself to examine the descent. At the time I presumed they were made by the German party (Grob, Schmaderer, and Peider) whom we had met at Lachen and who had spent six weeks on the glacier before us. I have, however, just received a copy of their book from which it is clear that they never went to the Gap at all. What on earth is the explanation of these tracks? They might conceivably have been those of an animal—though most improbable at that time of year
with the deep snow we had—but for the steps cut down the Talung side. Was the Gap crossed earlier last year and by whom?'

The Gap had been crossed by no one. To understand the importance of Hunt’s report we must remember that the steps he saw on the Talung side had been deliberately made (kicked or cut) in a slope that without them was too hard and steep to give footing; and further, we must realize that the movements of a climbing party in Sikkim cannot remain hidden—least of all on so difficult an expedition as the attempt to cross the Zemu Gap. Had any mountaineer been there before Hunt, the fact would have been known at Darjeeling.

In July 1938 the first crossing of the Zemu Gap was successfully made by Tilman after the break up of the Everest expedition of that year. This occurred eight months after Hunt’s attempt, of which he as yet knew nothing. In Everest 1938, the official book of the expedition, he writes: ‘On 8th July from a camp on the Zemu glacier we set out to make the first crossing of the Zemu Gap. . . . The weather was thick, the snow soft. Photography was impossible. As we plodded up the long easy snow slope to the col, crossing the debris of some huge recent avalanches, I noticed by our side a single track of footsteps which, in view of the weather conditions (daily rain and snow), could not have been more than a few days old. The tracks led up the glacier to the col and then disappeared on some rocks on the Simvu side. I remember feeling rather peeved at the time to think that we had been forestalled by some other climber, and we craned our necks anxiously over the top to see whether the tracks continued down the south side which was extremely steep. They did not, but on returning to Darjeeling, in order to make sure, I began making inquiries. . . . I found that the last visit to the Zemu Gap had been made by a Major John Hunt.’

No further evidence came out of the Himalaya for thirteen years. But members of Everest expeditions have been exceptionally favoured by fortune, and our return to the mountain in 1951 brought more news of the yeti. Early in November we withdrew from Everest into the Khomjupu district of Nepal, and thence explored the unsurveyed ranges that lie thirty to forty miles westwards. Our party split up. Shipton and Ward penetrated into the heart of the Gauri Sankar range—a wild tangle of high and icy peaks—by crossing a pass of 20,000 feet, now called the Menlung La. After explorations of our own farther north, Bourdillon and I followed them a few days later, and from the Menlung La dropped two thousand feet on to a
long, westward flowing glacier. At 18,000 feet on its snow-covered surface we came upon two lines of tracks, apparently made by two bipeds; the prints were shaped exactly like the human foot when booted, and of much the same size, but were quite distinct from the tracks made by Shipton and Ward and their only porter, Sen Tensing. At the time I wrongly assumed that Shipton must have three Sherpas with him. Like the first party, we followed the tracks for two miles down the glacier, because they had chosen the best route through the crevasse system. Where broad crevasses barred the way the tracks struck sharp left or right to avoid them, or dodged round little ice-cliffs or pinnacles. They were the tracks of an animal using its instinctive intelligence to choose a good, safe, and therefore (in its detail) complex route. Apart from that very important observation, our evidence at the Lest corroborates Shipton's and Ward's, for weathering had obliterated detail within the prints.

After two miles the glacier became excessively riven, so the tracks diverged rightwards on to the stony moraine, and there we lost them. We, too, had to take to the moraine, which we followed one mile to rough grazing grounds. These support small herds of wild goat and sheep and can presumably feed yeti too. On meeting Shipton and Ward, we found them to be still in a state of subdued excitement about the tracks, for they had come on them several days earlier than we, when the prints had been no more than a few hours old. Where the snow lay soft and heavy the yeti had left only the deep outline of the foot, but where it lay thin and frozen the pad marks and five toe marks had been distinct within the print. Where the yeti had jumped the smaller crevasses, the scrabble-marks of their toes could be clearly seen on the far side. The prints were six inches wide by twelve inches long. The gap between prints was not measured, but my estimate is nine inches at most.

Sen Tensing identified the prints as those of two yeti. He knew well the spoor of bear and could say at once that these were not bear tracks. To Shipton himself the yeti tracks were familiar enough, for in previous years he had seen and followed them for distances of up to a mile in several parts of the Himalaya. He and Ward had camped that first evening on the glacier, greatly wondering whether the yeti might steal up in the dead of night and drag them out by their feet. But Sen Tensing remarked: 'The yeti will be very frightened to-night, because we are the first human beings to come down into this valley.' The valley was indeed proved later to be completely
uninhabited by man. It lay at the heart of wild, hitherto unexplored ranges of mountains.

