

# 2

## An outspoken Australian

The first Australian connection with Himalayan climbing goes back to very nearly the beginning of Himalayan climbing itself and in location to Mt Everest, to the precise area of the mountain's northern aspect where the American–Australian drama of 1984 unfolded. In 1922, the second major British expedition to Mt Everest made the first serious attempt to reach its summit. The British climbers of 1922, using the North Col/North Ridge route that the Americans would follow 62 years later, climbed higher than any human had previously climbed. In setting that record, the second British summit team avoided high winds on the ridge by traversing across the North Face to a point very close to the Great Couloir—the line of the 1984 Australian climb. Ironically, the leader of that group of British climbers in 1922 was in fact an Australian, George Ingle Finch.

Finch was a man of many and varied talents. In addition to being one of the most accomplished snow and ice climbers of his era, Finch was a well-respected scientist, a clever innovator and an exacting and, at times, witty writer. Although he was a member of only the 1922 British Everest expedition, Finch exerted an important and often controversial influence on Everest attempts for decades.

It was a scramble up a rocky little peak on his family's sheep and cattle property near Orange, New South Wales, that first sparked thirteen-year-old George Finch's enthusiasm for high places. He wrote in his autobiography, *The Making of a Mountaineer*:

[O]n a dewy spring morning in October, I urged my panting pony towards a hill-top in the Australian bush, the better to spy the whereabouts of a mob of wallaby. The last few feet of the ascent being too much for the pony, I dismounted and, leaving him behind, scrambled up a short, rocky chimney to the summit. The wallaby were nowhere to be seen; but my wondering eyes were held spell-bound by such a vision as I had never even dreamed of. Miles and miles away the white-washed roofs of the township of Orange gleamed brightly in the clear morning sunshine;

the main roads converging upon the town showed sharp and distinct from out [of] their setting in the rolling bush. The picture was beautiful: precise and accurate as the work of a draughtsman's pen, but fuller of meaning than any map. I was just thirteen years old, and for the first time in my life the true significance of geography began to dawn upon me; and with the dawning was born a resolution that was to colour and widen my whole life. Before returning to my pony after this, my first mountain ascent, I had made up my mind to see the world, to see it from above, from the tops of mountains.<sup>1</sup>

Young Finch did not have to wait long to begin his life's odyssey to see the world from above. A year later, the Finch family travelled to Europe, and in no time George and his brother, Max, found something to climb. After scrambling up a steep, dangerous sea-cliff at Beachy Head in England, they scaled—much to their parents' consternation—the Notre Dame Cathedral on their first visit to Paris.

They would have many more opportunities to climb in Europe. It was decided that the boys would be educated on the Continent, looked after by their mother, while their father returned to Australia to manage the property. After tutors in Paris accomplished his secondary education, George Finch settled on the Eidgenössische Technische Hochschule (ETH) in Zurich for his tertiary education.

He decided that the physical sciences were exacting and challenging enough for him, so he pursued a course in chemical engineering, gaining his diploma in 1911 and winning a gold medal as the best student in his year (which he quickly sold to finance one of his climbing trips). After short sojourns in Germany and Geneva, he settled in England and built his considerable scientific reputation with more than 40 years of research there.

For nearly all of that period, he was on the staff of the Imperial College of Science and Technology in London, rising to Assistant Professor in 1927 and then to the Foundation Professor of Chemical Engineering in 1936. His major interest lay in surface physical chemistry and he was a pioneer in using the technique of electron diffraction to study the properties of surfaces. His work was widely recognised throughout the scientific world and he was accorded its highest honours. He was elected a Fellow of the prestigious Royal Society, received an honorary Doctorate of Science from the University of Brussels, was created a Chevalier of the Legion of Honour in France and was made a Companion of the Order of Leopold II in Belgium. Throughout his distinguished scientific career, he presented numerous invited lectures in England and on the Continent.<sup>2</sup>

---

1 Finch, G. I. 1924, *The Making of a Mountaineer*, J. W. Arrowsmith, Bristol, England, ch. I.

2 Russell, S. 1988, *George Finch—The mountaineer. A memoir*, J. W. Arrowsmith, Bristol, England, ch. 4.

George Ingle Finch's mountaineering career was equally illustrious. A member of the Academic Alpine Club of Zurich, he was soon recognised by his peers for his climbing prowess and for his rather unusual personal style. Italian climber Count Aldo Bonacossa, on visiting Zurich in 1909 and meeting the leading mountaineers of the area, remarked:

But the recognised number one mountaineer and the most outstanding personality among them by far was George Finch. He was tall and wore his hair long and untamed, quite unlike other men in Switzerland...this gave him an exotic look. Moreover he came from the Antipodes and as a result was nicknamed 'The Australian'.<sup>3</sup>

At the time of Finch's development as a climber, the mountaineering world was centred on the European Alps. The Himalaya were certainly known to climbers and Mt Everest had already been established as the highest peak in the range, and indeed the world. The problem, however, was access. The Kingdom of Nepal, which lay to the south of the great range of the Himalaya that contained Everest and seven other of the world's 8000 m peaks, was definitely off limits to outsiders. The northern approach to the range, through Tibet, was only slightly more accessible. It was the British who gained the inside track to the northern route primarily through their covert support of Tibetan autonomy in a three-way tussle with Russia and China for control of the arid plateau. Although China was officially recognised by the other powers as having sovereignty over the region, the Tibetans, when they eventually gained autonomy in 1913, did not forget the unofficial help they received from the British.

