

THE
ALPINE JOURNAL

A RECORD OF MOUNTAIN ADVENTURE

AND

SCIENTIFIC OBSERVATION

BY MEMBERS OF THE ALPINE CLUB

VOL. XXIX.

FEBRUARY 1915 TO NOVEMBER 1915

(Nos. 207-210)

EDITED BY GEORGE YELD

LONGMANS, GREEN AND CO.

39 PATERNOSTER ROW, LONDON

FOURTH AVENUE & 30TH STREET, NEW YORK

BOMBAY, CALCUTTA, AND MADRAS

1915

1569
123
Vol. 29
1915

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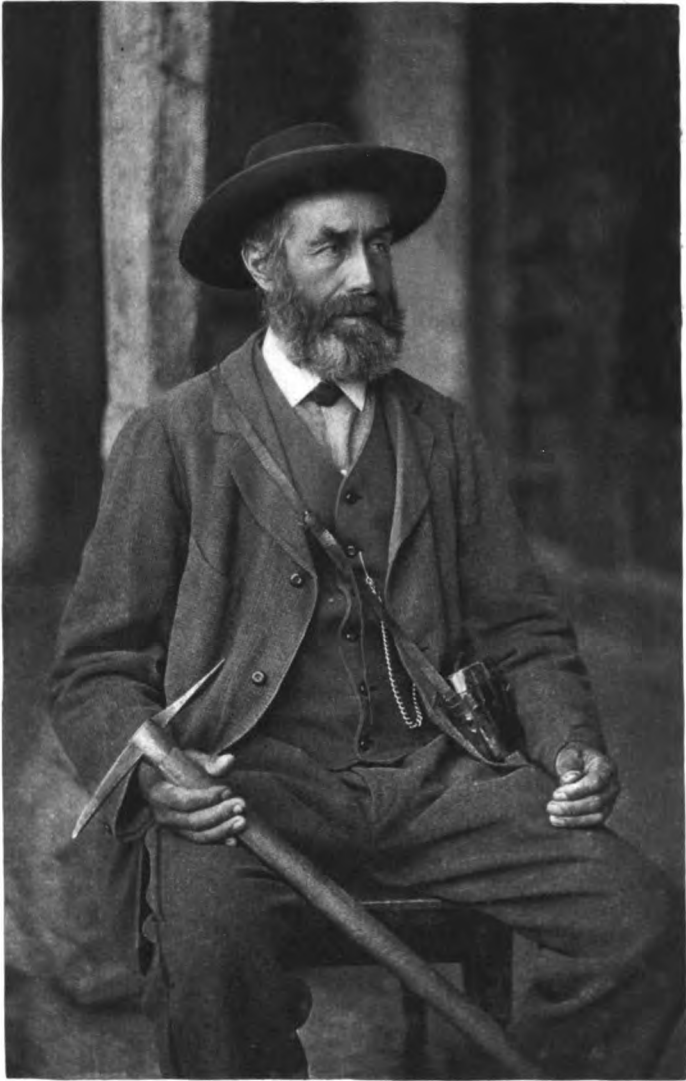
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From a photograph by Capt. WideW Abney, C.B., R.E., F.R.S.

Swan Electric Engraving Co.

MELCHIOR ANDEREGG

1827 - 1914.

THE
ALPINE JOURNAL.

FEBRUARY 1915.

No. 253.

TWO SEASONS ON THE WEST COAST OF NEW ZEALAND.
THE LA PÉROUSE GLACIER.

By H. E. NEWTON.

THERE have been several lectures and papers recently dealing with the New Zealand Alps, but all, with the exception of Dr. Leichmann's exhibition of slides, have dealt almost entirely with the East or Canterbury side, and the Editor has asked me to write a paper on the comparatively little-known West Coast side. And the reason for this request is obvious. From Christchurch, the Hermitage, a comfortable hotel and a central starting-place, could be reached in two days, while for the last eight years a motor service has gone through in the day, while to reach the Franz Josef Glacier it took five days from Christchurch or Nelson, and if the weather was bad and the numerous rivers, that had to be forded, were 'up,' it might be twice as long.

The mountain chain of the South Island, from a mountaineer's point of view, may be considered as being contained roughly between the Otira on the north, over which went the old coach road from Christchurch to 'The Coast,' and through which the new tunnel goes; and extends south to Lake Manipou, a distance of 250 miles as the crow flies, roughly the distance between Mt. Blanc and the Ortler, though, except at the southern end, the chain is narrower in New Zealand.

But between the two sides of this mountain chain there is an extraordinary difference. The East Coast side is open sheep country, with but little timber, the West is dense forest; on the East the Hermitage gives access to the Tasman, the Hoelder, the Mueller and the Murdochson Glaciers, all more or less parallel to



Mr. [Name] of [Location]

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BY H. E. NEWTON.

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the main divide, while on the West, at all events among the giants of the chain, the valleys run at right angles to the divide. Again, from the strata the rock on the West is good and firm after the schistous formation of the lower hills is left behind; on the East the rock is apt to be rotten.

To start climbing from the West it is necessary to get to Hokitika, either overland from Christchurch, or by sea from Wellington or Nelson; there is now a train as far as Ross, a mining township of some six hundred people, where I had my headquarters during the six years I was Vicar of the Ross Parochial District, which extended some two hundred miles down the coast between the Southern Alps and the Pacific Ocean.

From Ross a mail coach used to run once a week as far as the Franz Josef Glacier, about seventy-four miles. From Ross a good but rough road led through the forest, amid great red or white pines and Rata trees which in February are a blaze of scarlet flowers. Generally one was driving through an avenue of timber, with no view except the road rising and falling as it wound round the spurs from the hills; at times there would be a glimpse of the sea, or the road would run for a mile or two beside one of the lakes, which are one of the great beauties of Westland; then the road would come out on to a flat of some ten miles wide where several settlers had taken up land and were raising sheep and cattle; somewhere on this would be a river, three of them carrying a good deal more water than the Rhone at its entrance to the Lake of Geneva, and in those days all unbridged; in winter the rivers were clear except in a flood, but in summer milky-white, often with a very rough bottom, icy cold, and with a very fierce current, the fall on the flats being roughly 100 ft. to the mile. I shall never forget my first view of the Franz Josef Glacier. I had been told I should see the glacier, but did not pay much attention. I was riding through an avenue of trees and suddenly turned a corner, and there was the glacier, about two miles off, without a trace of moraine on it, apparently descending right on to a farmstead, while on either side rose the hills, covered with untouched semi-tropical forest, in which appeared brilliant red splashes of some Rata trees in full bloom.

In 1902, with Dr. Teichelmann, I had crossed to the Hermitage and returned by a new pass. In 1903 and 1904 we had been up the Fox Glacier, which is some twenty miles below the Franz Josef, and, like it, descends to within 700 ft. of sea-level, the first year with Peter Graham, who is now chief guide at the Hermitage and a splendid man on both ice and rock, and the second year

with his younger brother Alec, with whom I was to have four years' capital climbing. These years had taught me that in a new country too much time was taken up in the necessary swagging, and that three weeks in the hills meant three days' climbing and the rest getting camp in and out again, and that in a district where six inches of rain a day is fairly common. The Nor'-Wester, a warm wind like the Föhn, gathers moisture from the Pacific and then, on contact with the snow mountains, discharges it with tropical intensity; these storms generally last three days. In climbing from the West the approach of a storm is more easily noticed, and also the clearing often gave a day's advantage in starting.

My first three years we had to take a new man each year, so that it was impossible to send a man in advance to make a base camp, as the men whom we were able to get were diggers or settlers who were simply splendid in the bush, but had no experience of glacier work. However, in 1905 we were able to send Alec Graham on ahead with another man. Cook's River, one of the largest of the Westland rivers, receives the drainage of three glaciers, the Fox, the Balfour, and La Perouse; we had decided to get on to the La Perouse Glacier and cross to the Hermitage by a pass at the head of the Hooker which Mr. Harper had reached from the Hermitage in 1890. Cook's River, so called because from the Coast it seems to receive the drainage of Mt. Cook, though as a matter of fact Mt. Cook is entirely in Canterbury, runs for its last ten miles through open flats with a wide river-bed, in places a mile wide, with the river in several branches, though after Nor'-West rain it would be bank to bank, with uprooted trees swirling down it. The main branch of the river above this open flat runs for eight miles through a narrow gorge which might be compared to the Arolla valley, only there was no track and no bridges over the tributary streams and the whole mountain-side covered with forest. In the early days of the coast some diggers had been up 'fossicking' for gold; Mr. C. Douglas and Mr. Harper had been up later for the Survey Department, but had only reached the snout of the glacier, so it was indeed a virgin field.

On Monday, January 16, 1905, I left Scott's house after a week of services among the scattered settlers, and rode up Cook's River to some ruined diggers' huts in a steady drizzle. Alec Graham and Arthur Woodham, a digger, had been at work for a week cutting the track through the bush and carrying in swags. I had hoped to meet Dr. Teichelmann at the hut, but he had not arrived, so after waiting some time Graham and I set off

with a swag apiece. At first we were able to follow the riverbed with only occasional deviations into the bush, which is always very matted and tangled in such places. In about an hour we were opposite the Balfour; after this the going got worse, and it took us $1\frac{3}{4}$ hours to cover the next mile; it was then 6 P.M., so we decided to camp under Castle Rock at a tent they had pitched while clearing the track. We soon had a fire and our clothes up to dry. I found in a cleft of a big rock some newspapers Harper had left there in '94, but they were too sodden to read. In the evening it came on to rain steadily, and all the mosquitoes in the neighbourhood came into the tent to get out of the wet. Next morning it was still raining, so we decided that Graham should wait till Teichelmann arrived while I went on to the next camp. I started at 8.30 with a heavy swag and almost at once had to climb up 700 ft. to get above a steep bluff, where the river runs through an impassable gorge. I had but little difficulty in following the fresh blaze line except where a trial line had been made and abandoned. It took me $4\frac{1}{2}$ hours to get to the camp at Tony's Rock, though it is only three miles as the crow flies. Tony's Rock is an enormous erratic boulder, about 100 ft. above ground and 700 ft. round three sides of the base. The rock overhangs well on one side and the camp was made under it, but, like all overhanging rocks, it was a regular fraud in wet weather, as the rain followed the rock down and then dropped, and soon there was a regular forest of saplings against it to carry off the worst drips. Woodham arrived later on with another swag, I had missed him in the bush. The next two days were occupied in cutting the track ahead, one man with an axe to fell the larger boughs and the other with a 'slasher' to clear the track sufficiently to allow the passage of the swags. It rained most of the time and the bush was horribly wet and greasy, the deep moss making the footing precarious. A good deal of the cutting had to be done holding on with one hand and cutting with the other; I managed to cut my elbow and my boot, and Graham had cut his boot before; however, we managed to mend the boots with copper wire and strap ends. Each night we changed into dry things and put our wet things on again in the morning—horribly unpleasant until one got warm. By this time we had got beyond the big timber and were among the scrub, a low-growing tangled mass of branches all growing downhill, with branches often 6 inches in diameter and very tough to cut. By this time the axe and slasher, with only a file to sharpen them, had lost their edge to a large



BASE CAMP, LA PEROUSE VALLEY.

No. 2.



H. E. Newton, photo.

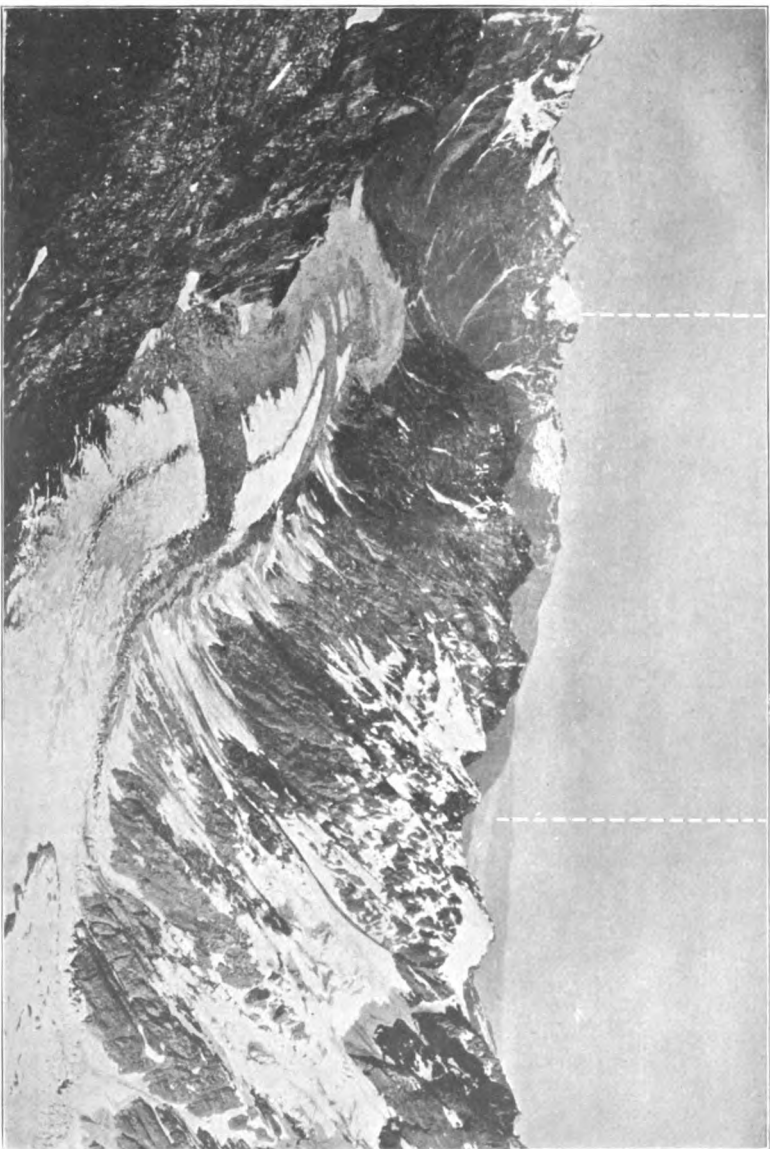
COOK'S RIVER.
"Swagging in."

No. 3.



Stean Electric Engraving Co., Ltd.

COOK'S RIVER,
Near Tony's Rock.
X below man shows size of boulders.



H. E. Necton, photo.

LA PEROUSE GLACIER,
FROM BELOW HARPER'S SADDLE

Stean Electric Engineering Co., Ltd.

extent. On the sixth day after I had reached Tony's Rock we had the base camp pitched, consisting of a 10×12 tent and fly and a smoke fly to protect the fire. That afternoon Teichelmann and Woodham arrived, wet through with the usual rain; Teichelmann had been unable to start as soon as he had expected, and then had been delayed by floods. It had taken two men, working continuously for a fortnight, to get the base camp in, a matter of nine miles, a distance equal to that of Evolena from the Rhone Valley, though not so great a rise. The next three days it rained, and beyond bringing in the last (eleventh) swag and cutting a track here and there along the river-bed, which was now good going, there was nothing further to do till the weather cleared. However, we had plenty of firewood that burnt well quite green, and I at all events was glad of a less strenuous time. Unfortunately, almost on the last piece of scrub, Graham cut his knee with the slasher.

The next day it cleared up a little, and three of us, leaving Graham behind to bake scones and rest his leg, went up to the snout of the glacier and then up it for a couple of miles and found a spot for a high camp. We found an excellent spot at the end of the N. spur from La Perouse, where an overhanging rock made a shelter for two, and outside we pitched an oiled fly and thatched the end for the other two. This was only to be a sleeping-place before starting on an expedition, but there was plenty of 'ribbon wood' round it, among which there is always a great deal of dead wood which burns fiercely and enabled us to save spirit.

We were now able to see our surroundings well; we could see Mt. Tasman towering up on our left at the head of the Balfour; from the Silberhorn, the S. shoulder of Tasman, came down the ridge separating the Balfour from La Perouse. From the Silberhorn the main divide continued over Clark's Saddle to Mt. Dampier (Hector), off which, and entirely in Canterbury, Mt. Cook appeared as a rock triangle with only the final snowcap showing; then the divide, though it was hidden from our sight, bends W. to Mt. Hicks (David's Dome), then over Harper's Saddle to La Perouse (Stokes); from La Perouse the main divide bears away S., while our valley was contained by the W. arête from La Perouse, which rose in two fine rocky peaks. The mountains at the head of this valley had received different names from the Canterbury and Westland Surveyors. I have followed the surveyors, who wisely named this group of peaks after the early navigators; the alternative names are given in brackets to provide a means of identification.

The next day we went up to the high camp again with some more food &c., the only excitement being that, as the glacier, unlike the Fox and the Franz Josef, was covered with stones, we followed the old moraine débris at its side, and in crossing a creek that drained a small glacier on our right one of the party in jumping was overbalanced by his heavy swag and fell in. Fortunately one of the party was able to give him a hand before he was knocked about by the force of the water among the stones, or carried under the glacier. Then, being wet through, he volunteered to carry the last man over at a better ford, I knew what would probably happen and got a photo of the upset, but alas! I had forgotten to change my film! We got to the camp about midday. Woodham went back to the base camp in the afternoon, and we went out to cut a track through the knee-deep snow-grass to make sure of a dry start next morning. It was a steady drizzle all night, so all hope of a start was abandoned; in the afternoon it cleared and we went out on to the glacier to get a closer view of the way up to the pass. I have never seen such enormous erratic boulders on a glacier as we came across just above the camp.

We got up at 1 A.M. next morning and had a good fire to breakfast by, but it was 2.50 before we got started, as we had to leave the camp secure in case we returned that way. We soon got on to the glacier and went along it for two hours by lantern light; we had intended to start up a snow-slope, but we could see that an avalanche had come down it since the previous evening, so we decided to have breakfast and wait for daylight. At 5.10 we started off up a rib of rock to our right, leading up to the left containing-wall of the glacier descending from Harper's Saddle, at the head of the Hooker Glacier. At first it was easy climbing, but it gradually got more difficult, and we put on the rope at a gendarme at the junction with the main ridge. We had to carry sleeping-bags, as we were sure of being out one night, and my swag, without food, rope, or camera, used to weigh 19lb. This was quite enough of itself to have warned me not to try difficult rock, but in addition I was carrying an ensign camera ($\frac{1}{4}$ plate) in a tin case outside, as a swag takes a good deal of undoing simply to get a photo. However, the climb looked interesting and was only short, so I set off. I had only got up about 8 ft. when I got on to a smooth slab, and in the middle my camera, which I had over one shoulder—a most foolish way of carrying it on rocks—slipped round in front, and instead of getting any body friction, the metal case was as slippery as a piece of ice, in addition to forcing me off the rock.

I had time to warn the others, and then slipped back on to the shelf I had started from. The rope checked any further fall, and my swag took the weight of the fall, so I got off with a slight cut on the head and a bruise on my thigh. We then turned over to our right and cut up the hard snow to turn the obstacle. It was now 11.10, so we stopped for some food and to take a series of photos. At 12.30 we started again and soon were wading through soft snow. Unfortunately, the mist which rises from the wet Westland forest on a sunny day after rain, and hangs on the hills from about 6000 to 8000 ft., made it difficult to be sure of our position, as we had no map that could be relied on for any detail. We wasted a good deal of time arguing, and then, at 3 p.m., the fog lifted for a moment and we saw that we were close to the saddle; in fifteen minutes we were on it, and after a halt to take photos we started down. The first 300 ft. were very steep, and Graham and I cut steps down in alternate traverses as quickly as we could, but it was slow work, as there was a couple of inches of soft avalanchy snow on top of very hard snow, and we were unable to make long traverses for fear of falling stones from the rocks on either side of the pass. Nearer the schrund the snow got better and we were able to stamp steps; we crossed over under Mt. Hicks, where the schrund was narrow, and decided to shoot it in line, as there was an enormous snow basin below it quite free from crevasses and time was getting precious. However, before I got out the others started and we all shot over it rather too close to each other to be pleasant. After a brief halt to get the snow out of our pockets, we set off at 5.45 to go as far down the glacier as possible. We kept at first rather close to La Perouse, intending to camp at a place where we had slept in 1902 when making the first crossing of Baker's Saddle into the Copland valley. But the glacier was very broken, much more so than when we had been there before; this is typical of a New Zealand glacier, as they vary from year to year to an extraordinary extent. We then crossed the glacier to some rocks at the foot of Mt. Cook. It was 9 p.m. before we reached them and found an old camp site where the New Zealand party had camped in 1894 before the first ascent of Mt. Cook. After a cup of tea and some food we turned in. It was a beautiful night and we all slept soundly. Next morning, after putting our socks and boots into our sleeping-bags to thaw, we had breakfast. Unfortunately we were unable to get down the rocks on our left and so turn the icefall, so we had to go out on to the glacier and ascend a little and then cross to the other

side and get through the icefall on the W. ; it took us one-and-a-half hours from the sleeping-place before we were clear of the fall. We were able then to take off the rope and travel down the level glacier towards the snout, the last part being along a very loose and toilsome moraine. There is a fair track down the left bank of the glacier, but the bridge over the Hooker had been carried away by a flood that spring and had not been repaired. It was only six miles down the glacier, but it took us three hours from the foot of the icefall. At 2 P.M. we stopped for an hour for food and a photo or two and then started off to the Hermitage, passing a camping party, who were very sarcastic with us for carrying axes over open country, but we tried to explain that we had been unable to leave them behind. We reached the Hermitage at 5. Soon after Peter Graham, who had been with us in 1903, arrived, then Jack Clark, the chief guide at the Hermitage, and a Mr. Low, who is now a member of this Club. After a bath—and I had not had a voluntary bath for a fortnight—we had an excellent dinner that was a delightful change after the eternal bully-beef stew and scone of camp, and we felt quite civilised again. Both Teichelmann and I had been feeling our eyes, the wood smoke of camp and then the fog on the pass, which had compelled us to take off our glasses, had irritated them considerably. We found some cocaine in the hotel, and by injecting that and using a tea-leaf compress we were able to get to sleep.

The next morning Alec Graham took a telegram down to Pukaki, and on his return was to rest at the Hermitage for a couple of days, and then follow us. In the afternoon Teichelmann, Low, and I, with P. Graham, set off to walk up to the Ball Hut, a distance of 12 miles, the last six being beside the Tasman Glacier, Clark following with the swags on a horse. Next morning Professor Spencer, of Melbourne, arrived from the Malte Brun Hut, 6 miles further up the glacier. Curiously enough—for climbers were then very rare in New Zealand—the previous year he had been going up the Tasman while Teichelmann, with Clark and Graham, had been at the Hochstetter Bivouac just before making the first crossing of Pioneer Pass to the Fox, and they had at the same time seen Alec Graham and me appear on the col between Tasman and Lendenfeldt, which we had reached from our camp up the Fox. Mr. Fitzgerald, in his 'Climbs in the New Zealand Alps,' reckoned that the ascent of Tasman from that col would present no difficulty, and certainly we could see none, but it was my fate to reach that col three times in an attempt to climb Tasman,

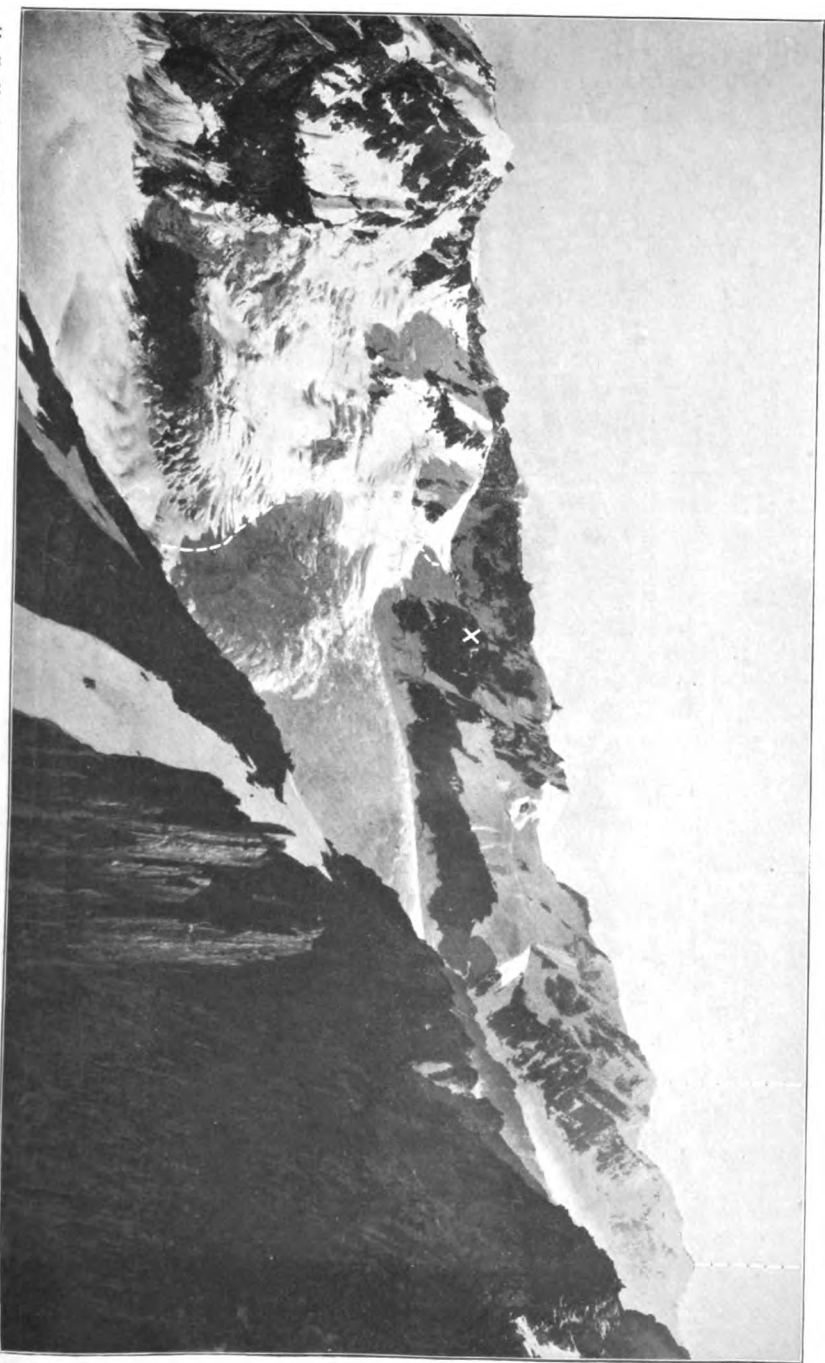
and to be turned back each time. That route has not been made yet, but I am afraid I shall have no chance now to be the first to make it.