The last European evidence I would cite is that of the Swiss Everest expedition in early summer 1952. In the first official account, *Mount Everest Expedition 1952* by André Roch, the leader Dr. Wyss-Dunant writes this report from the Khombu glacier camp: ‘Prof. Lombard’s scientific patrol recently returned saying that they had found traces of plantigrades (animals that walk on the soles of their feet) in the snow not far from the camp. I set off immediately for the spot and we found not merely a single trace but a whole series a little farther on, indicating a family of plantigrades. . . . The spoor (plantar surface) measures 25–30 cm. (10–12 inches) in length and 12–15 cm. (4½–6 inches) in width, according to the age of the creature. The pace is about 35 cm. (14 inches) and the prints are in perfect alignment. On close examination of the tracks, unfortunately a little worn by the wind and the showers of the past few days, I found two prints where the impression of three front claws could be distinctly seen. The thumb, to which Shipton drew attention in 1951, is always strongly separated and clearly marked, but, curiously, without a claw. On several tracks I noticed behind the heel two triangular spur-like impressions which were probably due to tufts of hair.’

Wyss-Dunant adds that he reckons the animal to weigh about 60–80 kg. (130–75 lb). He thought that the prints might be those of quadrupeds, and so probably bears. But I am informed by André Roch, who himself examined the prints, that in his judgment they had been made by bipeds, and not by bears. In that opinion he is confirmed by the Sherpas, whose exhaustive knowledge of the fauna of their own high valleys does not include bears.

How, then, are the tracks to be interpreted? The zoologists of the Natural History Museum at London and of many universities, and several other knowledgeable persons, have between them suggested the following animals as authors of the prints: loping wolves, giant pandas, snow-leopards, langur monkeys, Hindu ascetics, outlaws, and bears of the breeds *Ursus isabellinus*, *Ursus arctus pruinosus*, and *kodiak*.

All of these animals, and many more besides, have left tracks in snow, and these have been readily identified. Most of them have left tracks in the high Himalaya (as distinct from foothill country), the exceptions being the giant panda, which cannot live without its bamboo shoots, and the langur monkey, which does not venture far
beyond the tree-line and could not survive the intense cold and oxygen-lack of autumn life at 16,000–18,000 feet (say in the Menlung Chu), nor the total lack of vegetable monkey-food. The question is, therefore, whether the tracks reported by the above eleven European expeditions could all have been made by one or other of the suggested animals. The answer would seem to be no.

The tracks seen by Tombazi might conceivably have been made by a naked Indian ascetic, although the site and foot-measurements render the notion less supportable than that of a yeti. A loping wolf might conceivably have made the tracks seen by Howard-Bury and company on the Lhakpa La, although no wolf has ever before or since been reported at a height of 22,200 feet. A bear may have made the tracks seen by Shipton in Garhwal, for subsequent melting does make all footprints circular, like elephant spoor; and bears are common in Garhwal. F. S. Smythe has found bear tracks there at 16,500 feet, and in 1952 J. B. Tyson’s expedition to Tehri-Garhwal suffered the attack of a bear (during the party’s absence) on a glacier-camp at 16,000 feet.

This much having been granted, it remains to be noted that none of the clear tracks cited here in evidence has resembled those of a bear, and that some have been found in areas where bears, pandas, monkeys, outlaws, and wandering ascetics are with good reason believed not to exist—such remote tracts as the Zemu Gap, the Menlung Chu, the upper Khombu glacier, the Biafo Snow Lake, and the upper Salween. Of the remaining animals, no loping wolves or snow-leopards could have made steps in the hard, steep snow found by Hunt at the Zemu Gap, nor made the clear prints, complete with pad and toe marks, seen in the Menlung Chu in 1951 or the upper Khombu in 1952.

This same argument serves to demolish a most ingenious theory that has recently been put forward—that such tracks have been caused by the infiltration of a warm current of air into a very cold atmosphere, so that sudden condensation causes large blobs of water to be projected groundwards, thus marking the snow with tracks like those of an animal. That meteorological phenomenon has been observed in Canada, and might possibly account for some reports of circular prints that follow a dead straight line with wide spacing. But blobs of water do not leave pad and toe marks, nor kick steps in hard snow, nor follow circuitous routes through crevasse systems, nor make two to five criss-crossing tracks, nor stampede as a whole family out of the Khombu valley when the Swiss move in.