With the possibility of gaining access to the Himalaya growing year by year, the attention of the British mountaineering community quickly focused on Mt Everest—the logical first target of ambitious climbers. Finally, near the end of 1920, the Dalai Lama gave permission for a British expedition to travel to Mt Everest. The scramble was immediately on to organise the venture, choose the climbers, equip them and get the entourage to the mountain the next year before the fickle politics of the region had a chance to slam the door shut again.

George Finch was an obvious choice as one of the Everest climbers. He was by then one of the leading alpinists in Britain and the Continent, he was available for the expedition and in many other ways he was simply impossible to ignore. Even his physical appearance, though not quite as 'Australian' as in his earlier climbing days, commanded attention from all who met him. As his son-in-law Scott Russell wrote:

At first sight he seemed rather formidable. Over six feet two inches tall, broad-shouldered and very erect, he made the rest of us look rather puny, but it was his strong finely drawn features which impressed me most, especially his expressive cold-blue eyes, which inspected me, rather dauntingly, at our first meeting. Later I came to

---

3 Ibid., ch. 5.

realise that they were an excellent barometer of his mood, which sometimes changed rapidly. Interest, amusement, suspicion, or disapproval were unmistakably conveyed with an appropriate change in voice; silence and a blank, rather stern, expression indicated that he was deep in thought. It was no surprise that he inspired great friendships and equally great enmities for his personality and his appearance made it scarcely possible for him to be ignored in any company.<sup>4</sup>

Finch's experience and climbing skill were certainly recognised by Percy Farrar, president of the British Alpine Club, who recommended Finch and his brother, Max, as the summit party. They would be joined by Marcel Kurz, a strong Swiss climber, to form the nucleus of the climbing team for the 1921 expedition.

Unfortunately for Finch, Farrar could not make the selection alone. Soon after the Dalai Lama granted access to Everest, a committee was formed to organise and oversee the venture. Although the Mount Everest Committee had equal representation from the Alpine Club and the Royal Geographic Society (RGS), the group was quickly dominated by A. R. Hinks, the secretary of the RGS and a man with no mountaineering experience. Almost immediately, mountaineering considerations were pushed to the background and, try as they might, Farrar and the other Alpine Club members were virtually powerless to influence the committee's decisions on most aspects of the expedition.

The first to go was Kurz, as it was decided that the expedition should be all English. Next to get the axe was Finch, whose outspoken and unconventional behaviour did not sit well with the staid RGS, and particularly Hinks. Indeed, although Farrar supported him vigorously, Finch had made a few enemies within the Alpine Club with his frank comments on the quality of British climbing.

Everest historian Walt Unsworth attributed much of Finch's trouble with the Mount Everest Committee to his 'Australian unorthodoxy'.<sup>5</sup> It was, however, undoubtedly not his Australian upbringing, but rather his own, often abrasive, personality, his questioning, analytical scientific mind, his background as a Continental rather than British climber and his outspokenness, particularly when challenging traditional values, that got him into trouble with the committee.

Finch's problems with the Alpine Club itself stemmed from his pointed comments on two strongly held values of club members: the importance of rock climbing and the necessity of guided climbing in the Alps. British climbers' emphasis on rock climbing was understandable. The British Isles are liberally endowed with small to medium-sized crags of sound rock; but apart from a few Scottish hills with steep gullies that are covered in ice in winter, there are no ranges on which climbers can hone their alpine skills.

---

<sup>4</sup> Ibid., ch. 2.

<sup>5</sup> Unsworth, W. 1981, *Everest*, Penguin Books, Middlesex, England, ch. 3.

In Finch's home range of the Alps, he had learned to contend with a variety of conditions, from hard polished ice to soft, almost bottomless snow into which climbers sometimes sunk to their chests. He had to devise routes through mazes of glaciers, snow basins, ridges and gullies, and sometimes carry out the climbs in raging storms or thick fog. He had to be alert to dangers: the stability of a moderately angled snow slope against avalanching, the possibility of a rock fall from an unstable ridge above or the likelihood of hidden crevasses in a glacier. To Finch, rock climbing was just another weapon, and not a terribly important one at that, in the rather considerable arsenal of the alpine climber—and he was not afraid to say so publicly.

