jungle of heather, birch and rowan, boulders and peat, which I have never succeeded in circumnavigating. With Dr. Johnson, I have always felt that ' a walk upon ploughed fields in England is a dance upon carpets compared with the toilsome drudgery of wandering in Skye.'

But for all the scratches the ridge remains the finest mountaineering expedition in the British Isles. Or perhaps it is only the best but one ; for it has one sad disadvantage for the real hero. Its completeness is spoilt by those two awkward outposts of the Black Coolin, isolated amongst the Red Coolin, Blaven and Clach Glas. Blaven is perversely just over 3000 feet high, so that for a gatherer of Munros a traverse of the main ridge leaves one still to pluck.

In June 1939, Charleson and Forde started from a camp at the foot of Gars Bheinn, traversed the whole of the main ridge to Sgurr na h'Uamha, with snow and ice part of the way ; and after a meal and a rest at a camp in Harta Corrie, went up Clach Glas and Blaven and came back to their tent in Harta Corrie, the whole expedition taking five minutes less than 24 hours. Three months later Murray and Donaldson, setting out from Glen Brittle, sustained by vita-glucose and revived with draughts of navy rum and Bovril, repeated the feat with half an hour to spare.

So history once more repeats itself, and the finest expedition in the British Isles, already only a preliminary to an ascent of Blaven and Clach Glas, is fast becoming an ' Easy Day for a Lady.'

CLIMBS WITH MEDICAL AND WEATHER COMPLICATIONS

By C. F. FOTHERGILL

Read before the Alpine Club, April 1, 1944

After the very learned and classical paper we had read to us at our last meeting by Mr. Arnold Lunn, not to mention the brilliant one previously given by our then retiring President, Mr. Winthrop Young, I feel very diffident indeed about reading my paper this evening, and I only agreed to do so because so many are away on account of the war and, in consequence, I knew there must be a dearth of material. My paper will be a very simple one, merely telling of some of my personal experiences, which I trust may prove of interest.

The earliest climb I can remember, dates back to when I was five years old. On that occasion, my father led me up a steep dry water-course, holding me by the hand and teaching me where to place the tips of my toes. For the descent my father decided to carry me on his shoulders. He had a long alpenstock and this snapped in two when we

were halfway down. With great agility he swung round and somehow gripped one of the granite squares with which the watercourse was lined. I looked after myself by holding him so tightly round the neck that I nearly strangled him, after which we continued the descent with toes and fingers in a safe but very leisurely manner. This episode gave me a rooted dislike of alpenstocks ; sticks with crook handles are nearly as bad. I have always encouraged novices to buy an ice-axe straight off, but if a novice goes for a glacier or snow expedition with only a stick, one with a flat handle should be chosen.

Speaking of alpenstocks reminds me of an occasion which might have proved disastrous. Several of us had walked up to the Little Scheidegg from Wengen, not intending to do anything that day ; but three ladies of uncertain age in our party, who had never been on a glacier, went off and made friends with an old guide. He, of course, persuaded them what a pleasant excursion it would be, were he to take them across to the old Guggi hut, and prevailed upon them to engage him. They brought him along to me and asked me if I would come with them, for now they were all shy of going alone with a guide. I agreed, after having looked at the guide's book, and said : ' We can go for a short distance anyway, which will give you the experience of a glacier expedition.' Off we went, with the good wishes of various friends, who were much amused at such an incongruous party.

After we roped up, all went well to begin with, but we soon found that the guide was rude and irritable. He told us a little later that on the previous day he had been hit by a stone on the back of his head. He still had a very bad headache and was obviously suffering from the after effects of concussion ; in fact, as it afterwards proved, he was not quite responsible for his conduct.

His irritability was nothing as compared with the extremely perilous position into which he led us. The three ladies were complete novices, each one armed with an alpenstock. The guide took us into a very broken area, and during the course of our peregrinations led down quite a steep slope of ice, at the bottom of which was a crevasse nearly four feet wide. The guide jumped across it on to the ice beyond, but made no effort whatever to help the first lady, who, when she saw this yawning crevasse in front of her, lost her nerve and her alpenstock. We could hear it bumping down the crevasse, the sounds becoming fainter and fainter, until it apparently reached the bottom. She had not lost her footing, however. The second lady then passed forward her alpenstock which was certainly needed for a pole jump across the crevasse. It was hardly in her hand before she dropped it, and again we heard the repetition of bumps on the sides of the crevasse. The third lady, most unselfishly, then passed forward her alpenstock via the second to the first, who was now standing on the edge of the crevasse trembling like a nervous horse, and crying out in a high-pitched voice : ' I know I shall tumble in ! I know I shall tumble in ! '