The Ball Hut lies in a hollow behind the right moraine of the Tasman Glacier, on the site of Mr. Green's fifth camp. Leaving it in the afternoon, we walked up the Tasman till we were past the great Hochstetter icefall, one of the finest icefalls I have ever seen. Then, turning up the ridge that descends from Mt. Haast, and is the left boundary wall of the Hochstetter icefall, we climbed up it to the bivouac at a height of about 6700 ft. This was the scene of Green's bivouac, and the starting-point for the gallant attempts of the New Zealanders to climb Mt. Cook. It is just a big boulder, below which a flat place has been raked and filled with fine gravel; there was also an old nail-can, which served to economise the wood we had been able to carry up. It is a wonderful position: 3000 ft. below lay the Tasman Glacier, at that point $1\frac{1}{4}$ miles wide, opposite the great rocky Malte Brun range, culminating in Malte Brun itself, 10,421 ft., a magnificent rock cone. Ten miles up the glacier was *Élie de Beaumont*, 10,200 ft., towering above the saddle leading to the West Coast, while the main divide continued back to the head of our ridge in a series of peaks and tributary glaciers. Mt. Cook itself is invisible, but to the south lay the last 8 miles of the Tasman, and beyond an extensive view over the Mackenzie country. We set off at 6 next morning and reached Glacier Dome in about an hour. Glacier Dome is simply a snow dome on the Haast ridge, far above the head of the Hochstetter icefall, where it is possible to turn over on to the huge *névé* at the head. Straight up at the head of the ridge we were on rose Mt. Haast, though the summit lies over in Westland out of sight; then *Lendenfeldt*, 10,551 ft.; then Tasman, 11,475 ft., completely sheathed in broken glacier; behind it the divide running to *Dampier*, 11,823 ft.; then the mass of Mt. Cook, 12,349 ft.; while the rest of the view took in all that had been seen before from the bivouac.

Our intention had been to try to make a pass back to the *La Perouse* valley by a col south of the *Silberhorn*, the south shoulder of Tasman, but the guides said that it would take very long and that they could not be spared from the *Hermitage*, for in those days the guiding staff was small, as visitors were infrequent.

We then sat there and decided to try Mt. Cook next day; I am still convinced that *Teichelmann* and the others had put this up behind my back, and I am still very doubtful about the great

difficulties in connexion with the pass. Mt. Cook had been mooted at the Hermitage, but I felt I could not spare the time and ought to get back to the parish by the pass as soon as possible. Now I could not possibly get back for the Sunday, so the obvious thing was to submit to their scheme. We returned to the bivouac fairly early, bringing with us the remains of the ski Mannering and Dixon had used for crossing the big plateau in the early attempts on Cook. We got off at 1.20 next morning, February 3, mounting by lantern light to Glacier Dome, climbing on our way some rocks on which a climber whose reputation extends over four continents has a photo of himself leading his party up the buttress of Mt. Cook. We set off after a descent of some 400 ft. across the plateau, which must be nearly three miles across; it was in good condition, except where an avalanche had fallen from Tasman. At 4.10 we were at the foot of Mt. Cook; close to the first schrund we had some food and put on the rope, and at 5.10 had sufficient daylight to start again. We crossed the lower schrund after a little difficulty; we then bore to our right towards the N.E. arête; the second schrund gave rather more difficulty, Clark, who was leading, needing several axes and a bit of help; then, after cutting up the slope for some way, we bore to our right and took to the rocks. Here we were slow, as we were a party of five and had to be careful of loose stones. We got on to the crest at 10.10 a little below the first snow saddle; we went on for an hour and then halted on some rocks a little above the snow saddle. Here we had food, and, leaving the rucksacks, went on with only a few raisins and biscuits in our pockets. Starting at 12, we kept to the ridge, which was alternate rock and snow. At 3.15 we were on the final rocks, and here we had a council of war. If we returned at once we could get back to the bivouac and blankets by lantern light; if we went on we might not even get back to the food we had left at our luncheon spot; however, we decided to go on, as there seemed to be every prospect of fine weather. The final cap was very hard and needed steps almost the whole way, Clark leading at first and then Graham, but it was not till 4.55 that we stepped out on to the top. It was a glorious afternoon. For some time we had been looking over into Westland and were able to trace the coast for miles. I had often gazed up at Mt. Cook from various places on the Coast, from Hokitika, 100 miles to the north, to Jackson's Bay, 100 miles to the south, but owing to its being entirely in Canterbury I always thought that I should never be able to spare the time to climb it. Over the Canterbury plains it was rather hazy, and we were unable to pick



H. E. Newton, photo.

MAIN ICEFALL OF LA PEKOUSSE, FROM BELOW HARKPER'S SADDLE.

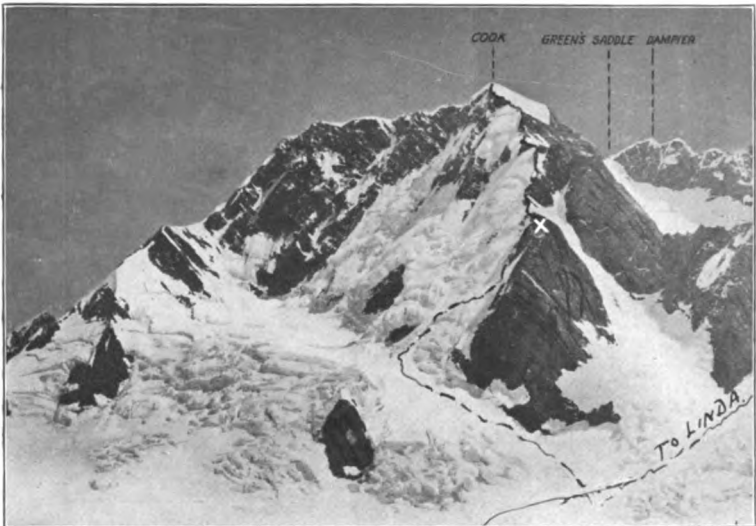
Steen Electric Engineering Co., Ltd.

No. 6. 12,319 ft.



MT. COOK, FROM TOP OF MT. HICKS.

No. 7.



H. E. Newton, photo.

Swan Electric Engraving Co., Ltd.

MT. COOK, FROM GLACIER DOME.
(N.E. face.)

up the sea on that side of the island. The thing that surprised me most was the vast extent of the Alpine country to the north and the width of the main chain. We only stopped for fifteen minutes and then set off again, Graham leading. When we got to the highest rocks Clark called out to Graham 'Zurbruggen told me he left a jam tin on the highest rocks; see if you can't find it.' The first stone Graham lifted, there lay the tin. We got down to about ten minutes above our sacks at 8 p.m. and then it was dark, and that last bit took us an hour, climbing very carefully and only one man moving at a time. We boiled some snow, but had no tea left, so we got a flavour by scraping out a marmalade tin. Teichelmann had a sweater, I had a couple of silk scarves, and Low had a waistcoat; none of us, unfortunately, had a dry pair of socks. We were unable to sit down and had to stand during the night, though three of us were able to lean against each other. I suppose we must have had moments of sleep, especially the three together, who were warmer and safer. About midnight we got a fine display of the Aurora Australis. About 3 a.m. Low and I started melting snow over a candle, and when we had enough we boiled the small 'billy' and had a mouthful of hot water and some food. At last the dawn came, and we looked a haggard crew indeed. The night had not been bad; the worst part was the wind, which, though fortunately not strong, was cold. The first thing we saw was Alec Graham appear on Glacier Dome. We all 'cooeed' and he stopped at once, and we thought he must have heard. I had left a note at the bivouac saying we had started up the arête of Cook and should not be back till late. He told me afterwards that he had spent a very anxious night, but had tried to soothe himself with the thought that several parties on Cook had had a night out, but that when he got on to Glacier Dome and could see nothing he was really alarmed.

The sun got to us very soon and we thawed out quickly, and at 7.20 started straight down the snow, at first having to cut steps, but soon being able to stamp them. As soon as we came out on to the snow Alec could count five little dots and was happy again. We got down to the schrund in two hours and soon were across and out on to the plateau. Graham came along and met us below Tasman. He, provident man, had brought a spare rope and some bandages and plaster in case there had been an accident, and a tin of pineapple in case there had not. We sat down at once and dealt with that tin and some bread and butter. The snow was still good, and we got back to the bivouac at 12.30. We had lunch there, and gave Alec instruc

tions to boil the billy and to go on boiling it till we told him to stop. We then set off, and, getting some good glissades, reached the Ball Hut at 6.10. Teichelmann and Clark rode down to the Hermitage that night, promising to send some horses up next day. Next morning we started to walk down and met the horses at the Blue Lake; we then double-banked on the three horses and reached the Hermitage by mid-day. I had meant to start alone that evening to get over the Copland in a last desperate attempt to get back for the Sunday, but the glass was falling and obviously Nor'-West weather was coming up, so I gave up all idea of it.

It might be convenient here to give a summary of the various routes up Mt. Cook.

1. SOUTH PEAK, 11,844.

A. *From the Ball Pass between the Tasman and the Hooker.* The Rev. W. S. Green made in 1882 his first attempt by the Southern Arête, Mr. Mannering trying it also in 1889; both came to the conclusion it was impossible. I do not think it has been tried since.

B. *From the Hooker.* The late Mr. H. Sillem, with Jack Clark, in 1906 camped high up on the ridge between the Noeline and Empress Glaciers and ascended next morning to this summit. I have no details of the route. This was the first ascent of the South Peak.

In 1913 Miss Du Faur, with P. Graham and the late D. Thomson, ascended by this route, and then traversed the three peaks of Mt. Cook and descended by the Linda Glacier. This was a magnificent performance, needing perfect conditions and an unusual absence of cornice on the ridge between the peaks.

In March 1914 Mr. S. Turner, with P. Graham and F. Milne, climbed this peak and a ridge farther to the North.

2. THE MIDDLE PEAK, 12,178.

First ascended by Fyfe, G. Graham and J. Clark December 20, 1894. From a camp high above the Hooker they climbed by the Empress névé and the W. ridge of the South Peak, then traversed to their left and reached the saddle between the S. and Middle Peaks and followed the corniced ridge to the top; 10½ hrs, including halts. See 'New Zealand Alpine Journal,' May 1895 (out of print). This was an attempt to reach the highest peak.

3. THE HIGHEST PEAK, 12,349.

A. *From the Hooker.*

(1) *By Green's Saddle and the N. Arête.*—On Christmas Day

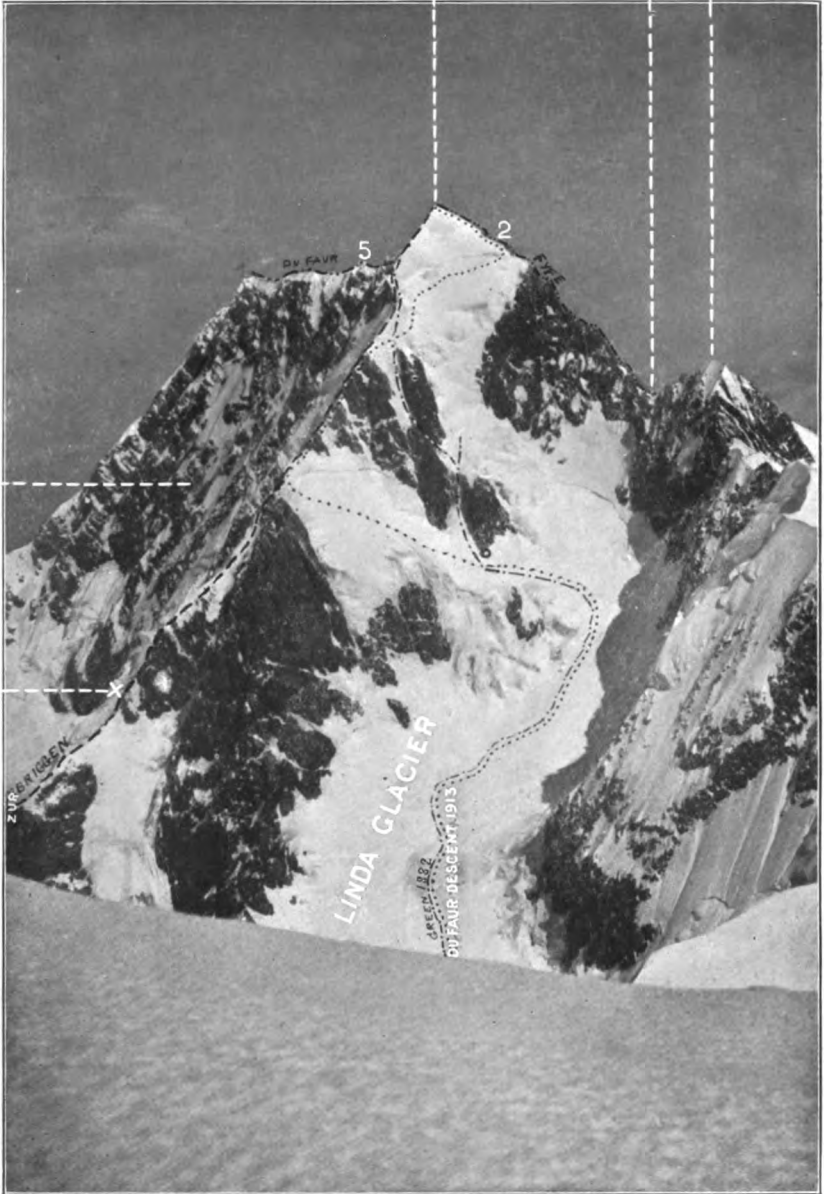
MT. COOK,
12,319 ft.

GREEN'S SADDLE

MT. DAMPIER.

This N. F. face is shown in full in No. 7.

This cross is also shown in No. 7.



F. du Faur, photo.

Swan Electric Engraving Co., Ltd.

MT. COOK AND MT. DAMPIER,
FROM THE SUMMIT OF MT. TASMAN.

Showing Zurbriggen's and the Linda routes.

(Mr. Green's route was finally completed only in 1912, as mentioned in the present article.)

Mt. Dampier. 14,349 ft. Green's Saddle. 12,173 ft. 11,844 ft.

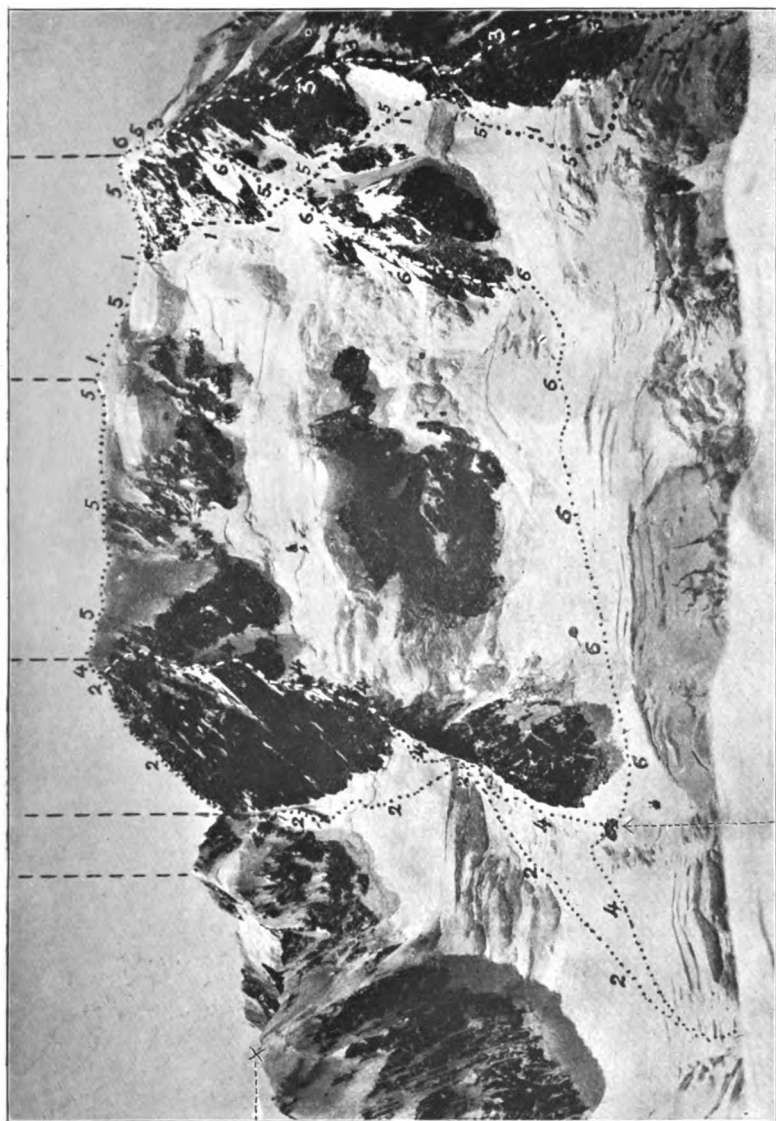


Photo. No. 6 taken from X.

Mt. Hicks. →

↓
To Harper's Saddle.

E. Teichelmann, photo.

Bivouac.

Swan Electric Engraving Co., Ltd.

THE W. SIDE OF MT. COOK, FROM SUMMIT OF LA PEROUSE, OTHERWISE MT. STOKES.

ROUTES FROM THE HOOKER SIDE.

1. Fyfe, G. Graham, and Clark. 20 Dec., 1894.
2. Fyfe, Graham, and Clark. 28 Dec., 1894.
3. Mr. H. Sillem and P. Graham. Feb., 1906.
4. Mr. Earle with P. and A. Graham and J. Clark. 1909.
5. Miss Du Faur with P. Graham and D. Thomson. 1913.
6. Mr. S. Turner with P. Graham and F. Mline. 1914.

1894 Fyfe, G. Graham and Clark, from a camp high up the Hooker, climbed up the steep snow couloir between Dampier and Cook, and followed the N. ridge to the top. See 'New Zealand Alpine Journal' as above. This was the first complete ascent of Cook. This is the route down which Ross came, as described in his lecture on February 3, 1914. All accounts speak of falling stones in the afternoon.

(2) *By the W. Arête.*—In 1909 Mr. Earle, with P. and A. Graham and J. Clark, ascended by this arête direct from the Hooker névé. The rock was good. This is the quickest and the safest route up Mt. Cook.

B. *From the Hochstetter Bivouac above the Tasman.*

(1) *The Linda route.*—This was the route by which Mr. Green all but reached the top with Boss and Kaufmann in 1882, the first serious attempt to climb Cook. The route from the Big Plateau bears round to the right, and to the left up the Linda Glacier, between the divide and the N.E. spur, and then ascends the N. face of Cook. This was the route followed by the gallant New Zealand parties of 1886-1894, who without any professional aid set to work to read climbing books, and then to climb Mt. Cook and eventually succeeded from the Hooker. This route was first completely ascended by Messrs. F. Wright and H. Chambers, with J. Murphy and J. Clark, in February 1912, thirty years after Mr. Green's attempt, and they were followed about a month later by Mrs. Lindon with Peter Graham and D. Thomson.

For accounts of this route see Green's 'High Alps of New Zealand' and his letter and marked route in 'A.J.' xxviii. 228; Mannering, 'With Axe and Rope in the New Zealand Alps'; and the 'New Zealand Alpine Journal.'

I believe no attempt has been made to ascend the Linda to Green's Saddle and then follow Fyfe's route, though Mr. C. Macdonald crossed Green's Saddle. ('A.J.' xxiv. 603.)

The sad accident reported in the May number shows the danger of this route. That accident seems to me to have been the fall of a hanging glacier rather than what is usually understood by an avalanche, a danger in my opinion, considering the activity of the New Zealand glaciers, equally great on the Big Plateau below Tasman.

(2) *By the N.E. Ridge.*—This was first climbed by Fitzgerald's guide, M. Zurbriggen, in March 1895, the same season as the first ascent. He took practically the route that we followed in the next ascent of Cook, ten years later, except that he kept closer to the rocks at the start. For accounts

see Fitzgerald, 'Climbs in the N.Z. Alps,' and the 'N.Z.A.J.' as above. This is a good route, but I think in some years the snow-slope would be very broken and icy.

It has been questioned whether Zurbriggen reached the actual summit owing to time. We were a party of five; none of us had ever been on Mt. Cook except Clark, who had climbed it in the first ascent from the other side. We had to cut up the final cap; he had to 'cut a few steps.' A guide of Zurbriggen's powers would go very fast. We took $15\frac{1}{2}$ hrs. up, he took 14 hrs. 20 min. In the descent, where a guide's superiority is more marked, we took $9\frac{1}{4}$ hrs., omitting the night out; he took 7 hrs., omitting $1\frac{1}{2}$ hrs. while he was waiting for the moon to rise.

I admit that there are several discrepancies between the times in the two accounts, and he certainly did not follow Green's route up the ridge. Mt. Cook has been climbed very much more quickly of late; but first ascents—and ours was a first ascent for all the party—are notoriously slow.

There seems to have been no attempt made to climb the Southern Peak by the ridge on the S. side of the Big Plateau and the Hochstetter icefall.

I must now, after this long digression, return to our own story. After we returned to the Hermitage we had two days' rain, but on the third afternoon started off up the Hooker again, Clark coming with us on a horse to put us over the river, so that we had the advantage of the track up the glacier. Crossing the glacier to the W. side, in three hours we were at a rock camp at the foot of the pass to the Copland. We got away at 5 next morning, reached the saddle at 8 without any difficulty, and after a short halt went straight down and at the end of the snow stopped $\frac{1}{2}$ hr. for breakfast. Instead of keeping fairly high to avoid some bad scrub, we went straight down to the river and soon were in the worst scrub it has ever been my fate to tackle. Two miles took us $3\frac{1}{2}$ hrs. About half-way we came upon an old camp site which must have been Fitzgerald's, as no one else had been foolish enough to try the river. At 12 o'clock we were just below Douglas Rock, a shelter rock named after Mr. C. Douglas, who had explored many of the West Coast valleys. We left at 1 P.M. and followed an old blaze line to Welcome Flat, which we reached at 6.20. Here we had to ford the river, and bitterly

cold the water was, and two chains wide, though only knee-deep. We then walked down the flat and decided to camp for the night. We slept out on the river-bed to avoid the mosquitoes, and, getting plenty of moss off some stones, had a good sleep. Next morning we got off at 8 and turned into the bush to see some hot springs. In nearly all the West Coast valleys there are hot springs; at the Waiho, the river from the Franz Josef, a bath-house has been built, and if the water is too hot it can be cooled with lumps of ice from the river. All these springs are hotter when the river is up. A horse-track has now been made up from Scott's, but then there was only a blaze line through the bush and we had a good deal of 'bush-whacking.' At Architect Creek we turned off to look at our old camp site of 1902, where, almost foodless, we had lain in pools of water under a leaking tent and fought mosquitoes all night. After that the river-bed was less confined and we got a good deal of open walking. It was dark when we got out on to the open country, and we got one rather deep ford; fortunately I knew pretty well where the Main South Road, a track about 5 ft. wide, left the river-bed, and at 9 P.M. we were at Scott's comfortable house and soon were enjoying a good meal. The next day I got my horse and started to ride up to Ross, meeting Low and P. Graham at the Waiho, they having come over by Graham's Saddle and down by the Franz Josef.