In *The Making of a Mountaineer*, he wrote:

Rock-climbing, particularly on good, sound rock, has never held any great charm for me. I have always regarded it as but one of the simplest, most easily learnt and less important branches of a wider art, and, as it is met with on almost any big snow-and-ice expedition, I have never felt disposed to go out of my way in search of it for its own sake.<sup>6</sup>

Earlier he had contended that 'the novice who is sound in mind and limb can do well on rocks even at his first attempt...even the greatest rock-climb becomes in time a gymnastic feat, a trial of purely physical strength'.<sup>7</sup>

Despite this attitude, Finch was, at one time, induced by devotees of rock climbing to scale the Grepon, one of the great rock pinnacles near Chamonix in the Alps. After the col below the peak itself, the climb was purely on rock and at the end of it an unimpressed Finch remarked, 'One could not help feeling that a baboon would have acquitted himself throughout with much more distinction than any of his human brothers.'<sup>8</sup>

Finch, however, saved his most vitriolic attacks for those, including some Alpine Club members, who pontificated about the danger of amateurs climbing in the Alps without the services of a professional guide. At the time, the conventional wisdom was that the strongest mountaineering party consisted of keen amateur climbers, who provided the idea and the driving force for the venture, and professional guides, who supplied the technical expertise required for long routes up complicated mountains over a variety of snow and ice conditions. In addition, the guides would do the hard physical labour of cutting steps in steep ice slopes. Moreover, climbing without professional guides was considered downright dangerous, and the inevitable accidents would give mountaineering a bad name.

<sup>6</sup> Finch, *The Making of a Mountaineer*, ch. XVII.

<sup>7</sup> *Ibid.*, ch. V.

<sup>8</sup> *Ibid.*, ch. XVII.

Although Finch was not the first climber to challenge this idea, he was the most outspoken proponent of guideless climbing. He believed that only by climbing without a guide could a mountaineer develop the true love of mountain adventure that came from tackling and solving problems using only one's own resources and experience the supreme joy that unaided achievement brought. When Finch and others began extolling the virtues of guideless climbing in public, the establishment fought back vigorously, calling the new ideas suicidal, wicked and immoral.

The clash over guided climbing was typified best by Finch's remarks when he was chastised by traditional climbers in Zermatt after having arrived by crossing the Furggjoch by himself:

Zermatt is filled with non-climbing trippers and crowds of hoary headed Alpine Club has-beens who seem to delight in discouraging would-be climbers...I was rude to two most important members of the A. C. who said I should not have come over the Furggjoch alone. I wound up by asking one of them point-blank if he measured my capacity as a climber by his own.<sup>9</sup>

Despite George Finch's sharp clashes with his more traditional peers, his mountaineering achievements themselves were so outstanding that the Everest Committee could not exclude him from the 1921 expedition without some more solid grounds. The clever Hinks was up to the task and soon found an iron-clad reason for tossing the troublesome Finch off the team.

The committee required all prospective climbers to undergo an extensive medical examination—quite a reasonable proposition since they would be subject to the most extreme physical stress on the Everest attempt. The committee chose the doctors and Finch was found unfit for the expedition, probably because he had contracted malaria during the war and had undergone drastic treatment in France. He was occasionally subject to weight loss, but that minor problem never interfered with his climbing in the Alps.

The decision to exclude Finch was controversial and the hand of Hinks was often suspected as the real reason for the negative medical report. More concrete evidence for this suspicion came to light only in 1986, when Scott Russell was researching his 'memoir' on the life of George Finch. Just after Finch had undergone his medical examination, and before he had been officially excluded from the expedition, he and an engineer travelled to Oxford to investigate the performance of stoves at low pressures. To do their tests, they used a low-pressure chamber constructed by Professor George Dreyer to study the reaction of airmen at high altitude to the use of supplementary oxygen. Before the pair could use the chamber for their stove tests, they had to undergo an exhaustive medical examination. The summary of the report on Finch states:

---

<sup>9</sup> Russell, *George Finch—The mountaineer*, ch. 6.

1. Captain Finch is slightly under weight at present, otherwise his physique is excellent.
2. He has an unusually large vital capacity. This indicates a high degree of physical fitness, and he should therefore be able to stand great exertion at high altitudes better than most persons.
3. Furthermore, the tests in the low pressure chamber proved that Captain Finch possesses quite unusual powers of resistance to the effects of high altitudes. Among the large number of picked, healthy, athletic young men we have examined, more than 1000 in all, we have not come across a single case when the subject possessed the resistance power to the same degree.<sup>10</sup>

The committee, by a majority decision, had excluded Finch from the expedition by the time it had received Dreyer's report. Farrar, who had backed Finch all the way, was furious when he saw Dreyer's report and fumed to Hinks, 'This is the weakling whom we have flung out!'<sup>11</sup> The decision stood, however, and Finch was relegated to climbing in the Alps that season. He wasted no time in climbing Mt Blanc by a particularly difficult route, prompting Farrar to write to Hinks that 'our invalid Finch took part "in the biggest climb done in the Alps this summer"'.<sup>12</sup>

The 1922 Everest expedition was quite a different story. The 1921 team had thoroughly explored the approaches to the mountain but had made little real progress in solving the problem of attaining its summit. It was clear that the next group would need to pay far more attention to the climbing aspects rather than exploration. The committee realised that the climbing team had to be strengthened and reluctantly agreed to invite George Finch to join the four other climbers: George Leigh-Mallory, Henry Moreshead, Edward Norton and Edward Somervell. The leader was General Charles Bruce.