After making all reasonable allowances and ascribing to known
animals and air currents tracks which they are unlikely to have made, there remains a hard core of recorded experience that as yet cannot be explained short of accepting the existence of the *yeti*; to which existence, and to whose appearance, the peoples of the Himalaya can testify.

In 1949 the *yeti* was seen in the district of Sola Khombu by a large company of Sherpas, who had gathered on the meadow before Thyangboche Monastery (see pages 149-50) in order to attend a religious festival held annually in November. One side of the meadow is screened by trees, through which the *yeti* appeared. The Sherpas say that they saw it within twenty-five paces and describe it as the size of a Sherpa. The forehead was high and narrowed towards the top. It was covered in reddish-brown hair except on the face which was bare. During the brief period in which they saw it, it stood on two legs, not four.

Sen Tensing had been present on this occasion, and gave us the above account after our discovery of the prints in the Menlung Chu in the autumn of 1951. In late November we had him thoroughly questioned at the British Embassy in Katmandu. H.B.M. Ambassador held a cocktail party, attended by members of the Royal House, the Government, the nobility, and the Everest expedition. Half-way through the function Sen Tensing was introduced to the company, still wearing his climbing boots and breeches and anorak. The Nepalese ministers and leaders grilled him for half an hour. He created a very great impression, and became the lion of the party. He held himself with dignity, made great by a natural ease of manner; he could look everyone straight in the eye and give his answers right off; he displayed engaging frankness and the fearless inner integrity of the true hillman. The Nepalese told us later that Sen Tensing was quite unsophisticated although intelligent: he could not have borne false witness and maintained it under the interrogation they gave him. They were satisfied that he had spoken the truth out of his own experience.

What the Nepalese could not say was how far Sen Tensing might quite unconsciously have allowed imagination to embellish original facts. And we had had no opportunity that year of checking the story at Thyangboche. But the check was made by Colonel Hunt in April 1953. On his expedition's arrival at Thyangboche he called upon the acting head Lama (the head Lama was in Tibet) and gives this report: 'Seated with Charles Wylie and Tenzing beside our host, a rotund figure robed in faded red, I questioned him about
the Yeti. . . . The old dignitary at once warmed to his subject. Peering out of the window on to the meadow where our tents were pitched, he gave a most graphic description of how a Yeti had appeared from the surrounding thickets a few years back in winter, when the snow lay on the ground. This beast, loping around sometimes on his hind legs and sometimes on all fours, stood about five feet high and was covered with grey hair, a description which we have heard from other eye-witnesses. Oblivious of his guests the abbot was reliving a sight imprinted on his memory as he stared across at the scene of this event. The Yeti had stopped to scratch—the old monk gave a good imitation, but went on longer than he need have done to make his point—had picked up snow, played with it, and made a few grunts—again he gave us a convincing rendering. The inhabitants of the monastery had meanwhile worked themselves into a great state of excitement, and instructions were given to drive off the unwelcome visitor. Conch shells were blown and the long traditional horns sounded. The Yeti had ambled away into the bush.

Although the yeti appears to move much above the snow-line, as do many other animals, advancing even to 22,000 feet where the ground is favourable, yet no suggestion is here made that he lives there. His lair is probably to be found among the vast areas of huge boulder scree between the glaciers and the grazing grounds, at heights varying from 13,000 to 16,000 feet. He is alleged by the Sherpas to eat roots, grasses, berries, insects and small animals like the tail-less rats, and also to attack and eat occasional high-straying yaks; but this latter statement should as yet be taken with reserve. He will, says the Sherpas, sometimes attack a man moving alone, but never men moving in company. The bodies are found with one side of the face torn away—a form of attack natural to both the bear and ape genera.

There is no doubt in my own mind that the animal is there. It is either an animal not yet known to natural historians, or else it is one known to them but living in an environment where it was not hitherto thought able to exist. Enough evidence has now accumulated to demand and justify an expedition whose sole purpose is to stalk and discover the yeti. Discoveries of new animals have normally followed the same history. They have been reported over a long term of years by the natives, and later by travellers; zoologists, finding no equivalent on their lists of fauna, scout the reports as fantastic; and then, after many years have elapsed, a carcase is produced and the men of science are confounded. Such has been the
course of recent discoveries like the baby hippopotamus, the okapi, and the giant sable antelope.

What, then, is the Abominable Snow-man? My earnest hope is that he may be nothing less splendid than a yeti, which I think likely to be a new species of a known genus. We must wait awhile for the answer. With good fortune that may be given us soon, for an expedition devoted to finding it sets out from England to Sola Khombu in 1954.
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