I heard afterwards that Woodham, whom we had left at our camp up La Perouse Glacier, had been very anxious when we did not return to time, and at last had come out to Scott's to see if there was any news of us.

This was my fourth year in the Southern Alps, and it was the first year I had been able to climb a peak; when it is impossible to get porters, and tents and food have to be carried in, so much time is lost in the necessary work beforehand, that often there is nothing left for real climbing. However, I shall never regret the experience; we managed to solve one or two small problems for the Survey Department and to get a very fair collection of photographs, the majority of which were new.

In 1906 the obvious thing seemed to be to go up Cook's River again and try to climb some of the peaks at the head of the valley, as we had done nothing in the valley, and there was the track open and a certain amount of tinned meat which would do in a case of emergency. I left Ross on Monday, January 15, and had a week of services at various places in the southern part of the parish, and then met Teichelmann and Low,

who was to join us that year. When I had been at the Waiho I heard that my ice-axe, which I had lost down a crevasse on the Franz Josef Glacier four years ago, had been found on the surface of the glacier and about a quarter of a mile below where it had been lost. On Wednesday, January 24, after a wretched night in an old digger's hut, we started up the well-known track; we were all very much out of condition, and were carrying heavy swags. Soon it came on to rain, and we were wet through, and found the wet, slippery bush more fatiguing than ever. However, at last we reached Tony's Rock, where we found Alec Graham, who, with the help of a digger named Anderson, had got all the swags except one up to the rock. Next day Graham and I, with a swag apiece, set off in the usual rain to the base camp; they had not been able to pitch it, owing to the bad weather, but had carried up several swags and had planted them under some rocks. The site of the camp this year was a little higher up the valley, with a magnificent view of the hills at the head of the valley. In the afternoon the weather cleared a little, and we pitched the fly to let the ground dry a little and then returned to the others. Next morning we all got off at 6 with heavy swags, and reached the camp just as it began to rain, and we had a miserable time fixing the tent in the wet, bringing the other swags from where they had been left, collecting firewood, and setting stones for the fireplace and floor. We even tried to dry some scrub by the fire for bedding. One of the troubles of a camp up a new valley is the inquisitiveness of the kea, a mountain parrot which has earned an unenviable notoriety on the Canterbury side by picking the kidney out of live sheep. Our first year in the hills we had heard a kea on the ridge pole, and we lay in our blankets and said 'How delightful to be where birds are not afraid of man!' But the next thing we knew was the sound of tearing calico, and a kea looking through the hole to see how we were getting on. This year I got up at once and shot him before he had time to do any damage, and a few hours later he was in the 'billy,' eking out the tinned beef. Curiously enough, there have been no complaints of their attacking sheep on that part of the coast. My own idea is that though the sheep are sent up on to the hills in summer there is sufficient scrub to enable them to brush off any kea that might light on their backs, and certainly it is a habit acquired in the last 50 years by a bird not otherwise carnivorous, and I believe in Canterbury it is still local, but once a kea has tasted kidney he becomes a moral wreck.

On the following afternoon it cleared, and we got our first view of the hills. The next day Teichelmann, Low, and I started up to the high camp of last year. We found some food we had left the year before quite eatable, and Woodham's bed under the rock quite dry. We pitched a small oiled fly and wattled the end to do for two, while the other two could sleep under the rock. It came on to rain again just as we finished and we returned to camp fairly wet, stopping to bathe on the way. The next day we took up final swags to the top camp; the following morning was glorious, and Low and I set off up the hillside above us to pick a place to bivouac before attempting La Perouse. We found a capital spot where the snow had melted away in front of a big rock, and prepared a place to sleep on. There must have been snow for 300 yds. below the rock, and yet we found a Maori Hen's nest just deserted under the rock and the tracks in all directions. The Maori Hen or Weka, a flightless rail, about the size of a Leghorn, has suffered much from the weasels which were imported into New Zealand to kill the (imported) rabbits, and I believe that this couple had nested for safety so high up, for when they built that nest the snow would have extended much further. We returned to camp for lunch, and in the afternoon we all set off to the bivouac with our blankets. We arrived in a thick fog, which cleared off after tea, and Graham went down for some water for the morning, while I stamped steps up in the snow above us. We got off next morning at 3.50 with the intention of making an attempt on La Perouse. It was a glorious morning, though heavy fog was lying in the valley below. We went straight up to reach the crest of the spur between the Gulch Glacier and La Perouse Glacier. In $1\frac{1}{4}$ hours we were on the crest and then followed it along for $3\frac{1}{4}$ hours; twice we lost a good deal of time in getting to the top of a gendarme and finding we could not get down, and being compelled to descend and turn it on the north. After $\frac{1}{2}$ hour halt for breakfast, we set off up the final peak, leaving everything behind, as white clouds were beginning to pile up behind the big peaks, and we were afraid of bad weather. In 40 min. we reached the ridge between the rock shoulder so conspicuous from the valley and the final peak; we had to chip steps all the way in the hard snow. On the arête we halted for a moment, as we had come up very fast. We had been afraid of a cornice on the Canterbury side, but fortunately it was quite free. The slope eased off a little, we were able to get on with very little cutting, and in an hour we stood on the summit at 10.50.

Before we started in we had heard of the crossing of Mt. Cook which Mr. M. Ross described in a recent paper, and we had also heard that they had designs on La Perouse, so we had been looking anxiously for tracks, but we were unable to see any, and felt pretty certain that ours was the first ascent after all. I was very glad to have such a good view of the upper W. face of Cook and the upper glaciation, which was almost unknown. Teichelmann took a few photos, but it was so hazy that they were chiefly valuable for topography. We then went to the lower peak on the arête leading to Harper's Saddle, about 45 ft. lower, and tried to get some prismatic readings, but we found the wind too strong. We then returned to our sacks, had a cup of tea and some food, and set off down at 2.10. On our way up we had noticed a fairly broad snow gully without any rocks or break in it, so we unroped and glissaded down. Soon we ran into the fog, and though we knew that there was no danger ahead we went slowly and reached our bivouac in 1 hr. 27 min. actual going from the top. After a cup of tea we returned to our high camp in a thick fog. It had been a pleasant climb, and the first virgin peak any of us had ascended. The next day Graham went down to the base camp to bake some more scones, as there was very little wood at the high camp, while we washed and dried clothes, our chief difficulty being the Maori Hens, as they managed to steal nearly all the soap. I had knocked my camera rather badly on one of the rocks, lowering it in my sack before descending, and had found that it was out of order, so I set to work to try to repair it. One of the vulcanite sectors of the shutter was broken, and at first it seemed a hopeless job with no tools or material, but at last I got a little thin tin off the top of a milk tin, and with the aid of a pair of nail scissors with a file on the back I got a shutter cut out of it that would work, and it did so well that I did not get another till I had the camera overhauled in England two years later. The next two days the weather was too uncertain to do anything of interest. On February 5 we got away on a doubtful morning, which soon improved. However, we had started too late and too low to attempt any big climb. For 1½ hours we went up the fairly level glacier till opposite Harper's Saddle, and then made our way up the main icefall, which comes down in a big semicircle, part of it coming into the lower glacier at right angles to its course. It was up this part, facing Harper's Saddle, that we got a route; at the head of the fall we went straight up to a low saddle looking into the Balfour, and climbed up a small rock knob on our right, 2¼ hours from the foot of the icefall. It was

then a beautiful day, and we took a round of photographs. The most interesting thing was the huge precipice which cuts the Balfour in two, and over which the upper glacier falls in avalanches to re-form below into the lower glacier.* While we were there an avalanche fell at almost regular intervals of five minutes. I was fortunate enough to secure a photograph of one. After lunch we returned to our high camp. On the next afternoon we went up to a bivouac we had noticed about an hour up the glacier. The next morning we got off at 3.15 and went up the glacier for an hour by lantern light, and, following our previous route through the icefall, bore to our right up the main glacier, our intention being to get to the saddle at the head of the valley between Mt. Tasman and Mt. Dampier. We had seen two days previously the obvious way round under the foot of Mt. Hicks, which was only a matter of tramping and avoiding one or two clearly marked crevasses, but the certainty of the one route, though it meant reaching an untrodden col, did not seem so attractive as an attempt to force the upper icefall, which had also seemed feasible. We got through the icefall after a little cutting, but were stopped by the wide crevasse on the top, through which we thought we had seen a route. We retraced our steps and tried again on the north side, only to be stopped again. We then tried again under Mt. Hicks, and were getting along rapidly when it began first to rain and then to snow, so we decided to give it up and return. It was a reminder of the lesson one is so apt to forget—that in new country one must be content at first with the easiest routes. If anyone makes the first crossing of this saddle from the Canterbury side, I would advise him strongly to make at first to the foot of Mt. Hicks and then cross to the right bank of the glacier and descend the part of the fall that faces Harper's Saddle. There would be an alternative for anyone who did not wish to descend the glacier to the coast: to mount the steep snow on the spur from Hicks which bounds the glacier below Harper's Saddle on the E., and then near to the final peak of Hicks drop down the snow to Harper's Saddle and descend to the Hooker and the Hermitage. At present this would probably mean a night out on the upper Hooker, near where we had slept the previous year.

We got back to our bivouac in one hour and 40 min.,

* In *A.J.* xxi. 183, there is a photo of Mr. Harper's showing the whole length of the Balfour. An illustration of La Perouse glacier is on p. 181.

and, being now in the sunshine again, boiled the billy and had lunch, and amused ourselves by photographing avalanches off the great rock face of La Perouse opposite. We then returned to the top camp, and Graham went on down to the base camp to cook some scones. While the others were away next morning I found a Maori Hen with his bill stuck in the butter, which he evidently thought much better than soap; so, feeling that there was a limit to his amusing tricks, I smote him with a stick and added him to the contents of the stewpot. After tea Low, Graham, and I set off to the bivouac up the glacier to try Mt. Hicks next day, Teichelmann deciding not to go, as he had a sore heel. At 2.30 we got off by moonlight on an ominously warm morning, and followed our previous route through the icefall, finding the snow soft. At the head of the fall we crossed the glacier to the long rock spur from Mt. Hicks, which we reached at 5.10. The snow had now improved and we were able to advance rapidly up the snow on the top of the ridge. At 6.30 we were below the final rise, and after a halt of half an hour for food we set off, cutting steps up the steep snow gully which ran up on the face of Hicks. We took to the rocks where the gully forks, and found them excellent climbing, though steep. Bearing to our left slightly, we reached the crest of the ridge running to Harper's Saddle. Here we found a very strong wind blowing, so strong that we had to sit down and straddle along the narrow snow ridge, which was broken by one short pitch of rock. At 10.45 we were on the summit; below us the Hooker was buried in fog, out of which La Perouse and Sefton rose majestically. Mt. Cook towered 2000 ft. above us, giving us a splendid view of the couloir leading to Green's Saddle, while the great N.W. rock face was a strange aspect of Cook, which is generally seen as an entirely snow mountain. Due E. the divide ran up to Dampier, the third highest mountain in New Zealand, and then, turning sharp N., ran across Clark's Saddle at the head of our valley and then over the Silberhorn to Tasman, in my opinion the finest of the New Zealand peaks and presenting a curiously similar aspect from every side. Further N. we could see the peaks at the head of the Franz Josef, and then the forest-covered hills running down to the Pacific. We were able to pick out the bluffs on the beach as far as the Wanganui River, eighty miles to the north—not to be confused with the North Island river of that name—while we could see Jackson's Bay nearly 100 miles to the S., inland from which we could see Mt. Aspiring rising above the surrounding peaks. We were

HICKS, or
DAVID'S DOME,
10,410 ft.

HARPER'S
8,580



La Perouse Glacier.

S.

THE BALFOUR AND LA PEROUSE

afraid to wait, in case the wind got worse, so after a round of photos, which I had to take lying on the snow to avoid unsteadiness, we set off down. As usual, for drink we relied entirely upon an aluminium stove to make tea from melted snow, and the tragedy of the trip occurred when the methylated spirit bottle slipped out of my pocket and broke to pieces on the rock below. We went some way down the long spur and halted for a dry lunch under some rocks to get out of the wind; then we floundered down the snow, which was now very soft, and reached the bivouac, and, picking up our sleeping-bags, got back to the top camp at 7.40, to be welcomed by Teichelmann and a large billy full of tea. We all slept well, except that I was awakened twice by a Maori hen dabbling at my ear; I suppose he thought it a new kind of soap! After dinner we packed everything into four large swags and went down to the base camp. The next morning we started early with four large swags. At Tony's Rock Low and I turned back to fetch the rest out, while the doctor and Graham went straight out to the diggers' hut. Our last swag from the base camp was colossal; what would not go in was tied on outside, and we walked to a clattering accompaniment of frying-pans, billies, an axe, and a slasher. Next morning we went out to the diggers' hut, meeting Graham and Anderson going in for the last swags. Rain was coming on, and the hut, of which one end had fallen out, was alive with mosquitoes and sandflies. We had left a horse on that side of the river which Teichelmann had taken to go to Scott's, promising to send up our horses for us. After an uneasy night, while we were at breakfast Graham and Anderson returned, having raced the rain, which came on just as they arrived. By three o'clock the river was unfordable, and we had only brought out enough food for one meal, expecting the horses on our arrival, while across the river we could see Anderson's camp, which was well stocked with food. Anderson was used to the bush and put on the most terrific 'smudge' I have ever seen; he smoked contentedly in the thick smoke; we coughed and bore it, as preferable to the mosquitoes. Next day Scott arrived about 12, and, after driving a horse across to see what the ford was like, brought the others over, and we soon had the packs on and were across at Anderson's tent, where we had a much-needed meal and then went through to the main S. road, at that point a rather vague bridle track. I rode through to the Waiho, reaching it after dark, and the next day I rode 65 miles and got home early the following morning in time for my Sunday's work. Thus ended our second trip up

the La Perouse Glacier. I have not heard of another party going up there since. There is a good deal of new work to be done there, as there is all along the coast, but it is rough work, and by this time our track will be completely overgrown again.

I appreciate the guides, the hotels, the huts, the footpaths, and, perhaps most of all, the bridges of Switzerland, as only the man can who for six years had to do without such luxuries. I must even confess to being often relieved to find well-defined nail-marks on rocks, or tracks over the snow, or, basest of all, a fixed rope, but I would like to have another season on the West Coast of New Zealand before I grow too old to rough it.

NOTES ON THE ILLUSTRATIONS.

1. The base camp of 1906, position about 'O' in 'Moraines.' The valley is here fairly wide, but covered with dense and stunted vegetation, 6 to 12 feet high; all burns well quite green.

2. Cook's River, just below the junction with the Balfour; from this point the river runs through a gorge till above Tony's Rock; the sides are clad with big timber, chiefly of the pine family.

3. The head of the gorge; the size of the boulders can be seen from the figure above the X. The water is difficult to distinguish in the photo, but there is a considerable volume.

4. The curious dirt bands are probably old avalanches; the highest band is not visible in a photo of Mr. Harper's taken from Ryan's Peak in 1896. (See 'A.J.' xxi. 181.) Cook's River is seen at the end of the glacier, and reappears after collecting the drainage of the Balfour and the Fox. Beyond, the Pacific Ocean was clearly visible some twenty miles away.

5. Taken from almost the same position as No. 4. (See No. 10.) The main icefall is mostly behind the near rocks on the right, but it swings round in a huge semicircle, at right angles to the course of the glacier as well. The route described on p. 18 is up part of the icefall in shadow to the left of the centre. This leads to the snow col on the range (in the middle ground) separating the Perouse and the Balfour glaciers. The higher range (in the background) divides the Balfour from the Fox. No. 10 is taken from the small rock peak marked by an X to the right of the col.

6. This great rocky N.W. face of Mt. Cook is hidden in all distant views by Mt. Hicks. The first ascent of Mt. Cook (by Fyfe's party in 1894*) was made up the snow couloir in the foreground and then up the rock ridge on the left. Mr. Earle's route (see Photo No. 8) was by the rocks on the right. Fyfe's route is marked No. 2, Earle's No. 4.

* Cf. *New Zealand A.J.* ii. 29 seq.

7. The N.E. face of Mt. Cook (see also No. 9). The route described in the present article, and which is in the main a repetition of Zurbriggen's ascent, is marked. The first (unmarked) part mounts the crest of the ridge at the right-hand bottom corner of the picture for 1000 feet, then descends on to the Big Plateau, passes under the foot of Tasman, and rounds the foot of Zurbriggen's arête as marked. (See also No. 9.)

8. The Hooker face of Mt. Cook, with the various routes. The author is indebted to Peter Graham, the chief guide at the Hermitage, for the route marks, and to Dr. Teichelmann for the photograph. Reference should also be made to the splendid picture (by Miss Du Faur) of this face in 'A. J.' xxvii. 100; but, as already pointed out in 'A. J.' xxviii. 227, the summit is on the *left-hand* end of the ridge and the 'lower peak' on the *right-hand* end, and not as marked in error on the photograph.

9. The Tasman or Linda face of Mt. Cook from Mt. Tasman, showing Zurbriggen's arête route and the Linda variations.

Zurbriggen kept closer to the arête; the actual route will vary with the season. We passed the night on the descent as marked by an X on this and No. 9. The best illustration of this side of Mt. Cook is on p. 142 of Fitzgerald's 'New Zealand Alps.'

The rock arête on the extreme right-hand skyline does not lead to Green's Saddle, as might be imagined, but is a subsidiary buttress of the N. arête.

10. On the extreme left of this panorama is a col leading to the Fox Glacier; Torres we climbed from the Fox in 1907. Fitzgerald, with Clark and Zurbriggen, climbed Tasman in 1895. From the Hochstetter Bivouac they climbed to the S. shoulder of Mt. Tasman, and then followed the snow arête to the summit. From Tasman to Dampier the Divide falls on to the Big Plateau and feeds the Hochstetter Icefall. At Mt. Dampier, first climbed by Miss Du Faur with P. Graham and C. Milne in 1912,* the main Divide bends W. and falls into the Hooker. Mt. Cook, which stands off the Divide, only shows as a rock triangle. Our route up Hicks in 1906 was above the main icefall of La Perouse Glacier, up the long snow slope, and up the rocks at the head of it. We reached Harper's Saddle in 1905 by a rock ridge which runs out of the picture about 1 inch from the bottom on the right side, and then we crossed the large snowfield to the col. Our route up La Perouse is not visible.

The compass points are only approximate; to get the effect of the panorama, the ridge between the Balfour and La Perouse should be taken as the centre of the picture, and the Balfour side bent sharply back and the Perouse side in a wider sweep.

The position of the site of this photo is shown by a cross on Photo No. 5.

SPECIAL NOTE.—The accompanying map was originally published

* A. J. xxvii. 98 seq.

with Dr. J. M. Bell's 'The Wilds of Maoriland' (reviewed 'A.J.' xxviii. 412), who expressed his indebtedness for the use made of the map accompanying Mr. Arthur P. Harper's 'Pioneer Work in the Alps of New Zealand.' The author desires to express his own indebtedness to the authors of the above-mentioned books and to the respective publishers, Messrs. Macmillan and Mr. Fisher Unwin.

ARCTIC NORWAY: TWO ASCENTS OF
STRANDAATIND.

By WM. CECIL SLINGSBY.

Round the shore where loud Lofoden
Whirls to death the roaring whale,
Round the hall where Runic Odin
Howls his war-song to the gale.

CAMPBELL.—*Ode to Winter.*

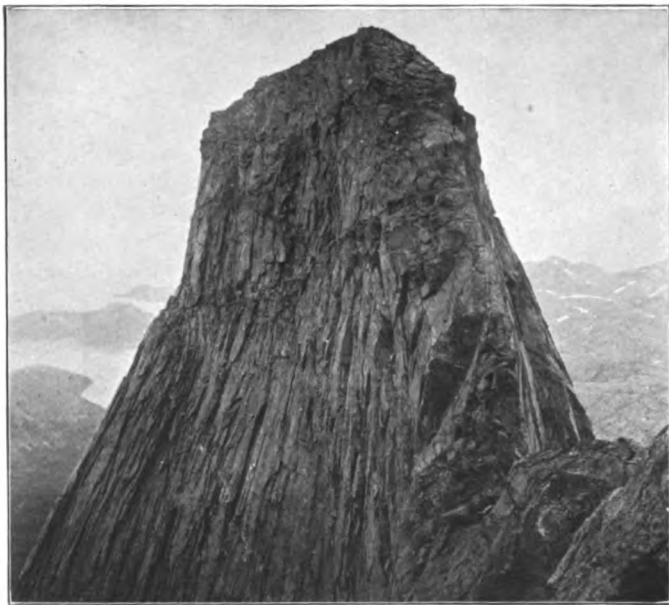
MANY of us were introduced at an early age by Harriet Martineau, in her charming little book 'Feats on the Fjord,' to that mystic Norse Northland within the Arctic Circle, and have been by fancy led to picture the glistening snows of the monarch Sulitelma, the shadows of its rugged rocks projected upon its glaciers and the pine forests and mountain pastures which insensibly lead the eye down to the romantic Salten fjord below. Others have had their imaginations stirred by the modest story of 'Peter and the Bear,' which treats of much the same region. Edgar Allan Poe has also invested Nordland with a halo of romance which will ever abide, and all have heard of the Mælström. Collie is right in saying 'Personally, I consider that by far the most beautiful part of the journey to the Norwegian Northland is after one passes the Arctic Circle.'* His description of the scenery in this paper in the ALPINE JOURNAL is the truest and the best that I have read.

Years ago I became the happy possessor of the best book which has yet been written on Norway by any foreigner, the mountain classic, 'Norway and its Glaciers, visited in 1851,' by Prof. Jas. D. Forbes, F.R.S. During the last thirty-five years I have very often turned over its pages and have almost invariably been attracted by a somewhat flamboyant but

* *A.J.* xxi. 91.



STEDTIND, FROM STEDFJORDNAES.
(Photo. by the late Dr. T. C. Ouston.)



J. Norman Collie, photo.

Swan Electric Engraving Co Ltd.

STEDTIND,

yet an unexaggerated sketch of 'Mountains near Folden Fjord,' opposite page 58. In describing these, Forbes says, p. 57 :

'On resuming our voyage, we passed some spots as green and cheerful as any we had seen in Norway, especially at Kjerringö, where there is an establishment on a most comfortable scale ; but a few miles more brought us to a scene of desolate grandeur, rendered more striking by the contrast. The headland which divides the North and South Folden fjords may vie with the aiguilles of Mont Blanc in the fantastic singularity of its forms. I have nowhere seen summits more perfectly acuminated. . . . It is quite impossible to describe the varied grandeur of the scenery of the coast from between the Folden fjord and the Vest fjord, one of the greatest inlets on the western shores of Norway.'

Oddly enough, though I had made three mountaineering campaigns in Arctic Norway, I had only once come by this part of the coast in a coasting vessel, and that was in the middle of the night, but had always crossed the Vest fjord on an express boat between Bodö and Svolveær. Hence, I had only seen very distant views of these mountains, the existence of which seemed to me to be more or less mythical.

Early in the summer of 1912 I was invited by our fellow-members C. W. Rubenson and F. Schjelderup to join them and another excellent Norsk mountaineer, Harold Jentoft, in a mountaineering campaign on the mainland in Arctic Norway, principally near the mouth of the Sör—or South—Folden fjord, some 25 miles N. of Bodö and between Lat. 67° and 68°, *i.e.* further N. than any portion of Iceland.

I accepted this invitation at once, conditionally that I should be taken up the grim monolith Stedtind, which two of the party and Arf Bryn had ascended the previous year by the route discovered in 1904 by Collie, W. E. and A. M. Slingsby, but which at that time was rendered impossible by a gale of icy wind.*

There were also two other good reasons why I should join the party. First, because the company was excellent ; and secondly, because wet weather in England had engendered a little rheumatism, and, as I had on one occasion completed a cure for lumbago by making the descent of Gaping Ghyll

* *A.J.* xxii. 624.

and joining in, to some extent, the survey of, at that time, some newly discovered passages, when we were nearly impounded by a flood caused by a thunderstorm, it was a fair assumption that camp life in Arctic Norway would be just what I needed.

The result entirely justified the prescription.

Fortunately, I was able to get from Mr. Howard Priestman much valuable information about the district we intended to visit, as he knows more about that part of the country than any other Englishman. He also gave me some photographs which proved to be a great help.

So far as I am aware, the first visit of any mountaineer with designs upon the weird peaks of that wild but beautiful region of Sør Folden was that of our late member Hr. Carl Hall of Copenhagen in the year 1889. With two guides from Romsdal, first-rate cragsmen, he climbed the Folden fjord Troldtind, and the western but lower peak of the Strandaatinder. Further N. he also ascended the Tilthorn, but failed, like so many other men, on Stedtind.