I was above at the back and had a very good view of what was happening. The guide did not take the slight st notice of the first

lady, though I told him to come back and help her. I might have spoken to the ice itself, so little was he stirred into activity. I called out to the first lady, ' You will be all right now. Just steady yourself, and whatever you do hold that alpenstock tightly.' I had hardly spoken when the guide seemed to wake up, turned round, and called out, ' Komm schnell ! ' This completely upset the equilibrium of the first lady who at once collapsed on to the ice and gracefully slid over the edge. I shouted out, ' Get ready for a jerk. Press your lower heel in if you can,' and drove in my ice-axe at the same moment. The second lady was instantly pulled off her feet. My rope being taut, the third lady for a moment shook like a fir tree in a wind but somehow held her feet, looking rather like a doll on a tight string between the second lady who was at full length on the ice slope and myself at the very back.

The head and shoulders of the first lady had remained in sight the whole time, for she had not enough rope between her and the second to fall further. The guide now regaining his guiding instincts, sprang back across the crevasse and pulled her up on to the ice. We all then assembled with extreme care near the upper edge of the crevasse. The guide once more jumped over and by degrees we got the three ladies across. The first one had held on to her third alpenstock like grim death, in spite of her thrilling adventure. I believe if they had all had ice-axes there never would have been any slip.

I find an ice-axe of the utmost value and prefer to have it with me when climbing, even if it be only on a rock climb without any possibility of ice or snow. In the Dolomites, for instance, it is of great use in springing from rock to rock and across narrow chasms. It takes off a great deal of shock when one has really become accustomed to its full use in this way, and so saves a considerable amount of fatigue during the course of the day. In the case of accidents two ice-axes used by two people make quite a useful improvised carrying chair or stretcher.

Long ago I resolved never again to be parted from my ice-axe when climbing. Having slept at the Trift Inn we were making that year's first ascent of the Zinal Rothorn and had reached the last rocks before the summit. Our party consisted of two ropes, with a guide, a lady and a man on each rope. My leading guide said, ' We can leave our ice-axes here, for we shall not want them again till we get back.' In consequence, we all, including the guides, left them behind. We then climbed up a fairly smooth and steep bit of rock face. As we got higher and a little round to the north-west, we found the whole of the summit covered with frozen snow, insufficiently deep to give us really firm footholds, and yet quite steep enough to make it a very unpleasant piece of work to continue to the summit without any ice-axes to help us. We had to scrabble away on the frozen snow surface with our gloved hands : a nasty experience on such a pinnacle.

A perfectly easy climb may, on account of weather conditions, prove extremely difficult ; for this reason alone it is a risk to take novices,

unless they are sufficiently fit to last through what may prove to be a most strenuous time. It is also essential to have enough strength in guides or expert climbers to be able to carry the climb through successfully should any emergency arise.

Early one July, a party consisting of five novices and myself decided to climb the Untergabelhorn from Zermatt. Among the novices were two girls, one of a rather lumpy type about twenty-four years old, the other of a thin, athletic build, whom I will call Rotunda and Atalanta. I went to Gabriel zum Taugwald and engaged him, with Josef Taugwalder as second guide. I told Gabriel that none of the others besides myself had climbed at all. Gabriel said : ' It is quite easy, but it has not been climbed this summer. There is still deep snow and the weather is not too certain, but I think it will be all right,' shrugging his shoulders alternately up and down in the way so characteristic of some of the Zermatt guides. He added, however, that as there were five novices it would be wiser to have a third guide in case of need. I readily acquiesced, and engaged Peter Kronig ; very glad was I later that I had done so.