Finch's reputation was very well known—as a climber and as an outspoken eccentric. While the former commanded respect from his colleagues, the latter encouraged them to hold him at arm's length and make him feel not particularly welcome on the trip. Even General Bruce, one of whose jobs as leader was to encourage harmonious relations among the expedition members, wrote of Finch: 'Cleans his teeth on 1 February and has a bath the same day if the water is very hot, otherwise puts it off until next year. Six months' course as a lama novice in a monastery would enable one to occupy a Whymper tent with him.'<sup>13</sup>

The problems were compounded by Finch's insistence that supplementary oxygen was necessary to climb Everest. The oxygen question sparked another bitter row between traditionalists, who thought that using supplementary oxygen was unsporting and

---

<sup>10</sup> *Ibid.*, ch. 7.

<sup>11</sup> *Ibid.*

<sup>12</sup> *Ibid.*

<sup>13</sup> Monteath, C. 1986, 'The man who brought English air to Everest', *Geo*, vol. 8, no. 4, pp. 40–51.

un-British, and those, like Finch, who thought that oxygen, like an ice axe or a stove, was just another aid to the climber tackling a very formidable problem. Other climbers objected to the use of oxygen not on philosophical grounds, but because the weight of the apparatus itself more than negated the benefit of breathing the pure gas. Initially, Finch was himself against the use of oxygen for this reason, but his meeting with Dreyer, who was a recognised expert on the use of oxygen by airmen, convinced him that oxygen would be useful for Everest climbers and, indeed, that the mountain could not be climbed without supplementary oxygen.

Farrar and Finch managed to convince the Everest Committee that the dispute over the usefulness of oxygen could be resolved only by testing the idea on the mountain itself, so Finch was put in charge of the supplementary oxygen apparatus and its use. Finch's enthusiasm for oxygen, however, and his nightly 'oxygen drills' on the voyage to the subcontinent and the march to base camp quickly turned the rest of the climbing team against oxygen. One of them penned a sarcastic poem and handed it to Finch:

The anchor was weighed at the Port of Marseilles  
 When we started to verify travellers' tales.  
 The weather was fine and we all were at ease  
 And prepared for a fortnight's good rest on the seas.  
 But Hark? What is that? It's six bells without doubt  
 And soon all our holiday's gone up the spout,  
 For whether we're resting, or reading or ill  
 We're ruthlessly summoned to Oxygen Drill.  
 Have you theories precise on the subject of gas?  
 Respiration, and so on and action in mass?  
 The exactest of thought will appear rude and boorish  
 Compared with the latest in science from Zurich.  
 Do you think you know about altitudes high,  
 And what kind of glass keeps the sun from your eye?  
 On such questions your ignorance really is crass,  
 But you'll soon be made wise when George Finch starts to gas.<sup>14</sup>

By the time the expedition finished its long journey across the Tibetan Plateau and established base camp along the Rongbuk Glacier, the group dynamics had ensured that Finch was well and truly excluded from the main climbing group and, indeed, that the objectives of the expedition had subtly changed from climbing Everest to seeing how high climbers could get without using supplementary oxygen. This tacit change of direction rankled Finch, who was determined himself to get to the summit if at all possible. The possibility of severe and open conflict between Finch

---

14 Russell, *George Finch—The mountaineer*, ch. 8.

and the other climbers was removed somewhat when Finch contracted a mild form of dysentery and was forced to remain at base camp while the other four climbers made the expedition's first attempt to climb Everest.

The mountain was a long way from base camp, so the climbers had to pass through three additional camps along the East Rongbuk Glacier before they could tackle their objective. The route they chose on the mountain itself was judged to be—and was subsequently proven to be—the least difficult on the northern side of Everest. They gained the upper reaches of Everest by climbing the steep snow slope that stretched from the neve of the glacier to the North Col—a saddle between Everest and Changtse, its northern outlier. From there they would climb the broad ridge from the col, at 23 000 feet (7000 m), to a shoulder at 27 400 ft (8350 m) where the ridge from the col joined the long North-East Ridge. They then hoped to climb the latter for the final 1600 ft (480 m) to the summit. The plan was to establish camp four on the North Col and put in one additional camp high on the ridge above the col before going for the summit.