On July 23 I left home and early on 25th reached Bergen where, in order to fit in with the arrangements of my comrades, I had to remain for two days and one night. The picturesque old city was as busy as ever, and bright sunshine, with corresponding deep shadows, intensified the beauty of the surroundings. I bathed twice at the headland, and so warm was the water that it seemed almost sinful to leave it. Only a few days previously I had shivered in the sea at Scarborough. I had met two A.C.'s on the way, J. W. Hartley on the voyage, and Dr. Prothero in Bergen. Alas! for these fishermen, there was too little water. At the new wireless telegraph station on the top of that high sun-baked hill I had a very interesting conversation on international politics with an official, who unbent when quite sure that I was not a 'Tusker.' *

Yes, such a jolly voyage north in golden sunshine and over rippleless waters! I even breakfasted whilst rounding that dangerous and generally most tempestuous headland, Stadt, the westernmost point of Scandinavia, and what is more I did not realise that we were so far until I said to the steward 'How soon shall we come to Stadt?' when he replied 'We are nearly round it now.'

At Aalesund, Rubenson and his bride joined me. They had been mountaineering in Jotunheim and had ascended

* Tusker = German.

Skagastölstind. The following day Schjelderup, Jentoft and a lady friend of Fru Rubenson's joined us at Throndhjem.

Such perfect weather and so little, so marvellously little, snow on the mountains ! No need in these days to send a boat ashore and to buy a favourable wind from a Lap necromancer, however famous he might be. No need then to pay for such a wind the sum of ' ten crowns and a pound of tobacco.' No ! these are the prosaic days of steam and not such as they were in the year 1658 when this bargain and most successful fulfilment were made. Perhaps we have the advantage, but who can tell ?

On Monday afternoon, July 29, the cosy little steamer *Salten* gently glided over rippleless water into the sound of Kjerringö. As it was low tide we had to land in a large boat. In the stern of another and smaller boat sat the beau-ideal of an old Norsk viking in a sou'wester and oilskins. The viking was a Scotsman, Capt. Ferguson, who, with his wife, have fished during many summers in this most fascinating district. Though we did not then meet them, I have seen a good deal of them in Rome, where we have had many a long chat about the far North. May they return again and yet again to their northern home ; and may I too join them and listen to the yarns of that dear old man, is a desire which I hope to realise.

In lieu of an inn we went to the merchant's house and were most hospitably received by Hr. Gerhard Kristiansen and his wife. Here, off and on, we spent five whole days, and it is well nigh impossible to describe the kindness which was literally showered upon us. Our convenience was invariably studied. Boats and men were placed at our disposal, and this too in spite of the fact that, in the short northern summers, there is invariably more work to be done than there are men to do it. We were treated as friends and guests, and the reverse of mere travelling tourists. Indeed nothing but the happiest of memories are centred on Kjerringö.

Across a narrow strait is a flat island strip which in early summer is the home of innumerable eider duck. The view from this island, or *ö*, is superb. Across the silver water-streak are the pier, the warehouses and the pretty white-painted wooden houses typical of the *amt* or province of Nordland. Beyond, in rich meadows, are a small settlement and the church with its pretty spire which tells the tale that Kjerringö is the centre of the district. Above are gentle rolling wooded uplands and beyond these a forbidding range of black mountains including the Trolldind. But these are minor details.

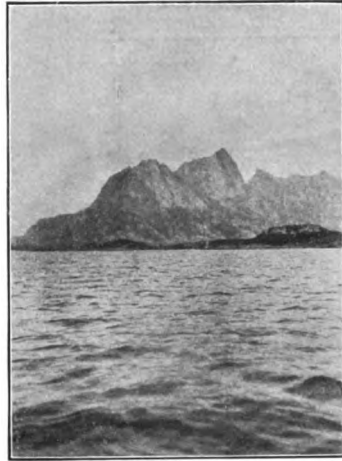
The great feature is the grand range of the Strandaatind, so much admired by Forbes, and, from the window in my bedroom, I had before me, only four and a half miles away, the view of this lovely range, which easily became impressed in my memory.

It consists of a double-peaked mountain of which both peaks rise on the S. side with most forbidding ice-planed precipices from a relatively low and partly wooded line of foot hills. At the base of the latter are smiling fields and many cosy little farms. For their upper ten thousand feet both peaks are exceedingly narrow, and the two walls, northern and southern, have been planed by the glaciers of old to a smoothness with an absence of cracks, chimneys or gullies, and consequently of subsidiary ridges, also of ledges, such as I have never seen in the Alps. There are black streaks running down the smooth sides which on the N. give the appearance of the inside of the frame and the ribs of a shipwrecked vessel. Not one of these streaks indicates a place which would afford the passage for a goat. The walls are indeed terrible, that of the higher peak being fully 2000 ft. of smooth rock, but the lines of the mountain are exceedingly beautiful.

The western and lower peak to all intents and purposes springs from the shore or *strand*. The *aa*, or river, on the S. of, and almost parallel with, the axis of the mountain probably supplies another syllable in the name of the mountain. This western peak has a broad base on the sea front which turns first into a Roman nose and then into a jagged ridge of the nature we associate with the Chamonix aiguilles.

Between this peak and its loftier rival is a great gash with a narrow gap at the bottom. At the E. side of this gash and on the side of the higher peak there is a great square-walled perpendicular crag, some 60 ft. in height and easily visible from the farms below. Above this, though the ridge is narrow and steep, there is only one place—a notch and a high crag—which would be likely to stop a determined and skilful party. This much knowledge we gained during a lovely walk which Kristiansen took us in the evening after our arrival, when Rubenson and I studied the peak carefully through our glasses.

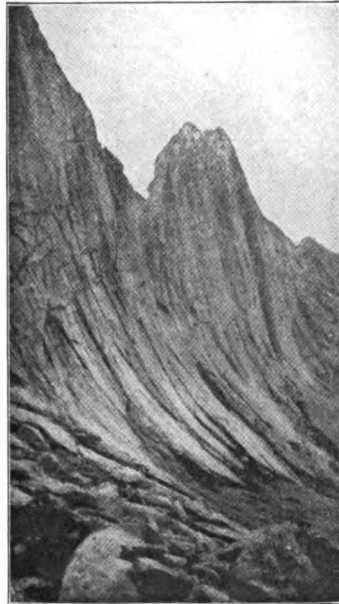
East of the principal mountain, but detached, is a group of peaks the lines of which recall some of the loveliest in Söndmöre, and with the exception of the gaunt naked walls there is nothing to be seen on the S. side of the fearsome grandeur and 'the forms of false craters, frequent in granitic formations'



THE STRANDAATINDER,
FROM NEAR KJERRINGÖ



F. Schjeterup, photo.



Swan Electric Engraving Co., Ltd.

NORTH WALLS OF THE STRANDAATINDER,
RISING OUT OF THE CIRQUE OF LAATERBOTN.

The highest peak on the left.

The western and lower peak
on the right.

STRANDAATIND.



The Great Slab.



Rubenson on the Great Slab.



F. Schjelderup. Photo.

Rubenson "swinging like a spider on its thread."



Swan Electric Engraving Co., Ltd.

"Meget morsomt."

such as are seen from the sea on the W. or N.W., and which are so well and so truthfully described by Prof. Forbes. There is nothing oppressive in the view. On the contrary, all is bright and cheerful.

Next day, July 30, was Rubenson's birthday, and moreover it was his lucky day, as two years previously he had led his party up to the top of what Woolley describes as 'that singular caprice of nature, the smooth and naked Stedtind.'*

We left the house at 9 o'clock with little, if any, intention of doing more than to prospect the route to be followed later. Indeed we thought we should return in the afternoon, so took very little food with us.

For 4½ miles we followed a good road through smiling fields of potatoes, hay and barley—the latter, then green, would be ready for harvesting within a fortnight, thanks to the well-nigh nightless days and the warm sunshine. Cosy little farm-houses, and men, women and children at work in the fields, all added to the interest. Many peasants told us that they 'had seen the Dane on that very top,' the lower peak. As we advanced, the higher peak put on a very ferocious aspect, so much so that, according to Schjelderup, I called it 'a beastly monster,' to which Rubenson, remembering that it was his birthday, added 'and I ought to build a cairn on it to-day.'

For an hour we followed the coast line, sometimes on the coral and shell-besprinkled sands, at others along cattle paths. Most beautiful it all was. In time we rounded the blunt end of the mountain and for the first time we saw into the grand cirque, Laaterbotn, well shown in Prof. Forbes's sketch.

Here, through forest and ling, over the crags and up the beck courses in order to avoid the trees, we found our way.

Even at an earlier period I had discovered that the legs of two of my Norsk friends were abnormally long and those of the third were very muscular and strong. Now, the fact was more than evident, and I realised too that 'Anno Domini' had something to say on my behalf. There was one redeeming point—the moltebær (cloudberry) in golden ripeness grew in profusion. Still, if the Norskmen liked the delicious fruit, so too did the Yorkshireman; and it was hot, very hot.

Above the tree line the interest increased and the northern face of both peaks looked ever more and more forbidding. Hardly was there a place for a sea eagle to perch on that gruesome wall. Near the sea end of the western peak is a

* *A.J.* xxv. 375.

small northern buttress and a corner. Obviously this led to a gap on the main ridge. In ordinary summers the top of the cirque into which we had now arrived must hold an immense amount of snow. Now there were only patches.

Up to the corner we went with little difficulty though care was needed here and there. We knew from Hall's account that we could at least climb the lower peak. We reached a gap in the ridge, at a height of some 2000 feet. I was tired and went slowly. Rheumatism also troubled me in one knee. Still, I could climb. I had tested this during a couple of hundred feet where we had some easy climbing. Moreover, the great interest had begun, the rocks ahead partook of the Chamonix aiguille character and were absolutely sun-dried and warm. I knew I could reach the first summit. Yes, but there would be no need to build a cairn upon it, as there was one already.

Should I continue and, to some extent, keep back my companions, who, I felt sure, would at most only reach the great gap between the two peaks, or should I return? This question was one which I had not often had to put to myself. I quickly realised that it would not be fair to the others for me to proceed, though they pressed me to do so. I told them that I would return. One other great factor which led to my decision was that we had so small a supply of food with us. After handing some of my share of this necessary commodity to Rubenson I sent them off with my best wishes, and climbed a little crag behind so that I could see them the better. Yes, it is quite true my feelings were mixed.

For 200 or 300 feet I watched them closely, overcoming one obstacle after another under Schjelderup's skilful leading. When they vanished, I turned towards the Lofoten Islands, a serried line of gabbro peaks, clear-cut against the deep blue sky some 70 odd miles across the Vest Fjord. This made me supremely happy.

With due care I descended into the basin of the high mountain cirque close to a tiny tarn where I sat on the sun-warmed rocks, watching my friends gain the first summit. Then they vanished for a long time but reappeared at the gap. Unexpectedly, a shower of rain came on, the only one which I saw in Norway that summer. I sheltered awhile; then, noticing that they were closely examining the great slab of rock at the foot of the higher peak, I realised that they contemplated the remote possibility of its ascent.

Meanwhile I closely studied with my field glass the N.E. arête in profile. This was a route which I had advocated

the previous evening, though, truth to say, I had not seen the arête itself, as it was at the back and then out of sight; but I was certain that one existed, and that it must start from a relatively high gap. Two conclusions were soon arrived at: first, that the gap between Strandaatind and the Laater fjeld could be reached, and secondly that some two thirds of the way up the arête there would almost certainly be much difficulty.

About two hours later I got to the hamlet of Strand, and looking up I saw a figure on the top of the great slab in the gap. A farmer came to me and pointed out the figure to me. Others came and their interest was intense. I think at first they looked upon me merely as a chicken-hearted foreigner but were pleased when they found I could speak Norsk. As was most natural they were mightily pleased when I told them that all the three up there were Norsk, also that their success was almost assured.

‘ In cold laborious climes the wintry north
Brings her undaunted warriors forth,
In body and in mind untaught to yield,
Stubborn of soul, and steady in the field.’

When I arrived at Kjerringö, I found Kristiansen standing on a little knoll above his house with a Norsk flag ready to hoist on the flagstaff. He had seen the party in the gap and was fully prepared for the result. At 8 P.M., a few minutes after my return, we were delighted to see the gallant trio reach the summit, and the national flag was duly hoisted and dipped in their honour. With Kristiansen's powerful telescope we noticed them building the inevitable cairn.

Rubenson had therefore again celebrated his birthday on the summit of a maiden peak in Nordland and had successfully accomplished a bold deed, which he thoroughly deserved.

We went to bed as usual, well knowing that the party could not return for several hours, though there was no darkness to hinder them; but we were up betimes. Six o'clock came, and then seven and eight, when we became a little uneasy and prepared to meet them. Kristiansen, armed with a long Alpine rope, and I with food, set off at 8.30. We met them two hours later. They were desperately hungry and (shall I say it?) they were tired. When they reached Kjerringö, they had been 26 hours out.

Truly a good training walk!

I would not like to say that the Yorkshireman could not have done it, even with a few twinges of rheumatism; but I will say

that if he had done so, the length of the expedition would have been extended at least to 30 hours.

Other mountaineers have before now planned huge expeditions as mere training walks. Not many years ago I joined, at the eleventh hour, a party of stalwarts who looked upon the crossing of Mont Blanc from Chamonix to — [Here the censor has deleted a sentence], an exceptionally difficult descent, to be eminently suitable for the purpose. I did not grumble, but I made one stipulation, so far as I was concerned, viz. that the principle of taking three, instead of two, bites at a cherry should be adopted. The first bite was to be Chamonix to Pierre Pointue, where I was to sleep; the second to the Grands Mulets, where also I was to sleep; the third the complete ascent and descent to — somewhere? The two first bites came off successfully, the third was successful only so far as the Vallot Hut, when a gale of wind hopelessly defeated us.

In the 'N.T.F. Aarbok for 1913' Schjelderup has given a graphic account of the ascent of Strandaatind. The traverse of the lower peak was sensational, interesting and certainly difficult. When, however, they reached what from below we deemed to be the crucial point, a 60-foot slab, smooth and perpendicular, their hopes of success were faint.

At the foot of the slab they found a cairn built by Hall's guides in 1889. This plainly said,

'Thus far shalt thou go, but no further.'

The three hardy Norskmén, with whom I would trust myself as readily as with any men living, were not the men to give up without a trial, even when damped by the one shower of the campaign. There was not a chance of turning the obstacle, as on each side was clear inaccessibility.

It was Schjelderup's turn to lead and he would have loved to have done so, though probably his reach would have proved too short; but, as it was the birthday of the hero of Kabru, Schjelderup, with rare self-denial, gave up his turn to his life-long friend Rubenson.

The leader put on rubber shoes as the rock was as smooth as the bald pate of an alderman, and the slab was 60 feet in height. Fortunately, detached from, but near to, the great slab was a rock of some 20 feet in height. This gave Schjelderup an opportunity of giving a little support to Rubenson's feet. Jentoft, lower down, was holding Schjelderup in. The only chance of success lay in the remote probability of being able to traverse diagonally up the slab towards the S. side, where a

flake of rock suggested the existence of a miniature chimney, or crack, up the edge of the slab, but yet out of sight.

A few mere scratches on the face of the slab afforded but little hold for hand or foot, and Rubenson's great length of arm and leg was none too much. He came down once, and all three took a good breath. In a couple of minutes 'Jentoft the tall' held Rubenson's feet in and slowly yet surely the bold leader advanced, whilst Schjelderup took a photograph of him at work. As usually is the case, the tendency was to fall outwards. The miniature chimney did exist, but was of little service. The rain shower had wetted the rocks, the rubber shoes were unreliable and Rubenson longed for his nailed boots. The situation became critical, a hasty conference was held, and meanwhile Rubenson's fingers became cramped.

A small notch was noticed in the edge of the rock flake. Happy thought! 'Switch a rope over it, if possible.' After several trials this was done. Very gently, very firmly, it was held and Rubenson pulled himself a few feet up and behind the face of the slab and above a ghastly mural precipice many hundreds of feet in height. In due time he stood as a conqueror on the flat top of the slab, and there I saw him when I was talking to the farmers in the rich lowlands. Rubenson frankly admitted that this was much the most difficult climbing that he had ever done. This means much, The two others found the difficulties very great, even with the rope above them.

The second great crag on the ridge, which Rubenson and I had examined very carefully through our glasses, proved to be more sensational than difficult. The climbing of the whole of this narrow ridge was really first-rate. In three hours from the gap the summit was reached. Mummery says 'To set one's utmost faculties, physical and mental, to fight some grim precipice, or force some gaunt, ice-clad gully, is work worthy of men.' Yes, this was a magnificent climb, and one which called forth the full powers of the men who undertook it, and it was worthy of them.

The descent was difficult enough, and, hanging down the faces of the two great crags, ropes will probably remain for many years to puzzle the inquisitive eagles or ravens which may chance to perch thereon.

At 10 p.m. they reached the gap. After a short rest they tried to descend due south between the two peaks. Some 1200 feet down their way was blocked by impassable crags. They were dog-tired, there was grass. Surely, too, sleep would come! At 2.30 a.m. they got up and at 4.30 reached the gap

once again. They recrossed the lower peak and at last were heartily welcomed by Kristiansen and myself at the little hamlet of Strand.

This brilliant success, on a mountain which had been attacked on several previous occasions, and Rubenson's birthday were duly recognised by our genial host and his wife, and I am sure that the remembrance of the first ascent of the mountain which ennoble the more placid beauty of the rich farm-lands at its base will be cherished by the farming-fisher folk, their wives, and families, for many years to come.

Without much difficulty I persuaded my companions to set aside a day for us to attempt the ascent of Strandaatind by the route which I had chosen, namely by the N.E. ridge. I, on my part, offered to cancel the arrangement which had previously mainly interested me, that my friends should accompany me on an ascent of Stedtind. This was to follow some expeditions in Sör Folden.

Ascent of Strandaatind by the N.E. Arête.

We had scored some successes in Sör Folden, but, alas! had suffered one notable failure. Here we found ourselves in the lap of luxury once again at Kjerringö. The weather was perfect, as it had been the whole time we were in Arctic Norway. Yes, we have every reason now to look back upon the summer of 1912 as ideal. What a contrast to 1912 in the Alps, practically to that of the whole Continent, to England, also to South and Central Norway! The only weak point was the relative crudeness and lack of the lovely half-tones of colour, which form usually such a distinguished feature of Nordland. This was due to the dry weather.

At Kjerringö the thermometer often showed 88° to 92° F., and once 90° in the shade, and at 9 o'clock in the evening!

My last available day for mountaineering this summer, August 10, arrived all too soon, but we were determined to make the best of it. For once we were up in good time and were rowed by an old fisherman to the coral cove, and enjoyed to the full the view from the sea which inspired Prof. Forbes with enthusiasm and led him to make his sketch of 'Mountains near Foldenfjord.' This sketch, which is from the W., well shows the lower part of the cirque, though not a wicked-looking buttress which divides it in two, the buttress being hidden by the lower peak of the Strandaatind in the centre of the view. The highest peak is that on the right. Its summit is barely 3000 ft. above the blue waves.

The little journey by boat had been most enjoyable and I think we were all sorry to land. However, we found the now well-known cirque, the Laaterbotn, as beautiful as ever, the slopes as steep, and the cloudberry, though not quite so numerous as on our previous visit, if possible more delicious.

Camp life and plenty of exercise had not only driven away my rheumatism, but had put me into rather better training than when I toiled up through these woods and up the bare rocky hill slopes a short time before.

When under the northern walls of Strandaatind, we turned to our left instead of the right as before. My love of snow led me a little out of the way to two little snow-fields. To my mind the only disappointing part of climbing the grim aiguilles and horns on the mainland and near the coast in this part of Nordland arises from the absence of glaciers, or even of snow gullies in the summer. It is very different in the Lyngen peninsula and even at the head of the Sör Folden fjord where there are large glaciers.

Two or three hundred feet of rocks gave us a little climbing to reach our real starting point, a saddle between Strandaatind and the Laaterfjeld.

The view from this saddle of the northern wall of Strandaatind was most striking. Here could we see our work now fully revealed to us, and it was easy to realise that success could not be attained without a struggle. Indeed, the issue was doubtful. Our feelings were probably mixed. A failure here could not possibly mean so much to my comrades as it would to me. Indeed, it would add a lustre to their mountain. Yes, surely it would be rather hard too on the long-called inaccessible and unconquerable mountain itself if a second feasible route should be found up it? Hr. Hall had declared it to be absolutely hopeless to try new routes, or apparently any route at all, as he had failed on the W. arête.

I, too, was the one who first believed that there was a fair chance of success on this ridge, and I had brought Rubenson also into my way of thinking when we saw the peak from a hill above Kjerringö. The others with rare good nature were willing to help me to indulge in my idiosyncrasy.

From the saddle the ridge, or rather blunt but narrow end of the mountain, resembles the N. face of the Pillar Rock, but is steeper and not a third of the width, and fortunately a Pillar Rock minus moss, bent grass, bilberry roots and Sedums.

As in the case of the other route there were manifestly two crucial places. A crag, fairly low down, and a black chimney

in the narrow face, both unavoidable. Lunch on dry moss. [No, we didn't eat the moss.] Then the inevitable pipes. Very suitable too. Delightfully warm and such a grand view of the Lofoten peaks across blue seas.

'Come along, you fellows! I want to see that black chimney.'

We were soon hard at work, up and over, or under and through, a maze of huge blocks which had thundered down the mountain at a place where the ridge had become very narrow. A square-cut and partly overhanging crag barred our way.

'Hallo! Here's a cairn.'

'Ah, yes! Only another "Thus far shalt thou go, but no further."''

'Why, it's only 15 or 16 feet high at most.'

'I wonder who built that thing. It was not many years ago.'

'Evidently it was built by novices.'

Schjelderup was hoisted up and on to Jentoft's head and steadied by an axe to where he reached a good hold. A few pulls and he soon stood on the top, saying 'This is the place for a cairn.'

We had discussed the question whether we should use the rope before now or not, but agreed to wait a little. Now it was needed and for a couple of hundred feet we had really good rollicking fun. The rocks were mostly firm and gave excellent hold. Narrow ledges, some flat, others inclining upwards, alternated with little chimneys, then letter-boxes where we posted and delivered ourselves; or, as a change, came steeply inclined blocks up which we went a-straddle. It was the orthodox Chamonix-aiguille type of climbing, barring one great feature—the presence of snow or ice.

We approached the foot of the black chimney, and the nearer we came to it the less we liked it. Rubenson prospected the ridge itself which we had left. It was very narrow, terribly steep, and altogether most unpromising, and he came down to us.

In order to get into the chimney it was necessary to traverse the plinth of a huge rough natural pilaster which formed one side of the portal of the chimney. There were no handholds and the diminutive ledges of which the plinth was formed sloped downwards at an angle of about 95°. Moreover they were wet or greasy. Below this was a ghastly precipice.

Schjelderup led and was paid out by a long rope which, after all, was not long enough. Jentoft followed, and when he got into a position of rather less unstable equilibrium than usual Schjelderup advanced to the actual foot of the chimney,

where he had the semblance of a handhold. Rubenson and I followed and the two others had to move up. The chimney was perpendicular and about 150 ft. in height from the place where we struck it. A mid-rib divided it in two for about 12 ft. in height, and this was the only relatively easy place in the ghyll. Above this a tall man can go up by back and foot progression. A short-armed man has to do as best, or as little bad, as he can. As Schjelderup was too short in the limbs, Jentoft went first and climbed this horrid place brilliantly. Near the top the rocks bulged outwards and there was a well-nigh unconquerable inclination to fall out. It was certainly an unpleasurable place and we all disliked it. The view between one's legs downwards was not of the nature to stimulate any latent artistic tastes.

Well! All of us have been in such places and most of us may again, but we only go there as a means to an end. For a few feet near the top I was hoisted up like a sack of potatoes. This mode of progression at least saved time.

How we enjoyed the bright sunshine when we reached a platform at the top of the ghyll can easily be imagined. From here the climbing was thoroughly enjoyable, neither too easy nor yet too difficult. We reached the summit rather unexpectedly in $2\frac{1}{2}$ hrs. from the saddle, and I had the pleasure of photographing the three gallant Norskmen who had made the first ascent of the mountain only ten days previously.