We left Zermatt about 3.30 A.M. knowing that we had a rise of nearly 6000 ft. to the summit. We passed the Pension Edelweiss and took the path to the west, which soon faded away ; then we followed the usual route. We sat down for a rest and had some food. I noticed that Rotunda seemed to be unduly breathless and looked a little blue. I quickly told the story of Dr. Peter Horrocks, who, when recovering consciousness after a fall on the Zinal Rothorn, counted his pulse for scientific purposes, and I suggested that I should at once take the pulse of everyone in the party as a matter of interest. They all agreed. Rotunda had a pulse of 134 ; the rest of us amateurs were between 102 and 120 ; the three guides were between 104 and 112. Five minutes later I found that Rotunda's was 112, but that everybody else's pulse was under 100. I asked her whether she would not prefer to go back to the Pension Edelweiss with one of the guides, who would easily catch us up again, or remain with one or two others there. She laughed at the idea. What was one to do ? The guides said that we would go very slowly indeed and that she would be all right ; so we decided, all of us, to go on, I having given her digitalin hypodermically. Climbing on three ropes we reached that steep snow couloir, which I suppose has made most of us a bit breathless, and went up it very slowly indeed. Gabriel, Rotunda and myself were on the first rope. The snow was very deep and a long way above our knees. With a good deal of pulling and pushing Gabriel and I managed to get Rotunda up, and eventually we all reached the col. Almost immediately the weather, which had become more threatening, suddenly broke, and a terrific blizzard came down upon us. The wind was icy, the snow was blinding. We were just about to begin the final bit of rock climbing when Atalanta, who was on the third rope, fell down on the snow quite unconscious ; thereupon Rotunda passed into a hysterical condition ! I felt for the pulse of the unconscious girl ; there was none ; it really

looked as though she had died from a heart attack. Anyway, I gave her a hypodermic of digitalin and planted an atropine tablet as far down her throat as my finger could reach. There was no time to waste. Our ropes had to be completely rearranged. We decided to descend on the other side of the col. I settled with Gabriel that he and I would detach Atalanta and carry her down somehow between us on our rope ; Peter and Josef were to take Rotunda down between them, closely followed by the other novices on another rope. We were in a good stiff mountain storm. It was very difficult to carry the unconscious girl down. She was just like a corpse. I led down carrying her legs, and Gabriel her head and shoulders ; at times we let her down on the rope. I have not the slightest idea of our route, for it was quite impossible to see anything on account of the blinding snow. Gabriel shouted his orders to me and I merely obeyed and climbed down as he directed. I do remember that bits of rock were blowing about on account of the wind. Eventually we reached what seemed like a steep valley covered with snow, full of enormous snowballs six to eight feet high, the remains of past avalanches. Gabriel told us to be ready for an avalanche at any moment, saying, however, that it was safer to risk the descent of this valley in order to save time, rather than keep to the edge of the rocks. After we had descended about 1500 ft. from the col, the unconscious girl showed signs of life. Her pulse began to beat and she became warmer. A little later she opened her eyes and a little later still, when we sat her down on the snow, she seemed to make an amazingly rapid recovery, stretched her arms and legs as if she were waking up from a sleep. We waited there for a bit whilst the others collected round us. She drank some coffee with plenty of sugar in it, and ate a bit of bread and butter. She was well wrapped up, for we had seen to this at the col. Then she got up and told us she could walk, so we continued down very slowly to the Trift inn where she was able to rest and be generally restored. Eventually she reached Zermatt in safety, and the next day did not seem very much the worse. The two guides with Rotunda also had quite a lively time ; probably her heart was not fit for such an effort, and further a hysterical temperament did not help matters in an emergency. I think it quite possible that she may have had a somewhat enlarged thyroid, so common at that age in a certain type of girl, a condition which stands muscular effort in high altitudes very badly. She also was quite all right afterwards. Looking back at the episode, I think it was heart failure in the case of Atalanta due to the rise in altitude of nearly 5500 ft. to the col from Zermatt, combined with the muscular effort of getting there, finally capped by the sudden onset of extreme cold. She was capable of walking well over twenty miles in England on a day's excursion, a fact which emphasises the importance of being acclimatised to the altitude before trying to make any ascent, but thin people, like unduly fat ones, often do not stand the strain of altitude combined with muscular efforts and or extreme cold.

Small details may mean so much on a climb. Badly nailed boots ; an axe, weather worn just above the metal shaft ; a frayed rope, or

insufficient food or liquid, all these may cause serious results. On one occasion we climbed the Matterhorn Couloir of the Riffelhorn in a terrific sun. The rocks seemed to be on fire as we touched them and the sun on our backs and heads was almost unendurable. By some accident no coffee, tea, water or anything else to drink, had been added to our food supplies, with the result that, after what was a very strenuous feat of climbing in such a sun, not one of us could speak other than in thick whispers.

On another occasion my son Guy (Captain G. S. Fothergill, A.C.) and I were climbing the Cinque Fratri in Corsica above Calacuccia. When we started at midnight our thermos flasks were absent from the provisions, and as we could not find anybody about at that time, we left without them. After the sun had risen the heat was terrific , this time we had lemons which we ate like oranges, but apparently pure lemon juice on an absolutely dry tongue and gums skins one's tongue and the mucuous membrane of the mouth. We could scarcely eat or drink anything unless it was warm liquid for days afterwards, because it was so painful. Another complication on that climb was that the peasants are always ready to shoot at a moufflon, the large wild horned sheep of Corsica and North Africa. At dawn we were at the base of the mountain and ready to start the actual climb, but we were mistaken for moufflon, shot at, and had to wait motionless until it was sufficiently light to rectify the mistake.