By the time Mallory, Norton, Moreshead and Somervell had retired beaten from their attempt on the mountain, Finch had moved up to camp three below the North Col and had greeted the climbers on their return. He reported them to be 'practically at the end of their tether and were hardly able to speak coherently'.<sup>15</sup> Still, the four had made a tremendous effort, climbing to 25 000 ft (7620 m) before establishing the last camp, from which Mallory, Norton and Somervell pushed to nearly 27 000 ft (8230 m) before the effects of cold and altitude forced a retreat.

Finch, now recovered from his bout of dysentery, still had two formidable problems to solve before making his own bid for the summit. The first was a lack of climbing partners. The other four members of the climbing team had just returned exhausted from their attempt and obviously none would be in condition to accompany Finch. He was forced to settle for Geoffrey Bruce (see image 2.1), the cousin of General Bruce, and Gurkha Tejbir, one of the non-commissioned officers attached to the expedition. Neither had any mountaineering experience.

It would be hard to imagine a more bizarre team to attack Mt Everest: a skilled but eccentric climber who periodically suffered from the effects of malaria and who had just recovered from a bout of dysentery, the expedition's transport officer whose only experience in mountains had been to chase game in Kashmir, and a Gurkha porter whose main attribute seemed to be that he grinned a lot. Nevertheless, Finch, who was undoubtedly disappointed at not having any of the climbing team to accompany him, was not unduly worried about his partners' lack of climbing experience. In fact, he had often climbed with novices in the Alps, sometimes on

---

15 Finch, *The Making of a Mountaineer*, ch. XX.

difficult routes, and considered a man's character, fitness and mental attitude to be as important as his climbing experience. In choosing Bruce and Tejbir for his Everest attempt, his judgment proved to be flawless.

The second major problem was the condition of the oxygen apparatus, which had taken quite a battering on the rough trip to base camp. Many repairs were needed and since Finch's reputation was staked on the efficacy of the apparatus, he threw himself into the task during his days at camp three. Joined by the hard-working Bruce, who had become an enthusiastic convert to the oxygen cause, Finch set up a workshop outside the tents at the camp. The pair, interrupted at times by snowstorms, worked tirelessly with hacksaws, pliers and soldering iron to seal metal joints, replace dry washers, check valves and design and construct a new mask. The hard, often uncomfortable work paid off. The trio was about to embark on one of the most remarkable efforts on the world's highest mountain.

On 22 May, Finch, Bruce and Tejbir set out for the North Col. Using the oxygen apparatus with the redesigned mask, the climbers made short work of the task and arrived at camp four just three hours after their start. Of that time, 45 minutes had been taken by stops, so the 2000 ft (610 m) of altitude had been gained in little more than two hours. That rate was comparable with a good rate in the Alps; Finch had proved his point about the usefulness of oxygen.

Furthermore, Finch's knowledge of snow conditions had come to the fore in the climb to the col. He led his inexperienced partners directly up the treacherous slopes; a zigzagging route would have risked loosening snow shields or triggering avalanches. Near the top of the slope, Finch cleverly found the buried lip of a small *bergsbrund* on which to safely traverse to a point where the ice cliffs guarding the col itself could be breached. It was a masterful performance by all three and it suddenly appeared that Everest would have a strong challenge.

The three climbers dropped their loads, had a look around the col and then descended to camp three to rest for a day before starting their push for the summit. They completed the descent in just 50 minutes, including frequent stops for Finch to take photographs. The other four climbers, resting at camp three, were startled by the performance of Finch's party. It looked like Finch was about to turn the tables on those who had mocked him and his oxygen on the trip to base camp.

The success of the team's carry to the North Col had convinced John Noel, the expedition's official photographer, of the value of oxygen and Noel accompanied the group on their second climb to the col on 24 May. The next morning, Finch sent the porters away at 8am for the carry up to the next camp. The three climbers themselves, however, were in no hurry as Finch was confident that, with the help of oxygen, they would quickly overtake the porters. At 9.30am, they left camp four and, about 1500 ft (460 m) above the col—about 24 500 ft (7470 m) high—they

overtook the porters on the broad snow ridge leading to the shoulder. Above lay a steepening snow slope, so Finch set to work cutting deep, closely spaced steps to aid the porters' ascent. The party progressed steadily, but as they gained the rocky terrain above the snow ridge, the weather broke and they were buffeted by wind and snow. Finch pushed the party on, but as they reached 25 500 ft (7770 m), he realised that to push further into the storm would unjustifiably risk the lives of the porters, who were to return to the col after dumping their loads at the high camp.

The camp was pitched precariously on a little ledge on the crest of the ridge; it hung above precipitous drops into the Rongbuk and East Rongbuk Glaciers. As Finch, Bruce and Tejbir settled in for the rest of the day, the storm intensified. At times it lifted the tent, with its three occupants, off the ground and threatened to toss it off the ridge. The three climbers took turns crawling outside to resecure the guy wires, and during the worst gusts Finch reported that the 'wild flapping of the canvas made a noise like that of machine-gun fire, and, what with this and the shrieking and howling of the gale round our tent, it was well-nigh impossible to converse with each other except by shouting, mouth to ear'.<sup>16</sup> To make matters worse, a flying rock cut a hole in a panel of the tent.