The view is inexpressibly grand. The recesses of numberless unknown fjords are unfolded. Smoke issues from cosy homesteads in many an unexpected corner. E. and S. are several truncated pyramids, ugly enough in themselves, but which harmonise with their savage surroundings. Some of these we had ascended. Far far away E., at the head of Sör Folden, are range upon range of snowy mountains, on or across the Swedish frontier. Sulitelma, that mysterious ice-girt mountain, invested with so charming a halo of romance years ago, was one of these. Kebnekaise, explored and ascended by the gallant Frenchman M. Charles Rabot, is there, white and glittering. Further N. are the ice-bound fjelde and nunataks of Frostisen, ascended by Mr. Hastings, but about which he has told us so little. Yes, that is Stedtind, and mellowed by distance it looks less ferocious than usual. S., the glaciers of Svartisen sparkle in golden sunshine. Nearer to us are dozens of sharp peaks. But look below the terrible precipice on which we are standing, see the smiling homesteads of the many farmer-fisher folk. They are now cutting the barley or

leading hay, but see their boats in land-locked safety, ready for the herring in summer or for the cod in the winter. See the forest lands and be thankful for the comparative absence of the pernicious goats, the ruthless destroyers of all young trees. That white-painted house is the school, wisely closed during the harvest months. In every direction there is something which fascinates us.

Yes, but look 70 miles away across the placid waters of the Vest fjord ! See that grand array of sky-piercing gabbro peaks, standing out clear-cut against the deep blue sky. Where but in the Lofotens can such a glorious line be seen ? Deeply cut is this line in some places, because the Lofotens consist of many islands great and small. Still, in all respects, it is a chain, here and there a doubled or a trebled chain, of mountains, 80 miles in length. Even at that distance, through the clear atmosphere which usually prevails in Nordland in summer, we easily recognise many old friends in the serried ranks of peaks. First of all let us greet the noble Vaagekallen, the long-called 'inaccessible aiguille,'* which rises so superbly out of the deep waters ; nor must we omit to take off our hats when we see the island Skraaven, where I trust still lives the greatest of all Nordland mountain pioneers, Martin Ekroll, who, many years ago, disproved the inaccessibility of the peak of which a glorious view is to be seen from the windows of his pretty house.

Naturally the twin-peaked Rulten claims my homage and the sight of it awakens many delightful recollections. Hermandalstind and many others claim notice. Rubenson and Schjelderup naturally greet Rörhoptind with enthusiasm.

Ah, what happy memories of hard work and successful endeavour, of failures which were almost triumphs, of staunch friendships which still abide, of adventures on the sea as well as on the mountains, does the sight of those Lofotens bring back to me ! What an intense longing I have to return yet once again to camp on the shores of those lovely fjords ! Yes, and to climb some more of those most fascinating peaks of the far North !

Let us look at the island Moskenesöen. Yes, the Mælström is only a mile or two away from its southern headland !

Have we not had our sympathies awakened when we pictured the full-rigged ship—did we ever think of the crew?—or the ponderous whale being drawn into the vortex of the Mælström ? Can we not in some measure also follow Kircher in his weird

* *A.J.* iii. 23, and illustration p. 24.

imagination and see the same ship and the same whale, possibly rather bruised, as they emerge from their subterranean voyage on to the placid waters of the Gulf of Bothnia ?

A cold wind and the remembrance that we were to leave Kjerringö by steamer soon after midnight warned us to be off. In addition to this we wished to be below that most gruesome black chimney.

We had noticed, soon after regaining the ridge or nose of the buttress which ends the mountain on the S.E., that a little crack, or an undeveloped ghyll, existed just over the main axis of the buttress from the side of the black chimney. It was worth trying whether we could descend by this to some ledge along which we could traverse to a place below the mouth of the black chimney, but yet on our original line.

We started merrily and we got into a broad shallow gully ; very steep it was, too, and we saw that the steepness was approaching perpendicularity. Fortunately we found a natural pillar, an Arctic milestone, on the side of this gully. It was perfectly firm and we knew that we could rely on its stability. The gully continued some 50 or 60 feet below the milestone and then ended at the top of a shoot.

Rubenson and I stopped at the pillar, and having anchored ourselves we lowered the two others down to the top of the shoot. Here there was an overhanging rock on the top of which was a notch which made a partial hitch, but only when the rope was held to its place. Jentoft was then lowered to a very small ledge, and guided by the rope above him to the main ridge. Then, after I had come down to the top of the shoot, we lowered Schjelderup. Rubenson meanwhile discovered what he conceived to be an easier place to descend than over the shoot proper. With the help of a rope which I had hitched, he got down to the little ledge but could go no further for want of rope. The Yorkshireman felt that he was ' up a tree ' and awaited developments.

' Now then, Slingsby; put your rope on to that notch on the overhanging rock, and climb down.'

This was all very well in theory, but it would absolutely fail in practice because the notch was but a snare and a delusion. Very shallow it was and only one-sided. Such, in fact, that the pull of a rope from below must inevitably cause the rope to slip off. True, the distance to be descended to the narrow perch below was only some 50 or 60 feet ; but, many hundreds of feet below this, one looked down at a terrific angle upon a cheval-de-frise of sharp rock needles, and most fiendish and

threatening they appeared. In fact I have rarely, if ever, seen such truly savage rocks.

We were now perched in three places. Two were for the moment in perfect safety, but could not climb up to any position where they could help me. Rubenson could not proceed for want of rope, and he and I were sticking to the rocks like limpets as best we could. After a futile suggestion on my part that I should try to climb down without help from above, a short conference was held. The outcome of this was that Rubenson climbed up again to me with the aid of the rope and then up to the Arctic milestone round which, having cleared away a few stones, he ascertained that a rope could be drawn safely. I was then lowered, and drawn on to the ridge below. Even this process was not too easy. Meanwhile Rubenson was at the Arctic milestone and out of sight. An extra 60-foot rope was tied on to the long one we had been using. Schjelderup climbed up some 20 or 30 feet on the ridge and held on to the rope whilst Rubenson tied himself on the other end and began to descend. The rope ran beautifully round the smooth milestone whilst Rubenson descended to the top of the shoot. Then he swung himself carefully over the edge and, according to Schjelderup, 'he hung dangling like a spider at the end of a long thread, and swaying about in the wind like a pendulum.' We drew him in carefully and the other end of the rope ran beautifully round the milestone and we all stood in safety in a little gap on the ridge.

Although the descent of this formidable though short place had occupied two hours of hard and careful work, we had avoided the black ghyll which would have taken all our powers and care to descend safely, without giving us any compensating pleasure. Our new route, on the other hand, was very enjoyable.

The rest of the ridge or buttress gave us much interest, and though it was not absolutely essential, a length of rope was cut off at the rock above the 'Thus far shalt thou go, but no further' cairn, and we used the now much too common 'abseilen' method and soon stood on the great saddle and below our climb. From here we descended in a S.E. direction by rocks, sheep lands, and down rock terraces covered with primeval forest which was hot and not too easy for quick walking.

In due time we gained a little hamlet and drank much delicious milk. A six miles' walk through rich pastoral lands brought us once more to Kjerringö, where, though it was 1 A.M., we found an excellent supper provided for us.

It was by no means an easy matter to leave so lovely and so interesting a place, and we parted from our kind host and hostess and other good friends with regret. My companions were bound for the Lofotens, whose peaks we could see clear against the blue skies. It was only 5 A.M. when we left, and at that time Strandaatind and the forest-clad hills below were suffused with a deep purple hue which, owing to the warm weather, had not been so general as usual.

'Farvel Kristiansen. Lev godt.'

At Bodö our party broke up. Rubenson, taking advantage of the opportunity of getting a well-earned nap, was left on board the coasting steamer which quickly left the quay. We took a boat and found him fast asleep and chaffed him a good deal because the little steamer was soon to set off with a party of a hundred teetotallers for a day's trip up the Salten fjord. My friends left for Svolvær, to join Fru Rubenson and her friend, and ascended the Svolvær Gjeita.

I had perfect weather on my voyage and this continued in England. It was the same also when I went to stay with friends in Skye, when I was able to compare yet once again the scenery of the gabbro peaks of the Coolin with those of the Lofotens. In addition to the two ascents of Strandaatind we made two most successful expeditions from a sunny camp at the bend of the Sjunk fjord* and on returning from one had a very narrow escape of having our boat capsized in a sudden storm. My companions, excellent oarsmen, fought manfully against a head wind; but we were driven back and had a walk of many weary hours along the pathless shores of the fjord, in some cases over huge avalanche débris overgrown with alder and Scotch firs. I lagged terribly behind, and I shall ever remember seeing Rubenson awaiting me when I thought him a half hour ahead. Ultimately he got me a boat which brought us to camp. The two other men had wisely gone ahead to prepare a much-needed meal.

On another expedition * we failed to ascend our mountain, partly owing to two facts. First, we got off much too late in the morning; and secondly we had been misdirected by kind and well-intentioned natives, but by this we went some 10 miles out of our way, and were tired and declared the peak inaccessible without trying the 200 or 300 ft. which could obviously be ascended.

Others have succeeded and well deserved their success.

* *A.J.* xxvi. 466.

I did, however, state that the mountain was 'absolutely unassailable and invincible.' However, a view of the mountain in profile, which I saw some months later, made me doubt my formerly expressed opinion.

There are still many grand and new mountain expeditions to be made in Arctic Norway. Of this fact the Norsk mountaineers are now fully aware, and year by year the number of maiden summits gets less and less. Let members of the Alpine Club note this fact.

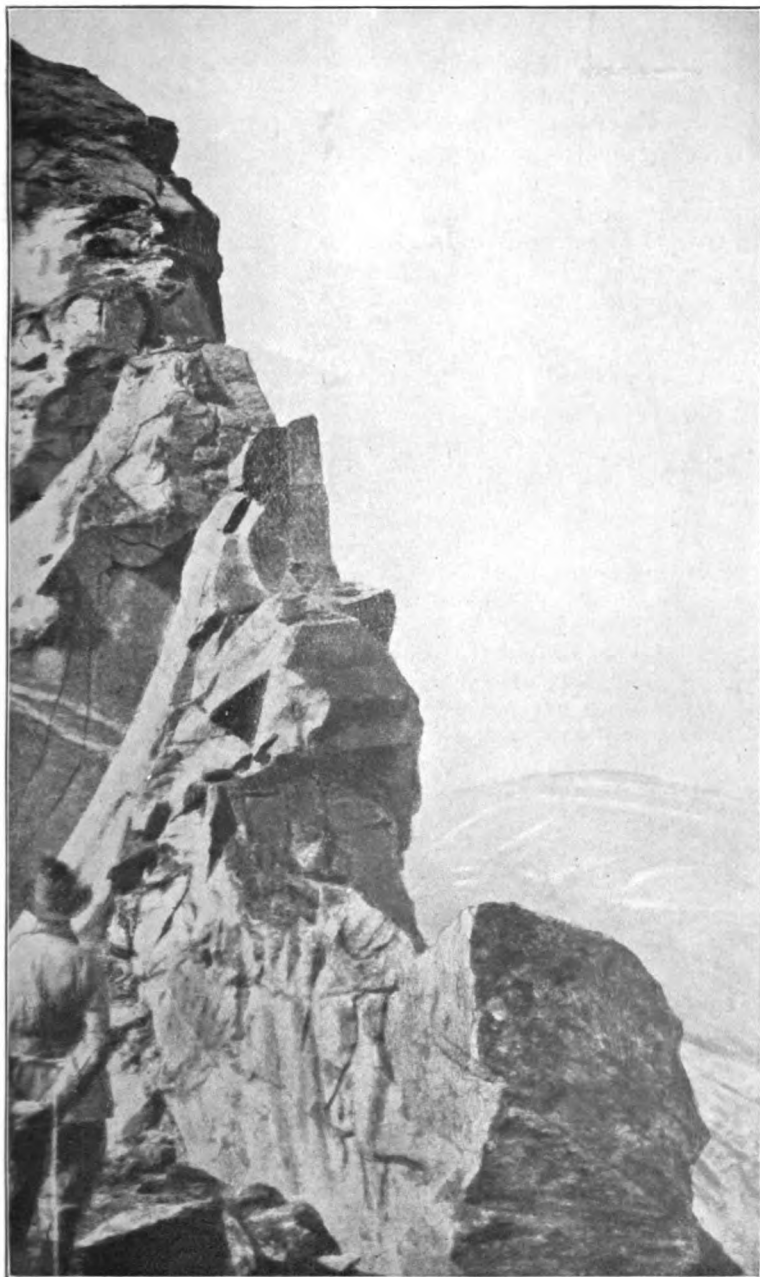
STEDTIND. THE ANVIL PEAK : 5200 FT.

THOUGH there have been many references in the ALPINE JOURNAL * to Stedtind, until now, so far as I am aware, there have been no illustrations of what is probably the most remarkable natural obelisk in the world. When seen from a boat close to the head of the fjord, Stedtind does indeed seem to have been well named, and the Anvil is seen to have the usual shoulder, while the top of the Anvil itself is broad and flat. It is not beautiful, and, with the exception of a narrow shore of loose stones, probably the lateral moraine of an ancient glacier, this wicked-looking monolith rises to the stupendous height of 5200 ft. out of the blue waters of the fjord. Some two-thirds of the height there is certainly a ledge or a crack, which runs diagonally up and across the face of the rock ; so the captious critic may, if he likes to do so, claim that the mountain consists of two stones. I prefer the term 'one stone with a crack across it.'

It is a strange fact that though the words 'sted' and 'stedje' are good old Norsk words and are also used to-day, the Norsk folk, with the now prevailing eagerness to simplify their language, only a few years ago omitted the letter 'd' in the name of the mountain until I pointed out the necessity for its reinstatement, now readily acknowledged. As I am a Yorkshireman, I naturally recognised in Stedtind, Nature's gigantic anvil in Arctic Norway, because in my native county the words 'steddy,' 'stede,' 'stiddy,' and 'stithy' are all forms still used for an *anvil*.

Stedtind is triangular in plan, and the top half may well be described as a truncated triangular pyramid whose smooth, steep, ice-planed and polished walls are really hideous. At the back, or away from the fjord, there is what for many years has been called the 'bridge,' a narrow causeway perhaps 30 to 40 yards in length which connects Stedtind with a broad Norsk fjeld. On one side the wall of this bridge is perpendicular, and from between 1000 to 2000 ft. below is a small glacier which is held up on the fjord side by the shoulder of the anvil. This glacier is of no use to mountaineers wishful to

* *A.J.* xxii. 396-399, 624-625; xxv. 363.



Schjelderup, photo.

Swan Electric Engraving Co., Ltd.

STEDTIND.

The two steps ; a cairn is to be seen on the lower one, the highest point reached before 1910. The hand-traverse leads to the back of the two steps.



STRANDAATIND.

The North-East Arête.

The Black Chimney is shown by the letter B.



Bryn, photo.



Swan Electric Engraving Co., Ltd.

STEDTIND.

Rubenson leading on the hand-traverse.

Schjelderup on the hand-traverse, following Rubenson.

ascend the peak. The other side of this remarkable bridge is not perpendicular, but still a stone dropped over the edge would slide merrily down at least 3000 ft.

Every attempt to climb Stedtind has been made on the side of the bridge, and several cairns mark the various points reached by the hardy adventurers. Some of these never even touched the bridge. Nor is this to be wondered at.

The first mountaineers who really had specific designs of ascending the mountain were Martin Ekroll, an excellent mountaineer as well as an Arctic explorer, and Dr. Paul Güssfeldt. This was in 1888. Ekroll was virtually the discoverer of the bridge. The next attempt was made the following year by our late A.C. member, Carl Hall of Copenhagen, and his guide, Matias Soggemoen. Since then there have been several others, notably that of H. Priestman, in 1904, and later the same year that of Professor Collie.

To return to the bridge. At the far end are the two steps or huge blocks of gneiss or granite which entirely block the way. We in Collie's party fully realised that, if these two obstacles could be surmounted or turned, the greatest mountaineering prize still remaining unconquered in Arctic Norway would be won. The lower step, about 25 ft. in height, was climbed by W. E. Slingsby, whose cairn is visible in the accompanying photograph of the 'steps.' The second step, some 30 ft. in height, alone blocked the way. After this Collie and W. E. and A. M. Slingsby discovered the hand traverse, and though a gale of icy wind then prevailing rendered this route at the time utterly impossible, it was realised that the mountain had at last revealed its great secret, and that success was assured to the first strong party of mountaineers who attempted the ascent in good weather. Meanwhile, Woolley, Baly and I had been shivering in a hole at the other end of the bridge, and with the aid of our glasses we had also felt sure that, though the climbing would be difficult, Stedtind would be climbed by the first party who passed the two steps.

Early in the spring of the year 1910 Schjelderup came to stay with us in Westmorland. Needless to say, we talked much about Arctic Norway, which was then unknown to him personally. Maps, photographs, and sketches were brought into service, and the outcome of his visit was the successful ascents of Stedtind and other peaks in Nordland by Schjelderup, Rubenson, and Arf Bryn, three first-rate mountaineers and sons of Norway.

They, as well as I, were aware that during the last few years several German mountaineers had been prowling about Arctic Norway, and though they had not accomplished very much we thought it quite within the limits of probability that they might turn their attention to Stedtind and attach a name, of which we are not at present much enamoured, to the bridge, the hand traverse, or even to the view.

WM. CECIL SLINGSBY.

FIRST ASCENT OF CATHKIN PEAK, DRAKENSBERG, NATAL.

BY THE LATE G. T. AMPHLETT.

CATHKIN PEAK is popularly known in the N.W. districts of Natal as 'The King of the Drakensberg'; but whether the title has accrued owing to its commanding appearance, its supposed superior altitude, or its reputed inaccessibility, is not clear—probably all three reasons have weighed in the matter. Anyway, it seems to have been generally considered, outside the Surveyor-General's Office, as the highest point of the range forming the backbone of South Africa; and in many maps and in some more or less official publications its altitude appears as 12,000 ft., whereas that of the Mont aux Sources figures at 11,000 ft. Down the latter the Basutos drive their woolpacks, and a mountain must, under such circumstances, lose something of its dignity in comparison with others more repellent in character.

Apart from mere height, however, Cathkin Peak obtrudes into Natal in such a way as to command attention at the expense of some of its immediate, though actually higher, neighbours in its rear. Add to this the sheer forbidding character of its square-cut upper cliffs, the fact that many previous attempts at its dethronement have failed, the halo of romance and mystery which invariably attaches to an unclimbed peak, and it is perhaps not surprising that it should be regarded in public estimation in Natal much as the Matterhorn is by ordinary tourists at Zermatt.

Among previous attacks on Cathkin Peak, mention must be made of the efforts of two Swiss gentlemen, the brothers Stocker,* who, according to the farmer under whose auspices our expedition was organised, spent a month in the vicinity of the Peak. Their principal attack was directed at the N.E. corner where the mountain breaks away in a series of sharp pinnacles; but, on reaching the highest of these, they found themselves cut off from the main mass by a gap of say 1000 ft. A couple of years ago, I essayed the same route with four others, two of them ladies, and with limited time at our disposal and no previous knowledge of the mountain. We were conducted by our farmer friend to the same camping spot as the brothers

* See the paper, *A.J.* xiv. 397-402, 'The Kahlamba Mountains,' by A. H. Stocker, with a useful map; also *A.J.* xxii. 362 *seq.*, and xxvi. 468.

Stocker. This was our first near view of the Peak, and on looking at the pinnacle route as we did, end on, the prospect was by no means unpromising. (See a description of climb in the 1912 issue of the 'Annual' of the Mountain Club of South Africa.) Suffice it to say that we in turn reached the same point as our predecessors; but although the gap between us and the main peak could, with some trouble, have been negotiated, the prospect of successfully climbing the upper rocks opposite seemed so doubtful as to induce us rather to reconnoitre the southern side. Unluckily, mist and rain frustrated these intentions.

In July 1911 Mr. Wilfred Wybergh of Johannesburg made a more thorough examination of the mountain (see also the South African Club's 'Annual' for 1912). He camped in Monk's Ravine on the S. side at an altitude of about 7000 ft. and, after a preliminary survey, bivouacked the second night at a point an hour's walk further up the Ravine. Thence he made two attempts, but encountered so much snow and ice that he was unable to proceed. Mr. Wybergh's efforts were undoubtedly creditable. He was alone, in mid-winter, and had no ice-axe; but, notwithstanding these drawbacks, he reports having got to within 400 ft. of the summit.

Other climbers, ourselves included, have been surprised at the sub-Alpine conditions met with in the shaded southern recesses when, as seen on the Natal side, the mountain appeared entirely free from snow.

Apart from others who have left no records, the peak was attacked from the Monk's Ravine (S. side) by Messrs. D. O. Reynish, Colin S. Nunn and A. Beevers in August 1909, and by Messrs. Nunn and George Scott in August last.

In almost all maps and publications the name of this mountain is given as Cathkin Peak or Champagne Castle; but the two are entirely distinct and between them rises a third mountain—a precipitous nipple-capped pinnacle of most forbidding appearance, called, from its shape, the Monk's Cowl. The three peaks are separated by two necks styled the Monk's Nek and Cathkin Nek, attaining an altitude of roughly 9700 and 9600 feet respectively. Both Champagne Castle and Cathkin Peak as seen from Natal are similar in formation, i.e. their top structures rise from a broken folded mass in the shape of sheer walls of rock some 1200 or 1500 feet high; and from some points of view the two mountains appear as one unbroken flat-topped summit.

Cathkin Peak is triangular in shape. The northern end of

its eastern side is seamed with cracks, up one or the other of which it may be just possible to force a way. The remainder of the eastern face and all the western seem quite hopeless.

On arrival in Monk's Ravine our party encamped on the site previously occupied by Mr. Wybergh, the highest point to which we could get the ponies. Later in the day we went along a spur of Champagne Castle to an altitude of some 8300 ft. in order to reconnoitre the southern face of Cathkin Peak opposite.

Near the eastern extremity of the latter was what appeared through our glasses to be a slightly sloping protuberance up the angle of which a route might lie, but we had grave doubts about the topmost portion.

Approximately central on the S. side a ridge ended half-way up the face, and the top above this appeared to be a bit broken and to recede a little; but here we were doubtful about the central portion.

At the western end of the S. face was a deep gully, the only one we could discover on the mountain, and as this faced S. and our reconnaissance was undertaken in the early afternoon, *i.e.* against the sun, we were at a disadvantage as regards the light. It was evident, however, that the gully receded substantially; but at the top, where it seemed more or less sheer, was a long chimney, and we instinctively recognised that this would probably be the key of the position. Lower down were two precipitous waterfalls which might cause trouble, and the bottom part of the gully was hidden by a curved fold in the ground.

We finally settled upon this gully as affording the best promise of success and at 7.30 A.M. on the following morning we left camp for the climb. Our party comprised Mr. W. C. West, Hon. Secretary, Mountain Club of South Africa, Cape Town, the Reverend Father Kelly of Bloemfontein, Mr. Tom Case-ment of Witzieshoek, and myself, with two porters. Our host, Lt.-Colonel Woods, intended to set us on our way as he had done Mr. Wybergh. The Monk's Ravine, up the bed of which we proceeded, is fluted with gullies leading up to the cliffs on the southern face and to Cathkin Nek, etc. By a misunderstanding we got high up the one leading to the Nek before we discovered our mistake, and then decided to go to the top and from there have another look at the western side. The result confirmed the opinion I had formed two years previously from a lower level, that the western side is impracticable. This deviation lost us an hour and a half. Retracing our way we

were able some distance down to traverse into the correct gully and decided to keep at first to the steep grassy slope on its western side, hoping thus to avoid ice-covered waterfalls in the bed of the gully. At an altitude of about 9500 feet we halted for lunch, and our host thereafter left us to attend to details at the camp, where only a timid 'umfaan' remained in charge.

Starting again, the increasing severity of the grass slopes soon induced us to take to the gully bed. Getting into this was our first difficulty. It was necessary to traverse across some slabby rocks into the watercourse, where snow and ice were fairly plentiful. Our only ice-axe had been left at the farm, as the appearance of the mountain gave no indication that it would be required. Luckily we were able to avoid much of the ice, while the snow was in perfect condition, being just frozen sufficiently to permit of good steps being kicked in it. A slip on this particular snow pitch would have sent us over a waterfall below it. At its head, on our right side, were some conveniently poised protruding stones, tempting, but too doubtful to trust, so we had to work out on the left from underneath an awkward boulder with deficient handholds. Above this some 80 feet of slabs were encountered, thoroughly testing the strength of one's finger-tips. These surmounted, the gully was divided into two by a rocky rib protruding down the right centre and extending to close under the top. The right (E.) side formed the main watercourse, but although apparently climbable lower down, there seemed to me no outlet at the top, and fearing that we might be unable to cross over to the chimney which we had recognised as the key to the summit, and which was sheer above us on the centre left, West and myself, followed by our 'boy' Tobias, decided to adopt the left side; Casement, the Padre, and their 'boy' Melato, however, preferred the right.