Once, when climbing the Riffelhorn by the skyline route, a lady on my rope called out to me : ' Dr. Fothergill, I am going to have a fit ! ' I called back, ' Nonsense ! What do you mean ? ' She answered, ' I am going to have a fit, I tell you. I suffer from them.' If she had not had the sense to tell me previously that she suffered from epilepsy, at least she knew, fortunately, just before that an attack was coming on. In double quick time I came down to a ledge about 10 feet above her, told her to lie at full length on her ledge of rock, put my right foot over the rope from her waist and held her tightly on to the ledge, with a loop of the rope beyond my boot held in both hands. I called to the guide of the rope below mine to pass the second lady on my rope and hold the rope taut from below as near to the patient as he could get. Various convulsive seizures then occurred. By the plan adopted she was safely held on to her ledge of rock, between the guide below and myself above. In a short while the fit was over and the patient regained consciousness. When she had fully recovered, she insisted on continuing, which was plucky on her part, but perhaps not quite wise. Anyway, she reached the summit and all went well.

While staying at Montenvers with my wife, some of us had returned from climbing the Aiguille du Moine just as the so-called Polar Bear influx was leaving by train for Chamonix. Having climbed the Grands Charmoz two days before, I was rather tired and was looking forward to an early bed after dinner that night. The soup had just been served when there was a general stir. Bad news travels quickly. A guide had rushed in, breathless and exhausted, to say there had been a terrible

accident on the Aiguille du Moine ; nine people, including two guides and a porter, had fallen into the bergschrund ; a rescue party with a doctor was needed at once. Someone hurried into our dining room and called out the news. There was no French doctor nearer than Chamonix as far as anyone knew. It was 7.25 P.M. and the last train had gone down long ago. Delay was impossible. The only doctors available were Dr. Finzi and myself. We at once both volunteered to go with the only four available guides. The guide who had rushed down for help was quite unable to set out again. We collected what we thought we should want in the way of dressings and drugs and at exactly 8 o'clock set out with a good send off from everyone in the hotel. We roped practically at once, Dr. Finzi and two guides on one rope, myself with the remaining two guides on the other. We had not gone far up the glacier when we met a Frenchman hurrying down alone for help. He told us that he had succeeded in getting out of the crevasse, with three others who were now in the Couvercle hut, but that four were lying at the bottom of the crevasse, he knew not how badly injured. This latest news was a further spur if we needed one. It was extremely cold on the Mer de Glace and a very dark, moonless night ; worse still, a fine drizzle had set in. On reaching the hut at exactly midnight, we were all devoutly thankful to learn that it was unnecessary to go any further ; the remaining four had somehow climbed out of the bergschrund, but while three of them were only rather shaken and bruised, the leading guide, Georges Cachat, had broken three ribs. He had roped up with eight other people and been pulled backwards into the crevasse. It was rather wonderful that they had all been able to get down to the hut, including Georges. We found him in great pain, bringing up blood, having perforated his lung with one of the broken ribs. I gave him something to take away his pain, then strapped up his broken ribs by binding putties, which belonged to the guides, round his chest. (I, personally, never use puttees : they increase liability to frostbite.) He was soon quite comfortable. We had intended to set off home on the return journey at once, but as it was now raining hard and pitch dark, it seemed better to wait until the morning, for not only would it give the patient some rest and sleep but it would render him less liable to catch pneumonia from chill. I cannot quite understand how, under the circumstances, the rescue party were not provided with mattresses or berths to sleep on in the hut, but the fact remains that Dr. Finzi and I had nothing better than one rug between us, placed on the floor in the outer room. Anyway, I found it extremely cold and sleep was out of the question. We waited until 7.25 A.M. before setting off, having had a good breakfast first. The hut provided us with a very clumsy *chaise-à-porteurs* on which we fixed the patient. We decided that on no account whatever must he walk a yard, a decision carried out to the very end of the journey. He was a heavy man. It was impossible to lower him down that iron ladder on to the edge of the glacier, so we started our return journey by climbing up to a still higher level above the Couvercle until we were able to