After a short lull in the morning raised hopes of the storm's abatement, it returned in full fury. There was no possibility of the climbers moving either up or down. By early afternoon, the storm finally began to wane and the trio had an opportunity to abandon their precarious perch and return to the relative safety of the col. Finch, however, would not entertain the thought. He had come to Everest to climb the mountain and he would give it his best shot. When the porters, carrying flasks of hot tea prepared by Noel at camp four, arrived in late afternoon, they were amazed when Finch and his partners refused to return with them.

Although the storm had cleared, the second night at 25 500 ft (7770 m) was little better than the first. They had virtually run out of food and the bitter cold was beginning to penetrate their bodies. Even the optimistic Finch began to worry about the real possibility of severe frostbite and even about their ability to survive the night. Then he remembered the oxygen, hitherto used only for climbing, and dragged a set in from outside the tent. The three took whiffs of oxygen in turn. The effect was instantaneous, as Finch described:

Tejbir took his medicine without much interest; but as he inhaled, I saw with relief that his face brightened up. The effect of the oxygen on Geoffrey Bruce was particularly visible in his rapid change of expression: the hitherto drawn, anxious look on his face gave place to a more normal one.<sup>17</sup>

The oxygen probably saved their lives.

---

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

In the morning, the unlikely trio set their sights on the top. With Finch in the lead and oxygen sets on their backs, they climbed steadily up towards the shoulder. About 500 ft (150 m) above the camp, however, Tejbir collapsed; he simply could not push himself any further. Finch and Bruce split his load and, after ensuring that he could descend safely on his own, sent him back down to the camp.

The wind came back in considerable force as Finch and Bruce pushed up towards the shoulder. Finch soon decided, with the icy wind howling across the ridges in increasingly powerful gusts, to abandon the ridge-tops and traverse out onto the somewhat sheltered North Face. The tactics, however, led to more difficult climbing as the strata on Everest dipped to the north so that the slabs of rock overlapped to present to the climbers small overhangs rather than small ledges. In addition, new snow had covered much of the rock. To save time, Finch had decided not to tie a rope between himself and the novice Bruce, thus showing considerable confidence in his partner's ability to handle the tricky conditions.

At an altitude of 27 000 ft (8230 m), Finch decided to change the attack and angle up directly towards the summit. A few minutes later, he heard Bruce give a panicked cry, 'I'm getting no oxygen!' and turned just in time to grab Bruce's shoulder before he tumbled backwards down the North Face.<sup>18</sup> Finch sat his companion down and, sharing oxygen with him, systematically went to work to find the fault. It turned out to be a broken glass tube in the mask. The methodical Finch had carried a spare tube, so he quickly repaired the mask and the pair was on their way again.

The delay had, however, taken too much out of them, particularly Bruce. With Finch's vast experience in the mountains, he was alert to the condition of his companion and realised that Bruce was near to a breakdown like Tejbir's. It was a brutal blow to Finch, who wrote: 'Never for a moment did I think we would fail; progress was steady, the summit was there before us; a little longer, and we should be on the top.'<sup>19</sup> Finch had the strength and determination to continue, with a good chance of reaching the summit, but he had no choice. To continue would have endangered Geoffrey Bruce, so, despite Bruce's protestations, Finch ordered a retreat. The first serious attempt on Mt Everest was over.

Although Finch was deeply disappointed at not reaching the summit, he and Bruce had achieved much. They had climbed to 27 400 ft (8350 m)—higher than anyone had climbed before. In doing so, Finch had safely guided two completely inexperienced companions up difficult and dangerous snow slopes, across treacherous rock slabs and through the perils of cold, storm and high altitude. And he had proved, on Mt Everest itself, that supplementary oxygen was definitely a benefit to climbers. That aspect of the debate was over.

---

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

Despite all of those achievements, Finch's difficulties with the Everest Committee continued, and even increased during the next year or two. When the climbing team was selected for the 1924 Everest expedition, he was not included. Much of the new trouble stemmed from a European lecture tour that Finch gave on the 1922 Everest expedition. According to the agreement that Finch and all the other climbers had signed with the committee, all photographs were to become the property of the committee and only lectures organised by and for the benefit of the committee could be undertaken. Finch was a keen amateur photographer, even taking his own mobile darkroom with him on the 1922 expedition, and, quite understandably, he did not want to part with his negatives. Apart from that, he did his best to help the committee. He and George Mallory lectured extensively in Britain and Finch subsequently suggested that he lecture, using his own photographs but sharing the proceeds with the Everest Committee, in Europe. Hinks refused to grant permission and when Finch went ahead with the tour anyway, the committee had had enough. His relationship with the committee had been strained beyond repair; Finch would never climb in the Himalaya again.