On our side the climbing was again mostly up steep grassy zigzags alternating with slabs. The grass was tough and long, and, where available, furnished excellent holds. At one place some delay occurred in the traverse of a grassy ledge partly snow-covered, some 30 feet in length with a width varying from 12 to 18 inches. Along this handholds were in places entirely absent, while the view below us distinctly enjoined care.

Finally we reached the chimney and here deplored the absence of our axe. It was too wide to 'back up' and there was no hold on either wall. The bottom, where it sloped back

most, was full of ice which at the edges had just parted from the rock sufficiently to allow one to insert one's finger-tips. By this means we mounted some 8 feet to where the ice gave place to frozen snow. In these steps were kicked and we were enabled to reach a chockstone, a few feet above which again was a landing-place on our right, some 2 feet square. But this side offered no holds, nor did the left where the chimney narrowed by the intrusion of a huge slab.

It was now only possible to get partially into the crack, and this place was undoubtedly the most awkward pitch in the route. We were glad when we reached a ledge some 12 feet above. From this point the crack widened and continued for about fifteen feet, but offered no difficulties. We saw, however, that a traverse along the ledge to the left (W.) would easily land us by a few steps on the summit, and we thus finished the climb.

By this time the other half of our party had arrived at the point where the two portions of the gully practically merged. They endeavoured to continue up their side to the top, but found the rocks there unclimbable, so came up on our ropes.

The summit, as our observations had led us to believe, is triangular, and perfectly flat with a distinct slope from the S. side to the northern apex. The highest point is almost in the centre of the southern edge. There we erected two cairns, in one of which we inserted a record of our names and the date.

We had reached the top at 2.30 P.M. and the boy 'Melato, unnoticed by us, gave vent to his enthusiasm by firing the grass in three places. This entirely spoilt any chance of getting a much desired photo of the summit.

The aneroid registered 10,500 ft. and as it was set high, the actual height by survey would probably not exceed 10,000 or 10,200 ft. We noticed that Champagne Castle was distinctly higher than Cathkin Peak, and, to our surprise, the Monk's Cowl also rose about one hundred feet above the level of the mountain we were on. At least two other mountains, also distinctly higher, were seen across the Umhlasini valley on the Basutoland border due W.

The Surveyor-General in Maritzburg subsequently informed us that none of these peaks had been surveyed. He stated, however, that Mont aux Sources was the highest point of the range.

I was particularly desirous of examining the summit of Cathkin Peak at the N.E. end, the object of my first efforts two years ago; but when a third of the way across the top we

looked at our watches and decided that, unless we were to be benighted on the way down, time did not permit. So we returned to our cairn, but I noticed a dark line across the surface almost at the extreme northern end, probably indicating a break-away and corresponding with one of the cracks at that part of the eastern face in which we had seen a 'window' as we rode some 3000 ft. below it two days previously.

The descent took five hours and we arrived in camp at 8 P.M. having got benighted among the boulders in Monk's Ravine. Half an hour from camp Colonel Woods met us with lanterns.

Owing to special circumstances the time we occupied in ascent and descent is no criterion of what is actually needed. Our camp was pitched at 7000 ft. and as the summit registered 10,500 ft. the actual climb is less than the altitude of Table Mountain. A properly equipped and experienced party should readily accomplish the ascent in say 3 to 3½ hours, unless badly hampered by ice conditions.

On the whole, the difficulties hitherto associated with Cathkin Peak seem rather exaggerated and I feel sure that most of the failures where men with climbing experience, such as Mr. Wilfred Wybergh, are concerned, have been due either to inadequate support and equipment in winter-time, or, in summer, to their being hampered by mists and rains and thus unable, with limited time at their disposal, to work out a practicable route.

It now remains to be seen whether the ascent is feasible by the other routes suggested as worth examining on the S. side or by the somewhat sensational N.E. arête. Time did not permit us to try these; but they may offer sporting chances, and, if successfully accomplished, would probably render the gully by which our first ascent was made a relatively humdrum route.

CORSICA IN MAY.

By VICTOR H. GATTY.

A DESIRE for an early mountaineering holiday, and a recollection of its summerlike climate in February and March, eight years before, took me once more to Corsica last May. In these days, perhaps, when frontier lines will need to be considered, some further account of a land of mountains, part of the territory of our friend and ally, easily accessible, and yet unspoilt, may be acceptable.

We landed at Bastia on a cloudless Sunday morning early in the month, and after breakfast at the excellent hotel—which had arisen since my first visit—close to the quay, took train to Vizzavona, which I had last seen under snow, and in due course reached the Hôtel de Monte d'Oro on the Col de la Foce (or Col de Vizzavona), the only hotel in the island which stands at a height approaching 4000 ft. The peaks as we neared the centre of the island had been shrouded in mist—an earnest of what was to come; for the next eighteen days the weather was curiously uniform in one respect, whatever the early morning might be—and there were mornings cloudless and sunny—after nine or ten o'clock the peaks were always veiled in mist, which sometimes crept down to the pass and so remained until sunset. As Corsica is not a country where very early rising is esteemed a virtue, the result of this in terms of mountain prospects may be readily surmised. The fact, too, that Corsica's clocks show Greenwich time, whilst the sun is forty minutes earlier, is a constant stumbling-block in the path of the mountaineer; indeed, the need to save time in the morning brought back to my mind (though I did not practise it) a recipe once given me by mine host of the Steinbock at Lauterbrunnen, who told of a British climber, who once frequented his hotel, whose habit it was to take breakfast the last thing before retiring, the theory being that digestion only commenced on rising, and so much valuable time was saved.

The Col de la Foce, now tunnelled by the railway, is the culminating point of the main high-road of the island from Bastia to Ajaccio. It lies between mountains of from 7000 to 8000 ft., easily climbed from it, which makes it an eligible spot for the commencement of a holiday. When I had last traversed the pass in February and ascended the Punta Ceppo—a view-point of 5350 ft. rising on its W. side—both were deep in snow, which lies on the pass until April.

Our first expedition, undertaken on a doubtful morning, was the ascent of the Punta dell' Oriente, which rises on the E. side of the pass to a height of 6917 ft. We went up a long ridge overlooking a wide combe on the left, up which the beech-forest climbs to a great height. The trees were in full summer foliage on the pass, whilst the highest stood in snow and were leafless still. The mists drifted on and off as we ascended, giving occasional glimpses of the snowy Punta Vetta and of the long valley stretching westwards to Ajaccio, and for a time cleared off the summit of our mountain.

A steep snow-slope led to the foot of the final peak, which

proved to be a short but very steep snow-wall surmounted by a row of rock-teeth. We had no rope, and I had only brought a walking-stick; but, fortunately, my friend Dansey had been more provident, and was able to lead up with his axe to a neck from which a short rock scramble led to the top. A direct ascent of this last bit might be difficult without snow, as it seemed to mask very steep slabs of rock. It had now commenced to rain, and through it the eastern coast was faintly visible, but there was little else to be seen. This was the commencement of a spell of fifty-six hours of uninterrupted downpour, which made it impossible to leave the hotel. We extemporised a rain-gauge from an empty tin, and during the second twenty-four hours collected $1\frac{3}{4}$ inches. As the rain was then much less heavy than at first, I think we must have had four or five inches during these two and a half days. The temperature during this spell of bad weather fell to below 40° F. during the day. On fine days it was usually about 50° F. and rarely reached 60° F.—an unexpectedly low range for the latitude of Rome in May.

The Vecchio, on which Vizzavona stands, turns sharply round the base of Monte d'Oro and springs from a narrow valley which lies between that peak and Punta Migliarello on the south. When the waters had abated on the morning of the 11th, we set out to ascend to the Col at the head of this valley. Passing up the old moraine on which stands the Genoese Fort, we followed the forest path to the Bergerie de Trottela. Here the path appeared to end, and we were soon engaged in a struggle with the dwarf beech, which grows everywhere on the higher slopes, and which made of the upper part of this valley an almost impenetrable thicket. With its long interlacing branches, spread out parallel to the ground, at a height of three or four feet, it makes progress very difficult indeed. We had nearly two hours of this before we reached the head of the valley where, at a height of 5200 feet, the ground was still snow-covered. It was not possible to settle on any definite line of ascent, as we could see nothing above us; so after lunch we felt our way upwards over fairly steep snow, broken in places by rock, and at 3.35 reached the Col de Muratello, a sharp ridge of snow falling steeply on the other side—the actual backbone of the island—as the streams on either side form the headwaters of the Liamone and of the Tavignano which flow out on opposite sides of the island. The height by aneroid was 6600 feet, and the temperature 39° F. The mists only occasionally parted and allowed a transient view of Monte Rotondo which seemed

to be less closely veiled. On the way down, we followed a snow-filled gully which, like many others in Corsica at this time of the year, needed some of the precautions proper to a glacier, owing to the chance of deep cavities beneath the snow. At the foot of the gully we were fortunate enough to strike a blazed trail, marked at intervals with red paint, which led us down the far side of the stream to a crossing-place below the beech scrub, and so we got home more quickly than we had hoped for—in $2\frac{1}{4}$ hours from the Col.

Two days later, we set out for a tour to the south of the island, in the course of which we hoped to see the wonderful sea-view from Monte Incudine of which Joanne quotes Freshfield's* inviting description. We journeyed in a victoria and pair, and in the course of some 230 miles' driving, then and later, never wished to exchange our excellent pair of little Corsican horses for one of the motor-cars which can now be hired in Ajaccio, which will run you all through the island in a very short space of time. Our driver was a genial soul with a friend in every town and a good many on the roads between, as we sometimes found to our sorrow; with him we crossed the Col de Sorba, spent the night at Ghisoni—a little town overhung by the magnificent Kyrie Eleison rock-towers—and next day drove over the Col de Verde to Zicavo.

About half-way down to the W. of the road there are to be seen two very symmetrical lateral moraines which once enclosed one of the old Corsican glaciers.

Next day we started early with a horse to carry our baggage up through a forest of evergreen-oaks to the hut near the Incudine—the first of its kind in Corsica, which had been recently erected by an enterprising couple, Paul Abelli and his spouse. Corsican ideas on hotel-keeping are still quite primitive, and embody the principle that you should do in Corsica as the Corsicans do; consequently, we were glad to be able to supplement the midday fare of lentils and garlick-flavoured sausage with some Maggi soup. Joanne promised us two bedrooms; but only one proved to be furnished, and that with a bed of very modest dimensions. The situation was further complicated in the evening by the arrival of a French doctor and his wife: the bed, however, proved equal to the emergency when subdivided and the lower half placed on the floor before the kitchen fire. The hut is most solidly built of stone, and its fittings include excellent window-frames in which, however,

* See *A.J.* x. 202.



THE KYRIE ELËISON ROCK-TOWER (GHISONI).



V. H. Gatty, photo.

Swan Electric Engraving Co., Ltd.

MONTE CINTO (IN MAY) FROM PUNTA "A."



V. H. Gatty. Photo.

Paglia Orba.

Monte Cinto.

Calacuccia.

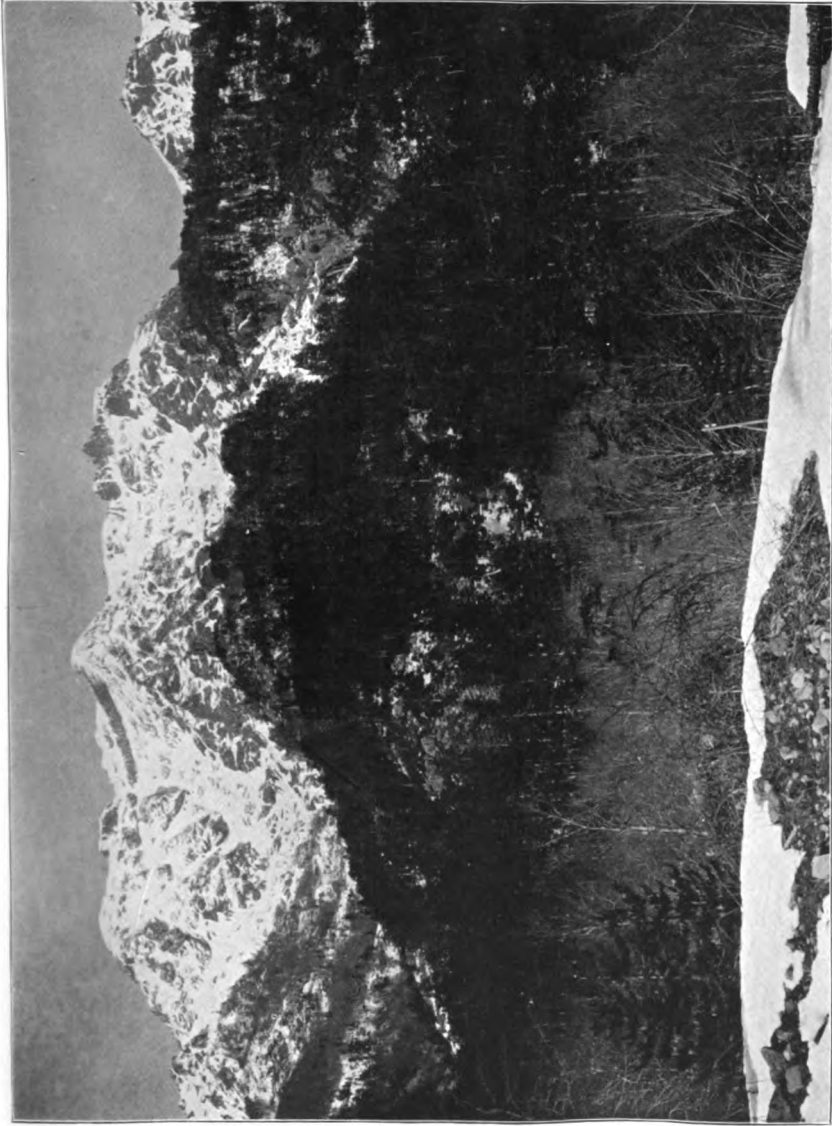
PANORAMA FROM COL DE LA RINELLA, CORSICA (IN MARCH).

is no glass, our hostess explaining that they feared the snow would break it in the winter. Our stay here for a day enabled us to see something of the interior economy of Corsica. I was interested to note that after we had dined the men sat down and were waited on by the women standing, who took their meal after the men had finished. A talk round the fire followed this, which soon turned to bandits and the vendetta. 'C'est malheureux, mais ce n'est pas déshonorable, c'est dans notre sang,' seemed to represent the attitude of Corsica towards this latter. Next morning we found it easy to rise betimes, and were away at 3.40 A.M., just as day was dawning; the party included the doctor and his wife and their guide, who went to the summit armed with a rifle he had brought up from Zicavo. We made our way round the head of a valley which lies between the hut and the mountain—a long ridge rather like Helvellyn—and struck diagonally up across the snow-slopes, frozen hard as iron, but seldom steep enough to need steps. On reaching the top in just over two hours from the hut, we found a peculiarly chilly wind blowing, little suggestive of Mediterranean breezes, with an air temperature of 32° F. The view was clear across the island to Ajaccio and to the N., but only glimpses through the clouds suggested the marvellous view over the sea to the eastward, 7000 ft. below us. It is worth noting that near the foot of the cliff on that side of the mountain there is a conspicuous moraine. On our descent we were lucky enough to find the snow still quite hard; we went straight on to Zicavo and thence drove down to Ajaccio—a stretch of forty miles, the last twenty-two of which our little horses took without breaking trot.

Next evening we were back at Vizzavona, and the day following found ourselves once more in fog. The morning after, however, dawned cloudless and brilliant, and we started at 4.45 A.M. for Monte d'Oro, taking with us Ange Antoine Rossi, a man of a type less common in Corsica than in most mountain countries, sure-footed and willing to carry a rucksack. We once more passed the Bergerie de Trottela, crossed the stream some way beyond it, and climbed the buttress W. of the great couloir up to a point where a detached rock rises from the ridge; at this point we made our way down to the snow in the couloir and then traversed diagonally upwards over snow alternating with patches of rock and débris. This led up to a shoulder on which is set the head of the mountain. The little final climb has been robbed of interest by the breaking up of the chock-stone, which formerly blocked the chimney,

and its conversion into a staircase—a deed less commendable than those which usually mark the T.C.F. The top (7842 ft.), a limited area of big blocks of rock, we reached at 9.55. We had had a clear view southwards on the way up, but were too late on the top—already veiled in mist, which only allowed us occasional glimpses downwards on the E. side. Through one of these breaks we saw the little Lac d'Oro, 1500 ft. below, still covered with ice and snow. We waited long for a view; the temperature was 38° F., and a little snow fell, but otherwise it was a blank monotony of mist; at last we gave it up and also our intention of trying another way down: snow in the great couloir took us quickly down the first 1800 ft.; we then left it, on Rossi's advice, owing to the risk of falling into a cavern under the snow, scrambled down the buttress and reached the hotel in 2½ hours from the top.

Two days after this, we bade farewell to Vizzavona and drove down to Corte on our way to Calacuccia. Corte was hot and *en fête*, as it was Ascension Day; but it was quiet and cool in the Hôtel Paoli, which had been my starting-point in March, eight years before, for a walk over the Col de la Rinella, at that time of the year a snow pass, to Calacuccia. It is an expedition well worth making on account of the splendid view of the Niolo peaks from the Col. We left Corte again at 4.30, and reached the Hôtel de France at Calacuccia, long after dark: the result of this was a late start next morning (May 22). We got away at 7.25, and decided after some doubt to make for a summit on the N.W. side of the village, unmarked on the French map, but named Capo Alla Villa on the sketch-plan accompanying M. André Lejosne's article in 'La Montagne' for August 1911. The article gives a detailed description of this region and of all the expeditions which have been made. When we reached the top we found a narrow and very broken rock arête leading onwards; this ridge M. Lejosne describes as 'très rocheux et dentelé allant s'éteindre au Capo Alla Villa.' He records no ascent, so I think it may be assumed that it had not been traversed by a tourist. To follow this ridge in its entirety would have taken more time than we could spare; so we turned down to the snow on the N. side and traversed steep slopes to the other side of a wide combe, whence we rejoined the arête and followed it to the foot of a rocky tooth which seemed to be the highest point of the ridge. This appeared at first to be only accessible by a very steep snow couloir rising from the snow-slopes on our right; but further investigation revealed a steep but easy chimney on the left, which brought us out on the



V. H. Gatty, photo.

MONTE D'ORO (IN WINTER).

Swan Electric Engraving Co., Ltd.

top; a mass of broken rock falling steeply on all sides. The height was 7800 ft. (by aneroid), and the time 2.15 p.m. This peak lies due S. of Monte Cinto, which looked very fine, still snow-clad from top to bottom, as did also Paglia Orba, the shapeliest peak in Corsica, rising to the W. above the southern ridge of Monte Falò. We named the peak Punta A. for short (*anonima*). It is a summit rising from the eastern ridge of Monte Falò, just as Monte Albano and the Cinque Fratri spring from the southern ridge thrown off from the same central peak. The task of building a cairn took some little time, and it was 4.30 when we started down. We went straight down the snow we had traversed coming up, which took us down some 1800 ft., and then followed round the slopes to join our upward track. An ankle sprained in a very simple place caused some delay, and it was dark before we reached the valley. As further climbing was impossible, we drove next day over the Col de Vergio to Vico, and thence along the shores of the beautiful Golfe de Sagone to Ajaccio. Both our horses and our driver kept up their reputations to the end. The latter at our last halting-place for lunch was, as usual, not forthcoming when the time arrived to start, but completely mollified us by an introduction to the cause of the delay, 'Mon cousin le gendarme,' a very magnificent man.'

The month of May is hardly to be recommended for mountaineering in Corsica, as we were told that the weather we experienced is not unusual at that time of the year. I believe the month of June would be preferable: later than this the snow will have largely disappeared and with it much of the charm of the scenery. There is no doubt that from a scenic point of view the island is at its best in winter when the snow comes down to a height of from three to four thousand feet. In May the level is about 2000 ft. higher: the snow is at that time continuous in places down to 5000 ft. and is general above 6000 ft., except on very exposed slopes. Corsica is still wild and unconventional; but I seemed to recognise that a change had taken place in the eight years which had passed since my first visit. The people—or at least those who come in contact with the tourist—are more ready to recognise his value, and no longer take up quite so independent an attitude. The motor char-à-banc is, I doubt, undermining the primitive simplicity of the Corsican mountaineer; it will, perhaps, end by making bandits and the vendetta absurd anachronisms which cannot co-exist with it.

IN MEMORIAM.

MELCHIOR ANDEREGG.

ON December 8, 1914, at the age of eighty-seven years and nine months, Melchior Anderegg passed away. He died at Meiringen, in the house to which he came down some years ago from Zaun, to receive from loving hands the attendance and care due to his age and some natural infirmities. His spirit was bright and energetic to the end; he was full of the interests of his many descendants, and of the community of Meiringen. Death, following a heart-attack, came very peacefully, as a sleep, and he started, ripe and willing, for 'the last ascent,' of which he had written, not many months ago, to an old comrade in England.

The close of a life so prolonged, so full throughout of all that was most alive, cannot but move many thoughts: of respectful sympathy with the family whose head has been removed, of pride and gratitude for the inspiring example which remains. To us his career is associated with memories which are, and always will be, among our most cherished. His retirement from regular work as a guide dates from the end of 1893, in which year the toast of his health was given at the Winter Dinner in special recognition of his intimacy with members of the Club during at least thirty-eight years.* It was 'proposed by Mr. Leslie Stephen, and responded to by Mr. Horace Walker, Sir Reginald Cust, Mr. F. C. Grove, and Mr. C. E. Mathews.' If to these names we add those of Mr. Hinchliff, of the other members of the Walker family, and of Mr. F. Morshead, as of persons whose association was most notable and continuous, we become aware that, with one honoured exception, all have left us. Happily the circle of those who knew and valued him is by no means so restricted. Many remain who have enjoyed his company in climbs of more or less frequency; others remember his bright presence, and his many-counselling and disinterested wisdom; and a younger generation cannot be unaware of its debt to him as a trainer of those who were to be his successors, and a founder, though by no means the sole founder, of a sound and noble tradition in guide-craft. Already in 1888, when in England on a visit to Mr. C. E. Mathews, he had been introduced at a meeting of the Alpine Club by the President (C. T. Dent) and 'most enthusiastically' welcomed.†

A sketch of Melchior Anderegg's life and performance has been written out of the full knowledge gathered through many years, and with much skill in marshalling the personal facts, by Mr. C. E. Mathews in 'The Pioneers of the Alps,' to which, as well as to the

* *A.J.* xvii. 88.

† *Ibid.* xiii. 572.



1859.



1908.

MELCHIOR ANDREGG.

same writer's affectionate tribute in the Badminton volume, any future biographer must be largely indebted.

He was born at Zaun, a hamlet above the left bank of the Aar, below Meiringen, in 1827. He was thus the junior by one year of Christian Almer, and also of Christian Lauener, and the same age as his cousin Jakob. Michel Croz (born in 1830) and François Devouassoud (1831) were slightly younger men; Franz Andermatten was his senior by four years. His earliest occupation was with cattle; he became a noted chamois hunter,* and was the champion wrestler of his valley; he also had a fine, melodious voice, both in speaking and singing. At eighteen he taught himself the art of wood-carving, which he practised in great perfection later on. The Alpine Club possesses, as do several of its members, specimens of his work, some of which were first exhibited in London in 1873 by the late H. Schütz-Wilson.† For some years he assisted his cousin Johann Frutiger in the management of the Inn on the Grimsel. It was here that he was discovered by Mr. Hinchliff in August 1855; and together they made a passage of the Strahlegg, which is described with much lively detail in 'Summer Months among the Alps.' The acquaintance was renewed at the Schwarenbach, where Melchior was installed as a green-aproned vendor of wood-carving. He had already climbed the Altels with two Englishmen, and was in possession of a 'book of certificates,' and an ascent of this peak followed. It used to be said that it was in consequence of some early chest delicacy that he passed these years in outlying mountain places; if this were so, the treatment was singularly successful. However this may be, he joined other members of his family in keeping the Schwarenbach Hotel, and there he was found in 1856 by Mr. (Dr.) F. J. A. Hort and Mr. (Bishop) J. B. Lightfoot, who made, advised and led by him, a new passage to the Rhone Valley at Sierre (the Lämmern Joch). It is very pleasant, though by no means surprising, to find in these early mentions of a young guide, wholly unknown to fame, all the now well-known points—caution, alertness, disinterested care for his employer, observation of the phenomena of rock and ice, and withal humour, a sense of natural beauty, and an all-pervading vivacity. Mr. Hinchliff gives a cheerful account of the descent of a steep snow-slope 'Melchior from time to time giving vent to his favourite cry of "Good, good!"' ‡ 'With great regret,' he concludes, § 'I parted with Melchior, considering him a most excellent and trustworthy fellow, one of those true and stout hearts with whom it is always a pleasure to be associated.' || Dr. Hort's letters leave the same impression. He speaks with warm gratitude of guidance in a climb of the Riffelhorn, which, at the time of writing (1865),

* See *A.J.* ii. 162.