work our way down to the Glacier de Talèfre, which we crossed above the level of the séracs. We then climbed up a short distance on the slopes of the Aiguille de Talèfre before descending to the lowest portion of the Glacier de Leschaux, which runs into the Mer de Glace. At the other end we had to go well below Montenvers to avoid the rock steps. We had enlisted two more guides at the Couvercle, so we numbered our original four, these two, Dr. Finzi and myself. We took it in turns, four at a time, to carry. It was most exhausting work, but by degrees on the Mer de Glace, first one, then another, and still another guide came hurrying up to meet us. They had been summoned by telephone from Chamonix the night before and had walked not only to Montenvers but also up the Mer de Glace. How glad we were to see them, for then we had to do no more carrying. Eventually there were twenty guides carrying Georges Cachat to Montenvers in turn, whilst our original rescue party of the four guides, Dr. Finzi and myself walked in wet through, rejoicing that our labours were over. The train due to start down to Chamonix at 12.30 had been kept waiting until 1 o'clock, at which time we reached Montenvers. The patient was put into the train and taken to the Chamonix hospital. My wife and I left Montenvers the next day. A week later, to our sorrow, we received a letter from someone at Montenvers to tell us that Georges Cachat had died. Exactly one year after the accident, as I was just leaving home to go out to Zermatt, I hurriedly opened my letters and to my great pleasure found one from Dr. Finzi to tell me that Georges Cachat had just restarted guiding! Two years after the accident I was out at Les Bossons below Chamonix where he lived, and had the pleasure of visiting him in his own chalet. He nearly fell upon my neck and kissed me when he learned that I was one of the doctors who had come to his rescue.

I have spoken of some medical and surgical emergencies which arose whilst climbing. The former, in particular, may almost be cultivated by those unwise enough to expose children and adolescents to the strain of undue exertion in high altitudes exaggerated by bad weather. One has to remember that their cardiac and respiratory systems as also their muscular tissues are not fully developed. I recall a September night in 1922 whilst at the Tête Rousse hut previous to climbing Mont Blanc the next morning, that a Frenchman arrived there when it was nearly dark dragging in his three small boys aged eight, ten and twelve, all in grey flannel suits with bare knees; it was snowing hard and there was a bad fog. They were practically done to death, all as cold as ice and the smaller boys blue, numb and unable to speak. I gave them hypodermic injections, hot black coffee with plenty of sugar, and massaged them; in due course they pulled round, but the two little boys had nearly succumbed. The foolish father even then thought that he would be able to take them up Mont Blanc in the morning until I frightened him out of the idea. It so happened that my guides (Couttet and Balmat) and I were caught in a terrific snowstorm on our way down from the summit as we approached the Grands Mulets and

for some time quite lost our way. What would have happened to those small boys had they set out as planned ?

Whilst at Pontresina in 1912 I climbed Piz Palü with a girl of twenty-one and two guides ; her brother was to have come also but he developed heart trouble and so got no further than the Diavolezza hut. She was a spoilt kind of girl accustomed to every luxury and said she supposed there would be a restaurant on the top where she would be able to get coffee, for otherwise she would not go at all ! I very well knew that there would be no restaurant there, but I equally well knew that one of the guides had a large bottle of coffee in his rucksack. This may not have been before the days of thermos flasks, but they were so expensive that I certainly did not possess one. I at once promised her there would be coffee at the top. It was a perfect morning and we were just climbing up on to the summit. As we did so an Italian man and two guides climbed up from the Italian side. He was so excited at having climbed the mountain that in true continental fashion he rushed at the girl and, to her surprise, kissed her on both cheeks before she knew what was happening. Then he quickly produced a large supply of coffee from his own rucksack, which he pressed upon her. I laughed and told her that she had found the restaurant for which she had asked, and my own coffee was shared between the guides and myself. One might mention that on the descent, instead of continuing via the Bellavista to the Boval hut, as it would have been rather longer for the girl, we decided to go back by the same route. Never have I been across so many rotten snow bridges or run the gauntlet of so many avalanches before nor since.

What strikes me after some forty-six years' climbing is that so many men, and women perhaps more so, attempt climbs before becoming acclimatised to the altitude or before they are really physically fit. Thereby they incur risks which may involve others as much as themselves in danger, and possibly bring discredit upon one of the finest of sports. There are others who boast that they prefer to climb without a guide, who are insufficiently experienced to do so. Most amateurs are only able to afford quite a short time for climbing each year, whether from lack of time or money, and few become as proficient as a good guide. Finally, I have often thought that some quite elementary instruction as to clothing, food and medical or surgical emergencies would prove of the utmost value.