George Finch's influence on future attempts to climb Everest was not finished, however, as the Everest Committee was not above seeking his advice and help on the design of oxygen equipment. Although many modifications and improvements to the equipment were made through the years, Finch's basic design remained unchanged. When Sir Edmund Hillary and Tenzing Norgay finally climbed Everest in 1953, they used oxygen sets of Finch's basic design. Ironically, that first successful Everest expedition met George Finch, then Director of the National Chemical Laboratory of India, in Delhi on their way home. The leader of the expedition, John (later Lord) Hunt, wrote of their meeting:

It was a particular delight in Delhi to meet again George Finch, veteran of the 1922 Expedition and pioneer in the use of oxygen for climbing purposes. His presence among us was the more welcome in that we were so anxious that the tributes with which we were being showered should be shared with those who had shown the way. As one of the two outstanding climbers on the first expedition to make a definite attempt to reach the summit of the mountain in 1922—the other was George Mallory—and as the strong protagonist of oxygen at a time when there were many who disbelieved in its efficacy and others who frowned upon its use, no one could have better deserved to represent the past than George Finch. We saluted him.<sup>20</sup>

Although the traits that made George Finch such an excellent climber and at the same time such a controversial figure probably had little to do with his early upbringing in Australia, he did share some characteristics with Australian climbers who ventured to the Himalaya much later. Prominent among these was an ability

---

20 Montearth, 'The man who brought English air to Everest'.

to take a fresh look at the traditional approaches to mountaineering, an openness to adapting new techniques to old problems and a knack for improving climbing equipment and modifying old methods for coping with high altitudes.

With his quick, analytical mind and training as a physical scientist, Finch was, not surprisingly, a very innovative mountaineer, always ready to question traditional wisdom and test new ideas. Nowhere was this more evident than in his simple but brilliant design of the mask for the oxygen apparatus used during the 1922 Everest expedition.

The requirements for an effective oxygen apparatus for mountaineering were sometimes conflicting, particularly regarding the mask. To make the use of the rather heavy oxygen apparatus worthwhile for the climber, every possible litre of the gas had to be breathed in by the climber and metabolised; the least possible amount should be lost to the atmosphere. This necessitated some sort of system to reuse the expired air so that the maximum amount of oxygen could be extracted from it. In addition, however, the mask had to be simple, robust, reliable and not prone to malfunction under the severe climatic conditions at high altitudes. The reliability of the system was of utmost importance, as it was believed at the time, especially by experts such as Dreyer, that if the oxygen supply was suddenly cut off, even for a very short time, the climber would likely die. Even if he could somehow survive for a few minutes, he would be so incapacitated that he could not effect a repair.

The preferred mask was called the 'Economizer' and was designed to store the expired air so that oxygen not absorbed by the lungs in the first breath would be recycled for use in subsequent breaths. The major problem with the system concerned two critical valves that, unfortunately, were prone to freezing, thus rendering the entire system useless. Many modifications were tried, but the Economizer was never considered reliable enough to use on the mountain.

Finch was keenly interested in the problem and brought his considerable talents as an experimental physical chemist to bear on it. The result was an ingenious design: simple, robust, reliable and effective (see image 2.2). Finch threw out the complicated valve system and attached a rubber hose to the outlet from the oxygen cylinders. To this, he connected a T-shaped glass tube; the other two ends of the T were connected to a toy football bladder and to another piece of rubber tubing, which was inserted into the mouth of the climber. Finch described the use of his mask succinctly:

On inhaling, the oxygen flowed through the rubber tube into the mouth of the climber, there mixing in with the indrawn air. On exhaling, the climber had to close the end of the tube in his mouth by biting it, and thus prevent the flow and consequent waste of oxygen. During this latter operation the oxygen, which was still flowing from the apparatus, was stored up in the expanding football bladder. On re-inhaling, the climber simply released the pressure of his teeth upon the tube,

and the bladder, collapsing slowly, gently forced the oxygen into his mouth where it mixed with the inhaled air. The correct closing and opening of the rubber tube by alternating biting and releasing the pressure of the teeth upon it became, after a few minutes' practice, a perfectly automatic subconscious process.<sup>21</sup>

The design was ridiculously simple yet extremely effective, as Finch and Bruce subsequently proved in their record-breaking attempt on Everest.