† P. 77.

|| *Life and Letters of F. J. A. Hort*, vol. i. p. 307 &c.

† *Ibid.* vi. 315.

§ P. 80.

had acquired sad associations, and which Melchior always insisted on being approached with serious respect.

Hinchliff died in 1882, and in a notice of him Mr. (Sir Leslie) Stephen wrote :—

‘Of all the expeditions I have made, I can remember none more pleasant than one of ten days in the Oberland with him and Melchior Anderegg. He had introduced me at starting to that old and excellent friend, who still, I doubt not, remembers Hinchliff as one of his earliest and best patrons.’ *

This introduction, made in 1858, led to a friendship which, as Mr. Maitland assures us, never cooled. ‘Whenever, after 1876, Stephen goes to the Alps, the two men whom he hopes to meet are M. Loppé, the painter, and Melchior Anderegg, the guide. Already in 1861 Anderegg visited Stephen in London. A remark of his about the superiority of a view of London chimney-pots over the view from Mont Blanc is the starting-point of a delightful pair of essays in the history of aesthetic.’ † In 1888 Melchior was again in London, and was, as we have seen, introduced to the Alpine Club; he was also introduced, by Stephen, to Westminster Abbey and to Madame Tussaud’s Gallery. ‘Friendship’ was a word which meant very much in Stephen’s life, and could not be used lightly by or of him. No doubt he found in the cheerful gravity of this Oberland guide, and a graciousness of nature which never sank into unmeaning geniality, a relief to his own moods of grim but not ungracious taciturnity. But if we could determine which points were identical and which complementary, we should have gone far in reading two characters, both original, and each, in very different ways, unique.

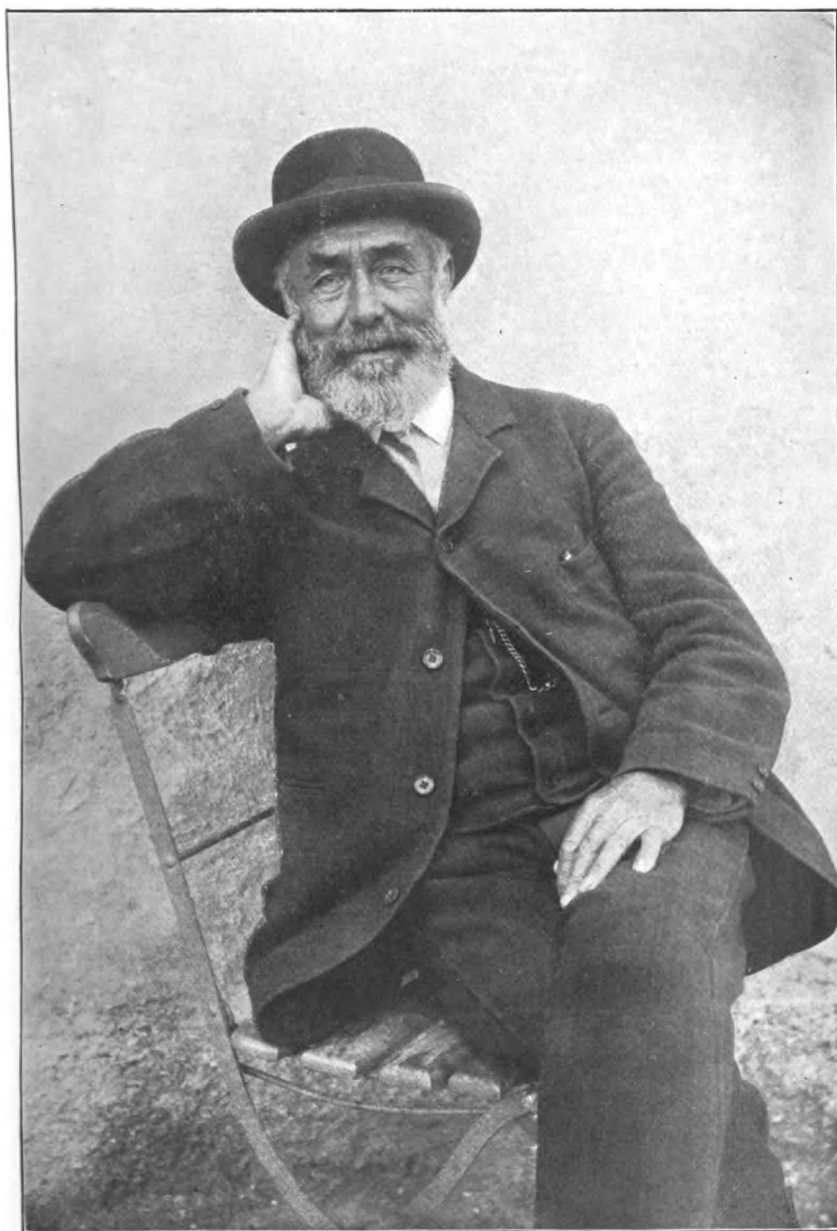
Mr. C. E. Mathews seems to have made Melchior’s acquaintance in 1858. In 1860 there was a remarkable assault on the Weisshorn, in which a Valais guide assisted. It is described in the *JOURNAL*, ‡ and, rather more fully, in Studer’s volumes. In a notice of Mr. Mathews in ‘*Alpina*’ Dr. H. Dübi speaks of Melchior as having given him, in conversation, a lively account of this expedition. It will be very interesting if more of such ‘Table Talk’ should be reported through any Swiss or other source. A lifelong and intimate friendship followed. In the early spring of 1888 Melchior was a guest at Mr. Mathews’ cottage near Machynlleth, and was taken to Pen-y-gwryd. § ‘He accompanied us on an ascent of Snowdon by way of Crib Goch. I led all the way, and as the snow was deep and very soft it was not an altogether easy task. In one place I hesitated for a few seconds. Melchior instantly forged to the front and proffered his services, which I emphatically declined.

* *A.J.* xi. 42.

† *Life of Sir Leslie Stephen*, p. 96 &c.

‡ *A.J.* i. 45.

§ *Reminiscences of Pen-y-gwryd*, p. 21.



Mrs. Aubrey le Blond, photo.

Swan Electric Engraving Co., Ltd.

MELCHIOR ANDEREGG,
1895.

"No," I said, "I am guide to-day, and you are the Herr." On reaching the summit of Crib Goch, there was the peak of Snowdon on our left, a great white cone rising into a blue sky. Melchior, whose knowledge of Swiss distances is faultless, at once said "We must go back; we cannot climb the final peak in less than five or six hours." "Oh, yes," I said, we shall be there in an hour." "That, sir," was his reply, "is quite impossible." In five minutes over the hour we were on the top of Snowdon. In the course of the same visit the same host took him, by way of variety, down a deep coal-pit. 'I can see him now, clad in a miner's jacket, holding a dip-candle stuck into a lump of clay, watching the colliers at work with the grave earnestness which is his distinguishing characteristic.'*

In his earlier visit to this country Mr. Hinchliff had set him to find his way, on first principles, from London Bridge Station to Lincoln's Inn Fields, in which enterprise, with one slight check, he triumphantly succeeded.†

Mr. Morshead made his acquaintance in the early 'sixties. This, too, led to an enduring friendship, based on mutual respect of mountaineering powers, and even more on some common points of character, and it extended, or extends, to the families on both sides.

We have no distinct information as to the steps by which Melchior trained himself as a guide, and adopted the profession. His career of full activity is covered by the forty years which ended in 1893. A list of his 'New Expeditions' drawn up by Dr. Andreas Fischer, his godson, and presumably authorised by himself, enables us to take a general survey of it. References to articles which have appeared in this JOURNAL are added. Particulars of the climbs in the region of Mont Blanc will be found in their place in Mr. Mathews' monograph volume, and all are duly recorded by Studer.

Melchior Anderegg's 'New Expeditions.'

- 1856. Lämmerjoch (with Hort and Lightfoot).‡
- 1858. S. or W. Wildstrubel (3251 m.) from the E. (with Stephen and Hinchliff).
- 1859. Mont Blanc by the Bosses Ridge (with Ch. Hudson, Hodgkinson, and Joad), Rimpfischhorn (with Stephen).§
- 1860. Alphubel, Blümlisalhorn, Oberaarhorn (all with Stephen).
- 1861. Mont Blanc from St. Gervais by Aiguille and Dôme du Goûter and Bosses (with Stephen and Tuckett).
- 1862. Monte della Disgrazia (with Stephen and E. S. Kennedy).||

* *Pioneers*, p. 90.

† P. 89.

‡ *Life and Letters of F. J. A. Hort*, vol. i. p. 307.

§ *Times* of Aug. 5, 1861. Letter of Mr. Tuckett.

|| *A.J.* i. 3.

1863. Dent d'Hérens (with Hall, Grove, Macdonald, and Woodmass) *; Parrotspitze (with Grove, Macdonald, and Woodmass) †; Col de la Tour Noire (with Macdonald and H. B. George) ‡; also second ascent of Mönch (with Macdonald).§
1864. Balmhorn (with the three Walkers) ||; Zinal Rothhorn (with Stephen and Grove) ¶; Roththal-Sattel, as a pass (with Stephen, Grove, and Macdonald).**
1865. Mont Blanc from the Brenva Glacier (with F. and H. Walker, Moore, and G. S. Mathews).††
1867. M. Civetta in the Dolomites (with Tuckett).‡‡
1868. Grandes Jorasses, higher point; Mont Pourri by the N. arête (both with H. Walker).§§
The 'Sattel' of Monte Rosa reached from the Grenz Glacier (with K. E. Digby and R. B. Heathcote).|||
1871. Mont Mallet (with Stephen, F. A. Wallroth, and G. Loppé).¶¶
1877. Unter Gabeljoch; Nordend by the N.W. arête (both with F. Morshead).***
1881. Lauterbrunnen Breithorn by the W. arête (with H. Walker and Moore).

To this list should be added the first passage of the (Unter) Studer Joch in 1863 (with Grove, Macdonald, Buxton, and Hall).†††

It is noted that through the years 1859-1879 Melchior Anderegg was constantly engaged by Miss Walker.

The items on this list are of various importance, and some of them must be taken with a qualification. Thus no part of the ascent of Mont Blanc from St. Gervais in 1861 was new, though the combination gave a complete and direct route from St. Gervais to the summit, and a real second mode of ascending the mountain. The route up the Grandes Jorasses in 1868 followed that taken by Mr. Whympere and Mr. George in 1865, but this was the first time the Eastern and higher point was reached. E. S. Kennedy's paper on the Monte della Disgrazia, the first article in the first number of the JOURNAL, is written in a discursive vein, and gives us many glimpses into the personality of Melchior. The Zinal Rothhorn stands out as a peak distinguished on its merits, and as the theme of an Alpine Classic. The Col de la Tour Noire in 1863 was a very arduous expedition, and it appears to have been, and probably was, the first occasion when Melchior Anderegg was associated with Christian Almer. 'Rivals in reputation,' writes Mr. George, 'they

* <i>A.J.</i> i. 209.	† <i>Ibid.</i> i. 199 (see p. 57).
† <i>Ibid.</i> i. 274.	§ <i>Ibid.</i> i. 423.
‡ <i>Ibid.</i> i. 378.	¶ <i>Ibid.</i> i. 433 and ii. 67.
** <i>Ibid.</i> ii. 161.	†† <i>Ibid.</i> ii. 132 and 369.
‡‡ <i>Ibid.</i> iv. 42.	§§ <i>Ibid.</i> iv. 157.
<i>Ibid.</i> iv. 157.	¶¶ <i>Ibid.</i> v. 297.
*** <i>Ibid.</i> viii. 339.	††† <i>Ibid.</i> i. 364.

yet work together like brothers,'* and so it always was between the two men. We find them together again in Mr. Macdonald's ascent, in the same year, of the Mönch by the S.W. ridge. The ascent of Mont Blanc from the Brenva Glacier in 1865 was a climb of the first order in every sense, and is admirably described by A. W. Moore.† It is one in which both Mr. F. Walker, then nearly sixty years of age, and Mr. Horace Walker took part. Melchior had reconnoitred the ground in 1863, and had pronounced against the enterprise with considerable emphasis, but he consented to make the attempt. At the critical moment when the party emerged on 'the narrowest and most formidable ice arête I ever saw,' Jakob happened to be leading, and to this the perseverance in the expedition, and its ultimate success, are ascribed; not that courage was lacking in Melchior, but that prudence was conspicuously absent in his cousin, who plunged into the irrevocable without stopping to consult his party. The passage once made, there was no more hesitation or foreboding. 'We must get up, for we cannot go back,' said Melchior; and he steered a way through the upper séracs by his own happy insight, ending with one of those feats of actual gymnastic on ice which, even at a much later period, it was a marvel to witness.

The ascent of Mont Blanc in 1859, which proved that the Bosses Ridge was traversable, is described by Mr. Tuckett in a letter to *The Times* of August 5, 1861.

The list of New Expeditions is useful as a guide, but does not nearly exhaust his recorded notable climbs. We have already mentioned the attempt on the Weisshorn in 1860, which failed through no fault of Oberländer or Englishman. A very severe, and indeed terrible, Alpine adventure, trying to the uttermost the powers of guides and travellers, was the ascent of the Matterhorn from Breuil with Mr. C. E. Mathews and Mr. F. Morshead in 1871.‡ And there are many others. Yet perhaps it is not so much by these brilliant records that the great fame of Melchior should be justified to those who come after, as by the qualities which stand out in memory to all who have seen him at work even on the most familiar ground. There was the faculty, found in greater or less degree in all good guides, of divining a way through a tangle of séracs or off a glacier without local knowledge, and this assisted by bodily feats of working up or down a smooth surface of ice with no visible points of adhesion, which would move wonder even in those who knew his ways well. The ice-axe was wielded with singular grace and ease, and in a manner characteristic of himself (some details are noticed in the Badminton volume, p. 169). As a step-cutter on the longest and most formidable ice-wall he was of skill and endurance quite inexhaustible, as is noticed in many narratives. The frontispiece of 'The Playground of Europe' shows him leading on the

* A.J. i. 287.

† *Ibid.* ii. 371.‡ *Ibid.* v. 259.

Rothhorn, and the pose of the figure is discussed by Sir L. Stephen in an interesting letter of 1871 to Mr. Whymper.* These points are mainly physical; there was also the capacity of a born leader for arranging his party so as to get the utmost out of every member, and keeping all under observation. 'However intently he may be occupied, he always knows what each member of the party is about.' His own place might be anywhere in the caravan, but when a lead was needed he instinctively forged to the front, or, if there was a weak point, there he would be found quietly reinforcing it. A well-marked trait was what can only be called his chivalry, as in the refusal to see a nervous or overweighted porter put upon. Often he would shift a great load of wood or provisions to his own very powerful shoulders in case of encountering difficult ground in the early stages of an ascent, and he was equally considerate of the old and weak. He would use few words, and very few hard ones, but there was a flash of the eye which carried exhortation to the most impenitent. 'Sacramento! nicht so schnell!' on a passage of steep rock with new snow, was noticed by a close observer as about as strong an expletive as ever passed his lips, and that an exotic. A slight stammer or hesitation gave point to all his utterances, such as the famous 'Ja, es geht, aber ICH gehe nicht.' His well-known caution was an invariable feature; many a fine expedition, as it may afterwards have turned out, was pronounced beforehand 'eine Dummheit,' with epithets of varied force. This was not due to any overclouding of the man by the mountain gloom; on the contrary, when the die was cast, his spirits would rise, as Sir L. Stephen observes, in proportion to the difficulty. But he would have nothing left to the valour of ignorance; every strong point against success should be reckoned with in advance; the game must have its risks, but were the particular risks fairly within the four corners of the game, as the rational man might judge them? And if he consented to take a hand, he would always be for going forward until advance became indefensible.

An incident of August 1883, showing his thoughtful care for others, will not easily be forgotten among guides. In descending the Dent d'Hérens, Ulrich Almer was struck by an enormous stone shortly below the summit. With great pluck, he refused to be carried, and ultimately walked down to the Stockje hut. But the party was obliged to spend the whole night on the Col de Valpelline, during which Melchior tenderly cared for the wounded comrade, taking off his own coat to cover him, and himself braving the cold in his shirt sleeves.

In 1864 Melchior Andereg married the wife who has been the mother of his eight sons and four daughters, and the companion and nurse of his latest years. One son, who bears his father's name, is the well-known landlord of the Hotel Andereg in Meiringen;

* Maitland's *Life of Sir L. Stephen*.

he had received mountain training in early life, and occasionally joins an expedition. Another, Peter, also of Meiringen, is in the foremost rank of guides. The death of Andreas in 1897,* caused by an avalanche started in the descent from the Jungfrau, was a great grief to the family. It is noted that, with prudence and firm will worthy of his father, Andreas had insisted on the abandonment of the attempt, owing to the dangerous state of the snow. Melchior, who had himself passed by the particular spot fifty or a hundred times, was himself on the Wetterhorn with Mr. C. E. Mathews, and heard of the disaster on his return to Grindelwald. This was a cloud on what has been, we may venture to hope, a life of unusual completeness and prosperity. Melchior took much pride in the affairs of Meiringen, and was a promoter of the fine development of the Aar Schlucht. He would come down from Zaun, where he and Frau Anderegg loved to receive their friends in cheerful hospitality, to guide a visitor through the intricacies of its bridges and galleries. He showed a critical admiration of the fine stores of wood-carving in which the modern town abounds. 'Few men,' wrote Mr. Mathews in 1887, 'are held in such esteem by their neighbours and their friends. His temper is so even and his judgment so sound that in disputes among his own people his decision has often been sought and accepted as final with perfect satisfaction by men who, but for him, would have gone to law against each other.'

Given a warm and vivacious temperament, and the constant opportunities which the chamois hunter or mountain guide has of taking in impressions

'From Nature and her overflowing soul,']

we cannot be surprised to find that a sense of natural beauty is claimed for him by those who knew him best. Not that he was likely to spend many words on any such emotions. But his face would be 'lit up with genuine enthusiasm as he exclaimed "Schön! Schön!"' at the sudden revelation of the glories of a sunset or the first flush of a sunrise. In the account of the Brenva ascent of Mont Blanc, when he went forward to reconnoitre at a critical moment, we are told that he came back with the breathless report: 'Ein schöner Eisfall! Einen solchen Eisfall habe ich niemals gesehen!' †

A capital instance of versatility and quickness in entering into the interests of others, however novel, will be found in Captain Abney's remarks on help given in his sunlight experiments, at the end of the chapter on 'The Portraits' in 'Pioneers.' ‡ 'Whatever he does he does well.' 'After a quarter of an hour's instruction he was *au fait* at what I wished him to undertake; a heliostat then to him became an entity, and a beam of sunlight an object worthy of all

* A.J. xviii. 557.

† *Ibid.* ii. 374.

‡ P. 84.

respect. In fact he paid as great attention to the spectroscope as he did to the details of travel.' The figure in the accompanying vignette is very characteristic and will remind many of Melchior's vigilance as to the packing of ' details of travel ' quite other than the heliostat.

Alpine interests are for the moment in abeyance. When they are resumed in a happier time, a new generation of climbers will look back to its origins, and will find itself confronted in all the records by the masterful personality of ' the gallant Melchior Andereg.'* Perhaps what will seem most interesting in it will be the union of opposites in happy commixture ; of versatility with steadiness of purpose, of energetic courage with unvarying prudence, of love for his own countrymen with a singular openness to the moods of Englishmen. For the present, we may leave him with the farewell words written in 1892 by the old friend already quoted, only adding one of grateful admiration for the following years of venerated age, in which the western slopes of life have been lighted up by a steady and beautiful glow, and good service has been done to a new generation by the mere survival of a standard and an example :—

' How difficult the task is to set down plain facts about such a man and yet to avoid the charge of exaggeration can be known only to those who, like myself, have had the priceless advantage of his friendship and his companionship for more than thirty years. I could express no better wish for the dearest friend of mine than that, when his time comes to climb the steep hills of life, he may have such a companion to share the perils of the journey, and such a leader to point out the way.' †

A. O. P.

The 1859 photograph of Melchior is copied from one in the possession of Miss Walker. Her first meeting with him was at the Schwarenbach Inn. She was anxious to make the ascent of the Altels, and her father accordingly insisted that if she was to go up there was only one man to get—Melchior Andereg. Upon asking the porter at the inn for Andereg the answer was ' Ich bin der Andereg,' and so the first of the expeditions that were to range over twenty years was made.

Writing to Mr. Solly, Miss Walker says : ' But for my weakness

* F. F. Tuckett's letter of 1861, quoted above.

† C. E. Mathews in the *Mountaineering* volume of the Badminton Library, p. 371.

I might tell you many nice things about my dear old Melchior. The last message he sent me was about a year ago, that he was bedridden, suffering no pain, and very happy and quite ready to make his last ascension.

One of his last messages also spoke of his gratitude for all the friendship and kindness that he had received from her and her father and brother and other English climbers.

Probably I am one of the youngest climbers who was ever on a rope with Melchior Andereg, and it is on that account that I am asked to add a few words to the notices written by his older friends.

I first met Andereg in 1890 at Grindelwald when he had come over the Wetterhorn with Mr. Horace Walker and Mr. and Mrs. C. Pilkington, and it was owing to my being a friend and near neighbour of Walker that in 1891 I was asked to go with him to the Silvretta district. Besides Walker the party consisted of Ellis Carr and myself, with Andereg and Gabriel Taugwalder, who was then at his best.

We made several of the recognised climbs in the district, which was new to us all, and upon one of them Andereg taught us a piece of mountaineering craft which I have never forgotten. We were on the west side of Piz Linard, intending to descend to Lavin on the south-east. There was nothing to prevent us from getting to the top, but there was a thick cloud covering the last few hundred feet, and Melchior said he would never start to cross a mountain that was in cloud, unless he knew the way down on the other side. The result was that we traversed round until we were able to connect up with the usual route from Lavin, by which we gained the summit. On the descent the clouds came lower, and we got as absolutely soaked as I have ever been. The weather turned bad, and we could do little more for some time, so we travelled round to Macugnaga and came over to Zermatt by the Jägerjoch and Jägerhorn.

In 1896 and again in 1901 I was a member of parties which Melchior accompanied, but he was more as a courier with the ladies, and did not join in any serious climbs. In 1901 I remember that he and Miss Walker ascended a point of the Pitzthaler Urkund, and it is possible that that is the last expedition that either of them made.

It is very difficult to compare Melchior with the best guides of to-day, with very few of whom I have ever climbed. The most difficult rocks that I ever saw him on were those of the Gross Litzner, and the short steep bit of rock leading from the Jägerjoch to the

summit of the Jägerhorn. On these he certainly went excellently, and with all the ardour of youth, but probably some of the younger guides and amateurs of this generation attempt and conquer places which he would, even in his prime, have thought impossible. In snow and ice work I should say he was never surpassed, and when a blizzard came on, as we came down from the Jägerhorn, he at once took the lead and solved the problem of the schrunds and crevasses in most perfect style.

I judge of him as much from what others expressed as from what I saw. Wherever we went in Switzerland, Italy, Austria, or France, as soon as it was known who he was, travellers, peasants, and guides all came to see him and pay homage. It was like a royal progress—handshakings and greetings and photography all the way. I know no other guide who ever held the same position.

I cannot improve on what others are saying of him. We have all known and valued many professional friends in many kinds of sport. I believe that no sportsman ever had for a friend a finer, more noble, or more faithful professional companion than was Melchior Andereg.

GODFREY A. SOLLY.

The following Notice of Melchior Andereg from the pen of the late Charles Edward Mathews appeared in the 'Pioneers of the Alps' published in 1887, and is, as well as the Photogravure forming the Frontispiece of this Number, reproduced by kind permission of Captain Sir William Abney, K.C.B., F.R.S., &c., and of the publishers, Messrs. Sampson Low, Marston & Co., Ltd.

'Melchior Andereg was born at Zaun near Meiringen, in the year 1828. As a lad he helped his father to tend cattle in the neighbourhood of his native village, and at the age of eighteen he taught himself the art of woodcarving, in which he has attained extraordinary skill. He became in early life an excellent chamois hunter, and the knowledge of crag and glacier so gained enabled him to take a foremost place as a professional guide, at the moment when the craze for Alpine adventure set in. At twenty years of age and for some time afterwards, he assisted his cousin, Johann Frutiger, in the management of the Inn at the Grimsel. The first glacier expedition he made in the capacity of guide was with an English gentleman, Mr. Robert Fowler; but up to the year 1859, when he was thirty-one, there is but little record of his achievements, for his guide's book had been stolen by some man who assumed his name, and who for a short time traded upon his reputation.