The oxygen mask was not the only innovative contribution Finch made to the design of mountaineering equipment. For the 1922 expedition, he made a jacket insulated with eiderdown—one of the first duvet jackets ever made and a vast improvement in warmth and weight over the heavy tweed jackets normally worn by climbers of that era (see image 2.3). The shell of Finch's jacket was made of waterproofed balloon cloth with the feathers quilted within. At first, Finch's colleagues ridiculed his dress, but they were quickly put in their place when the weather turned cold and Finch functioned in far more comfort than they did. John Noel reported:

Finch, who had a scientific brain, invented a wonderful quilted eiderdown suit of aeroplane fabric, doped. Not a particle of wind could get through. Underneath he used to wear a suit of silk underclothes, then one of wool, then another, then a fourth of thicker wool, then a fifth of the thickest substance he could find—then he really began to dress in earnest, when he was to go up to the highest camp with the wind reaching a velocity of 100 miles per hour.<sup>22</sup>

Curiously, Finch's duvet jacket seemed to have been quickly forgotten and did not become standard equipment for Himalayan mountaineers until decades later.

Because of his record of distinction as a scientist and the crucial role oxygen played in the first successful ascent of Mt Everest in 1953, George Finch is justifiably well known as an innovative mountaineer. Much less known is Finch's keen interest in helping younger, less experienced climbers improve their skills in alpine techniques. Although he did not suffer fools gladly and often verbally chastised climbers who made fundamental errors of judgment in the Alps, he nevertheless took great delight in leading determined, bright but inexperienced young climbers up challenging climbs on their first trip to the mountains.

Much of his instruction was in connection with the Academic Alpine Club of Zurich. Scott Russell recalled a typical situation in which Finch made quite a vivid impression on John Case, an American visiting Zurich in 1911:

George was then President of the Zurich Academic Alpine Club, and although the Club was very democratic, the President took rather dictatorial powers. Aspirant climbers were expected to display their skills on a climbing wall near the Club hut, and to maintain standards George periodically knocked off popular holds.

<sup>21</sup> Finch, *The Making of a Mountaineer*, ch. XX.

<sup>22</sup> Noel, J. B. L. 1927, *Through Tibet to Everest*, Hodder & Stoughton, London, ch. XII.

Notwithstanding this, Case climbed the wall, and the next weekend George and Marcel Kurz put him through his paces on a nearby mountain. Case passed, was admitted to the Club, and some weeks later George took him as his second in climbing the Marinelli Couloir on Monte Rosa. The crux of the climb came, in total darkness before dawn, on very steep grooved ice. So that George could see to cut steps Case kept very close behind him, holding a candle-lantern aloft on his ice axe. So they proceeded until dawn came, reaching the summit in eight hours from the Marinelli Hut, a record time. Case later wrote that during the climb the lantern had fallen from his ice axe but he had caught it; George's only comment had been 'Don't do many things like that, man'.<sup>23</sup>

Although Finch's sharp rebuke might have seemed inconsiderate, Case, who followed Finch on several other major climbs, had the utmost respect for his mentor and later remarked that Finch's instruction had been so unobtrusive and tactful that he was not at first aware of the extent of the 'systematic training of a varied nature' that he received.<sup>24</sup>

The classic example of Finch's willingness to take novice mountaineers on difficult climbs, and to patiently help them over the rough spots, was his partnership with the totally inexperienced Geoffrey Bruce in the 1922 attempt on Everest. Bruce was extremely grateful afterwards to Finch and wrote to him, 'I can never thank you enough either for electing to take me with you on the climb, or for the perfectly astonishing way you pulled me through it all. It was wonderful.'<sup>25</sup>

Thus, Finch's reputation for abrasiveness notwithstanding, he was, as Russell recorded, 'sympathetic to those whose skill or physical ability was below his standards and to those who had an unavoidable accident—or perhaps a moment of carelessness'.<sup>26</sup> In this willingness to help the less experienced or less fortunate, Finch perhaps started to build the reputation Australian mountaineers—and indeed Australians in general—now have for helping others in need.

Although he shared these characteristics of inventiveness and helpfulness with later Australian climbers, Finch's connections with Australian mountaineering appear most tenuous. He always considered himself to be every bit an Englishman and as a climber his background was almost entirely Continental. His basic motivation for climbing, however, undeniably goes back to his upbringing in rural New South Wales. As Finch recalls:

---

23 Russell, *George Finch—The mountaineer*, ch. 5.

24 *Ibid.*, ch. 2.

25 *Ibid.*, ch. 8.

26 *Ibid.*, ch. 5.

The love that Max and I have for the mountains I cannot but attribute to the fact that we were possessed of a father who taught us from our earliest days to love the open spaces of earth, encouraged us to seek adventure and provided the wherewithal for us to enjoy the quest and, above all, looked to us to fight our own battles and rely on our own resources.<sup>27</sup>

So, despite his close connections with the traditional climbing community of Switzerland and the staid British Alpine Club, George Finch's most important mountaineering attribute—the basic motivation to climb mountains—and even his attitude towards life in general were firmly rooted in the wild and open Australian bush.

---

<sup>27</sup> Finch, *The Making of a Mountaineer*, ch. I.

This text is taken from *Himalayan Dreaming: Australian mountaineering in the great ranges of Asia, 1922–1990*, by Will Steffen, published 2017 by ANU Press, The Australian National University, Canberra, Australia.