The first entry in the book now before me, which contains the testimony of some of our best climbers to his capacity, his courage and his high personal qualities, bears date the 18th of July, 1859, and is signed with the honoured name of Frank Walker. The last entry is dated the 10th of September, 1872, and is signed by M. Albert Millot of Paris. It states "that any recommendation of Melchior Andereg is unnecessary," and the statement was literally true, for by that time the name of Melchior was as well known as those of the great Mountains he loved so well, and to the summits of which he had conducted so many climbers with such unerring skill, prudence, and success.

The first reference to Melchior in Alpine literature is to be found in "Summer Months amongst the Alps." In that charming book the late Mr. Hinchliff describes his introduction at the Grimsel, in 1855, "to two guides, named Melchior Andereg and Johann Höckler, both of whom looked very promising fellows." With these guides Mr. Hinchliff made the passage of the Strahlegg to Grindelwald. We hear little of Höckler, except that he carried the cellar. Melchior, as usual, took all the honours of the day.

Some time later, in the same year, Mr. Hinchliff again met his guide of the Strahlegg, "with his apron of green baize," exhibiting his woodcarving to some travellers at the Schwarenbach, and at once engaged him for an ascent of the Altels; after which, says Mr. Hinchliff, "I parted with him with great regret, considering him a most excellent and trustworthy fellow, one of those true and stout hearts with whom it is always a pleasure to be associated." From that time to this Melchior Andereg has been at the very head of his profession. Climbers not unnaturally think most highly of the guides they know best. Those who have not actually worked with Melchior, and know him only by reputation, may have a preference for Almer or for Lauener, for Dévouassoud or for Rey. But ask them whom they would place second, and the verdict would be unanimous in favour of Melchior Andereg. The men who could equal Melchior in his best days as a pathfinder or as a cragsman may be counted upon the fingers of one hand, whilst for the combination of qualities which make a guide first rate—capacity, boldness, true prudence, unvarying courtesy, and sweetness of disposition—there is a consensus of opinion among competent judges that there has been no superior to the subject of this memoir.

His first ascents were important, though not very numerous. He led the late Charles Hudson in his ascent of Mont Blanc by Les Bosses du Dromadaire in 1859, and Messrs. Frank and Horace Walker, A. W. Moore and G. S. Mathews in their memorable first passage over the same mountain from Courmayeur to Chamonix by the Brenva Glacier in 1865. In company with Mr. Leslie Stephen he made the first ascent of the Rympfischhorn in 1859, and of the Alphubel, the Oberaarhorn, and the Blümlis Alp in 1860. With Mr. Stephen and Mr. E. S. Kennedy he conquered the Monte Della

Disgrazia in 1862. With Mr. Stephen and Mr. F. C. Grove he first climbed the Rothhorn from Zinal in 1864. He found a new way to the top of the Jungfrau by the Roththalsattel with Mr. Stephen and Mr. R. S. Macdonald in the same year, and in later days, in company with Mr. Stephen and M. G. Loppé, he first reached the summit of the Mont Mallet. He was the first on the Dent d'Hérens, with Messrs. R. S. Macdonald, M. Woodmass, and F. C. Grove, in 1863, first on the Balmhorn with Mr. and Miss Walker* in 1864, and first on the highest peak of the Grandes Jorasses with Mr. Horace Walker in 1868.

‘Melchior is a guide who possesses an irresistible personality. Quiet, grave, sometimes almost taciturn, he, like all really good guides, is seen to the best advantage in critical situations and when real emergencies arise. He is never at fault, he always knows what to do and does it. None of his *Herrschaft* ever dreamed of questioning his decisions or disputing his authority. It is only those who have served under his command, as Sir William Napier so well puts it, who really know “why the soldiers of the tenth legion were attached to Caesar.” His real superiority is only manifested when those who have worked with him have the comparative misfortune to be guided by a less competent man. In the case of all other guides I have known, however eminent they may have been there has been some drawback, some self-assertion, some want of courtesy, some defect of temper, some lack of consideration for the feelings of others. No one ever could or ever did find fault with Melchior Anderegg. Melchior achieved his reputation in the early, almost in the prehistoric, days of mountaineering.

‘It is sad to notice, in looking through the various testimonies to his worth recorded in the book to which I have referred, how many of his former employers are amongst us no more, but “*Litera scripta manet.*” The Rev. Charles Hudson, who perished on the Matterhorn, writes of him “that for difficult ascents, he is incomparably the best guide I ever met with.” And Mr. Hinchliff writes that “on all occasions he proved himself perfect, both as a friend and a companion.” Mr. Frank Walker bears frequent testimony to his “courage, skill, honesty, and true gentlemanly feeling.” Mr. Adams-Reilly describes how on one occasion, when ascending Mont Blanc under Melchior’s guidance in company with another party led by two eminent Chamonix guides, “he and Melchior had crossed the couloir on the Aiguille du Gôüter and smoked a pipe on the opposite side before the other guides had finished consulting as to how the couloir was to be attacked.” Mr. R. S. Macdonald writes that the “praises lavished upon him were justly deserved;” Mr. A. W. Moore that “praise would be superfluous,” while the

* Miss Walker was the first lady to climb regularly, season after season, in the Alps. In company with her father and brother she has ascended most of the great peaks.—C. D. C.

encomiums of living climbers, E. S. Kennedy, Horace Walker, Leslie Stephen, F. Craufurd Grove, F. Tuckett, F. Morshead, and others are hearty and unanimous.

Melchior may be said to have founded a school of Oberland guides. He initiated into the mysteries of the craft such men as Hans Jaun, Andreas Maurer, von Bergen, and others of less note, and his influence is distinctly to be recognized in their method of guiding. Jaun, who has since won so eminent a place in the highest rank of his profession, was first introduced to me by Melchior as a promising young porter. Like all Melchior's pupils he had an almost idolatrous veneration for his master. The cause was easy to understand. I remember on one occasion when Melchior was leading in a position of great difficulty, calling Jaun's attention not only to the confidence which Melchior exhibited, but to the wonderful grace and ease of his movements. "Yes," said Jaun, "but he is the king of guides." To see him at work is both a picture and a lesson. There is no slovenly step-cutting when he leads. In this respect he has had no superior, indeed it may be doubted if he has ever quite been equalled. No Red Indian chief ever found his way through primeval forests more deftly than Melchior finds his pathway in the most difficult séracs, with his active axe held like a racquet in one hand, and his keen eye instantly fixing upon the right foothold. However intently he may be occupied, he always knows what each member of the party behind him is doing, as many a Chamonix porter has found out to his cost when, in a moment of forgetfulness, he has made a careless use of the rope.

Melchior is one of those guides who combine the virtues both of prudence and of courage. He knows when it is right to go on and when it is the truest bravery to turn back. "Es geht, Melchior," said a fine climber once in my hearing when we came to a dangerous spot. "Ja," replied Melchior, "*Es geht, aber ICH gehe nicht.*" The result has been that under his guidance, accidents of any kind have been few and far between. Indeed I know of two only. He led the party over the Col de Miage in 1861, when Mr. Birkbeck fell more than 1700 feet; but the accident happened when that gentleman had unroped, and left his companions, and it was due purely to misadventure. In the year 1883 he led Mr. J. T. Wills and myself up the Dent d'Hérens, and in descending, Ulrich Almer, who was our second guide, was struck by a falling stone and severely hurt. After many hours of labour and anxiety, we succeeded in getting our wounded guide on to the Col de Valpelline at nine in the evening, and had no alternative but to sit out and wait for dawn. The care with which Melchior looked after his injured comrade, and the tenderness which induced him to take off his own coat that his friend might be the better protected, while he himself braved the night cold in his shirt-sleeves, will not easily fade from my recollection.

Melchior's motto is "thorough," and he acts up to it consistently.

No detail seems to escape him. Of this faculty, exercised under very novel circumstances, I venture to give the following illustration. Five and twenty years ago he came to England on a winter visit to some of his old friends. He arrived at the London Bridge Station in the middle of a genuine London fog. He was met by Mr. Stephen and Mr. Hinchliff who accompanied him on foot to the rooms of the latter gentleman in Lincoln's Inn Fields. A day or two later the same party found themselves at the same station on their return from Woolwich. "Now, Melchior," said Mr. Hinchliff, "you will lead us back home." Instantly the skilful guide, who had never seen a larger town than Berne, accepted the situation and found his way straight back without difficulty, pausing for consideration only once, as if to examine the landmarks, at the foot of Chancery Lane.

'On the occasion of his visit to England I thought it would be an amusing change for him to take him down a deep coal-pit. The interest he showed in the working was extraordinary. I can see him now, clad in a miner's jacket, holding a dip candle stuck into a lump of clay, and watching the colliers at work with the grave earnestness which is his distinguishing characteristic.

'Under no circumstances does Melchior forget what he believes to be the interest of his employers. On one occasion Mr. Morshead and myself were at Pontresina, preparing for an ascent of the Bernina. We thought it prudent to retain the services of the chief guide of the district, who not only demanded an enormous fee, but also that we should engage a comrade of his own on similar terms. Melchior was indignant, his sense of honour was touched, and he offered to take us, and did take us, to the summit of the Bernina without local aid. Just and fair in all his own relations with his employers, he resents any attempt at imposition by others.

'The qualities that win the esteem of men are not always those that women most admire. In Melchior, however, there is such a combination, that while some of our best climbers are proud to attribute their successes to his genius and his courage, there are also some of the gentler sex who can never forget what they owe to his unswerving courtesy, gentleness, and kindness of heart.

'I shall have written to little purpose if I have not conveyed the impression that Melchior is more than a mere guide. Few men are held in such esteem by their neighbours and their friends. His temper is so even and his judgment so sound, that in disputes amongst his own people his decision has often been sought and accepted as final, with perfect satisfaction by men who, but for him, would have gone to law against each other.

'He is a genuine artist. In many a London drawing-room or on the table of many a University Don are to be found specimens of his art, which are valued no less for their intrinsic worth than from their being souvenirs of a valued friend. Some years ago the late Mr. Adams-Reilly sent him photographs of the fighting stags, two well-known pictures by Landseer. In a few months there came

back two excellent pieces of carving, which I am happy to have in my possession, executed with vigour and freedom, and not only in exact accordance with the photographs, but in themselves admirable as works of art. It is amazing that a man who was entirely self-taught should not only have been able to turn out such work, but should also have been able to carve life-like statuettes of his friends, which have been found worthy of exhibition in a London Gallery.

‘He is a keen lover of nature. In too many cases, as Mr. Ruskin has truly observed of the Swiss peasant, “the wild goats that leap along those rocks have as much passion of joy in all that fair work of God, as the men that toil among them—perhaps more. The sun is known only as a warmth—the wind as a chill—the Mountains as a danger.” There are guides who regard a gigantic precipice or a lofty aiguille from no other point of view than that raised by the question of whether one can go up or down. Melchior is not of this kind. He understands the lessons which the mountains teach and the glories they reveal. I have many remembrances of scenes of beauty never to be forgotten when, following the cold grey of the early morning, the sun has smitten the great peaks one after another with a crimson flash, or when at sunset the whole western horizon has been one vast flame, and as they recur to me I can recall Melchior’s face lit up with genuine enthusiasm as he exclaimed “Schön! Schön!”

‘In 1864 Melchior married Marguerite Metzener, a girl who at that time had charge of the woodcarving in the Hôtel at the foot of the Rhone Glacier. They have had a numerous family, eight sons and four daughters. The eldest son, also named Melchior, was trained for a guide; he inherited his father’s charming disposition and much of his skill, though not his strength, and it was thought better that he should become a woodcarver only. The second son, Andreas, is a rising guide of great promise, and is likely to succeed to something of his father’s fame.

‘Melchior Anderegg has always preserved a keen attachment for his early patrons. They always had the first claim upon him. If his services at any particular time were not required by Stephen or Walker or Morshead or myself, then, and then only, was he open to fresh engagements, but he always looked forward with the warmest interest to new work with old friends. I am conscious that it is difficult to set down undoubted facts about such a guide as Melchior Anderegg, and yet to avoid altogether the charge of exaggeration. Those who have known this famous guide will make no such charge against me, and if those to whom he is a stranger will look well at the admirable portrait placed opposite this memoir, they will not fail to read in that the record of a noble life. The fine face has more furrows than when I first knew it nearly thirty years ago, and the once jet-black hair is now silvered by the advancing years, but as yet the eye is not dim nor the natural force abated. To say that I owe him a debt impossible to repay is not to say much

He first taught me how to climb. For more than twenty seasons he has led me—in success and in failure—in sunshine and in storm. He has rejoiced with me in happy times; he has nursed me when suffering from accident with a charming devotion. Year after year I have met him with a keener pleasure. Year after year I have parted from him with a deeper regret. He cannot expect to continue for many more years in active occupation, but the recollection of his splendid and faithful services is a priceless possession to those who have known and loved him; and in the green old age which troops of friends so heartily desire for him, he can look back with content and satisfaction upon a prosperous and brilliant career.'

C. E. M.

A COMPARISON AND A TRIBUTE.

THERE has now passed away the other 'of the two men whom common consent places foremost among the pioneers of the Alps.'*

Who does not remember Whymper's brilliant words?—'Who is Melchior Anderegk? Those who ask the question cannot have been in Alpine Switzerland, where the name of Melchior is as well known as the name of Napoleon. Melchior, too, is an Emperor in his way and a very Prince among guides. His empire is amongst the "eternal snows," his sceptre is an ice-axe' ('Scrambles,' 2nd edit., p. 192).

* * * * *

'It would be almost an easier task to say what he has not done than to catalogue his achievements. Invariable success attends his arms; he leads his followers to victory but not to death. I believe that no accident has ever befallen travellers in his charge. Like his friend Almer he can be called a *safe* man. It is the highest praise that can be given to a first-rate guide' (p. 193).

For over twenty years—from 1860 to 1880—the names of these two men, Christian Almer and Melchior Anderegk, their only possible equal perishing on the Matterhorn in 1865, dominated the Alpine world. So long as mountaineering counts for anything in the minds of men, so long will the names of these two men stand out as essentially emblematic of that professional skill and of those virtues of endurance, of self-sacrifice in the last resort, that are, not without some show of justice, commonly ascribed to the ideal guide of the High Alps. They were, if you like, in a way, each the other's only rival, and yet few things are more difficult than a comparison of their merits. Even now among mountaineers of experience, guides and amateurs alike, the mention of their names seldom

* *A.J.* xix. 201. Obituary notice of Christian Almer by the Rev. Hereford B. George.

fails to fill an idle hour with an animated, often heated, discussion of their respective powers, and now, as in their great days, the point is as far off agreement as ever.

In the opinion of those who knew them best, Melchior and Almer were, in their great days, undoubtedly to be regarded as in a class by themselves, and every mountaineer, whatever may have been his secret predilection as between the two, would certainly have accorded the second place amongst the whole body of guides to the other, and that second place would be scarcely below the first.

If they are judged merely by their 'first ascents,' then old Papa Almer is an easy first. But it must always be remembered that, although, most undoubtedly, initiative, energy, and cool, open-eyed daring are the essential requisites in the leader who habitually seeks out new routes, yet he has to depend on others for his *opportunities*, so that no true analogy exists in this feature of their careers.

In wider intelligence, charm of manner, in presence and in extrinsic knowledge, no doubt Melchior bore off the palm; in prudence—since to no party in their charge did ever a serious mishap occur—as in technical knowledge, there can have been little to choose between them. Yet it may well be conceded that in iron determination and possibly in tireless execution old Papa Almer in his great days was without a peer.

One might put it that he was *harder bred*.

We need only recall his descent of the Col Dolent, his ascent of the Silberhorn by the N.W. face, his passage of the Ebnefuhjoch and of the Col des Avalanches—none of which have been repeated—his (the second) ascent of the Meije in 1878, to realise that there was in him something that at times could be relied on to exalt his powers, to work on the stern stuff of his being, making him rise, without any sacrifice of safety, to the performance of, call them if you like, *Dummheiten*, which even the most prudent of us who tread the great mountains knows in his own heart to be of the essence of great deeds.

It has always seemed to one who knew not the men in their great days, and only one of them, at actual work, in his later years, that while Almer, viewed from the purely mountaineering point of view, needed no complement, Melchior might with profit have absorbed a dash of that 'devil' which was so pronounced a feature in his daring kinsman Jakob Anderegg, his companion—possibly chosen out of some unconscious feeling of need—on most of his great climbs, and indeed, in part, his leader on his greatest expedition, the Brenva face of Mont Blanc. To Jakob's character and merits one of the most experienced of our members contributed a critical yet sympathetic testimony in the last volume of this JOURNAL (page 274).

It is worthy of remark that Melchior acted regularly as chief guide to no less than five Presidents of the Club, viz. Hinchliff, Stephen, C. E. Mathews, Craufurd Grove, and Horace Walker, and occasionally to two others, Mr. Charles Pilkington and Sir Edward Davidson.

These constant retainers, of course, made his services practically unavailable to strangers.

We, of this Club, cannot forego our pride in the name of *Engländerführer*, bestowed by their countrymen on these two great guides, even if the name was possibly begotten in some mingled feeling of jealousy of their services to an alien race, not entirely quenched by national pride in and admiration of their deeds.

May they both rest in peace—always warm in our memories!

THE MS. JOURNALS OF THE LATE A. W. MOORE.

As mentioned in the last volume of the ALPINE JOURNAL the Committee has been able to purchase these valuable records. The following is the list of the contents and it is proposed to publish from time to time some of the papers.

1860. June 27 to July 13.

1. Paris — Bâle — Lucerne — Altdorf — Rigi — Vitznau—
Engelberg — Joch-Pass — Meiringen — Rosenloui — Great
Scheidegg—Grindelwald.*
2. Wengern Alp—Lauterbrunnen—engage Ulrich Lauener—
cross Petersgrat to Kippel—Brieg.

1861. June 19 to July 19.

Paris—Bâle—Lucerne—Arrival of the Guide Cachat †—Rigi—
Altdorf—Surenen Alp — Engelberg — Pfaffenwand—Titlis
in bad weather—Joch-Pass—Imhof—Handegg—Grimsel—
Rhone Glacier—Attempt on Galenstock—Return to
Grimsel—reach summit of the Strahleck but compelled by
bad weather to return to Grimsel—Interlachen.

Lauterbrunnen—engage U. Lauener's brother—cross Petersgrat
to Kippel—Turtmann Valley—Gruben—Pas de Forcletta—
Zinal—Trift Joch.—Zermatt—Riffelberg—attempt to ascend
the Lyskamm defeated by hurricane—reach a plateau
which lies between the Lyskamm and the Zwillinge
from which we got a most magnificent view into Italy—
cross the St. Théodule to Val Tournanche and Aosta—
reach Courmayeur—cross Col du Géant to Chamounix—
leave for the Pierre à Bérard and ascend the Buet—descend
to Sixt—Col d'Anterne and Passage des Chenalettes to
Chamounix—Home *via* Geneva.

* 'There was great excitement in the inn [the Adler] this evening as four *Englishmen* arrived who had crossed the Strahleck Pass from the Grimsel without guides . . . they had been walking for 16 hours, of which 12 were on the ice.'

† 'He is a short, stout and brawny man, very thickset, with a bullet head adorned with a not very large amount of short black hair—in fact, a thorough Frenchman in appearance.'

1862. June 16 to July 28.

Paris—Geneva—Val d'Illicz—Champéry—Col de Coux—Col de Golez—Sixt—Col de l'Echaud—failure from snow—attempt Col d'Anternes—Sixt drove Chamonix—Gl. de Tour—Col du Tour—Glacier de Trient—Glacier d'Orny—Orsieres—Valsorey Gl. Col de la Maison Blanche—Fionnay—near Col du Crey—Gl. de Corbassière—Val de Bagnes—drove Visp—Théodule to Breithorn (54)—Findelen Gl. to Adler Pass down the Alallin Gl. and Schwarzberg Gl. to Mattmark Inn—Monte Moro Pass—Alagna (67)—Sesiajoch (77)—Riffel—Zermatt—Eggischorn Hotel—Viesch Gl. (82)—Oberaarjoch (85)—Oberaargl.—Grimsel (88)—Abschwung—Finsteraarhorn Gl.—Strahleck Pass—Grindelwald—Guggi Gl. (100)—Jungfrau-joch (110)—Eggischorn—Gr. Viescherhorn—Mönchjoch—Grindelwald—Attempt Mönch from Wengern (119)—Home.

1863. June 13 to July 27.

Giesbach—Faulhorn to Rosenloui—Rosenloui Gl.—Weitsattel, between Dossenhorn and Engelhörner — Urbachthal — bivouac — Gaulijoch — Lauteraargl. — Strahleck — Grindelwald — Rosenloui — Gadmenthal — Susten Pass — Circuit of Vorder-Spitzalpli — Stachelberg — Richetli Pass — Elm — Segnes Pass — Sardonajoch — Vättis — Chur — Strela Pass—Dürenboden—Scaletta Gl.—Schwarzhorn—Scaletta Pass—Scanfs—Samaden—Piz Roseg attempt—Bellagio—Domodossola—Laquin Gl. to Saas attempt—Simpeln — Gamserjoch — Mattwaldthal — Saas — Col between Allalinhorn and Alphubel—Täsch—Graben Gl.—Dom—Lyskamm (third ascent)—Zermatt—Col de Valpelline — Col de la Reuse d'Arolla—Val de Bagnes—Col des Pauvres to Gl. de Corbassière—Col close to Col de la Maison Blanche — Col Ferret—Courmayeur—Col de Miage—Chamonix—Tête Rouge—Aig. du Gouter—Dome du Gouter—attempt on Mt. Blanc by Bosses du Dromadaire—Home.

1864. The journey of this year was described in the well-known book 'The Alps in 1864,' published privately in 1867, of which a new edition was issued in 1902 under the editorship of Sir Alexander Kennedy, F.R.S., &c.

1865.

Paris — Basle — Zurich — Glarus — Stachelberg — Altenoren Alp—Clariden Firn—Sand Alp—Bifertengrat—Ascent of the Tödi—Gliems Pass—Rusein Thal—Disentis—Medelser Thal — Camadra Pass — Olivone — Val Carasina — Ascent of Rheinwaldhorn — Vogel-joch — Val Malvaglia—Pena—Zapport Pass — Hinterrhein — Splügen — Andeer — Averser Thal—Forcellina Pass—Piz Lunghino—Pontresina—Piz Roseg—Maloja—Chiavenna — Milan — Orta — Alagna — Sesia-joch—Zermatt—Ascent of the Gabelhorn—Col de

Bertol—Arolla—Col de Breney—Valpelline—Aosta—Val
Grisanche—Courmayeur—Ascent of Mont Blanc—Chamouni
—Martigny—Beichfluh—Bel Alp—Eggischhorn—Faulberg
—Mönch-joch—Grindelwald—Wengern Alp—Kastenstein—
Brienz—Bern—Home.

1866.

Kandersteg, Schwarenbach, Balmhorn, Dünden-grat, Mürren,
Wengern Alp, Schneehorn, Interlachen, Bern—and in the
winter : Grindelwald.

1867.

Tour in the winter : Dauphiné.

1869.

Tour in the winter : Schwarenbach and Chamouni.

THE ALPINE CLUB LIBRARY.

The following have been added since October :—

Club Publications.

C.A.I. Rivista. Vol. 33. Redattore : Walther Laeng. Torino 1914
9½ × 7 : pp. xxiv, 392 : ill.

Among the articles are the following :—

- F. Mauro, Dent d'Hérons, variante per il versante S.O.
A. Andreoletti, Nelle Dolomiti agordine : Cima d. Gravinai, C. d.
Lastie d. S. Sebastiano, C. d. Gardizana, C. d. Forzelette, Mte
Moiazzetta, C. d. Sasse, Marmolada, parete S., Piccolo Vernel,
P. Serauta, Mte Fop, P. Le Crene, C. d. Val Fredda, C. Zopel,
C. di Valgrande, Cimon d. Pale S.O., Torre d. Alpini.
G. F. Gugliermi, Mte Bianco per la cresta del Brouillard.
F. Gnesin, I torrioni Magnaghi.
Gusella d. Vescova.
M. Piacenza, Esplorazione nei monti dell' Himalaya occidentale.
F. Pergameni, Nuove ascensioni nel gruppo del Gran Paradiso,
Cresta di Money, M. Nero.
R. Rossi, Nuove itinerari nel gruppo Scalino-Painale, P. Scalino,
Pta Vicima, Vetta di Ron, Colle Brutana, Corna Brutana.
V. Ronchetti, All' Uilpata-Tau da Valle Zeja.
L. Tarra, Gruppo del Mte Popena.
B. Asquasciati, Prima discesa d. versante occidentale dell' Argentera.
A. Ballabio, Mte Palino al P. Scalino.
F. Frederici, Ascensioni in Dolfinato, Vallon des Etages.
W. A. B. Coolidge, Le origini storiche di Arolla.
A. Ferrari, Prima ascensione del Colle Savoia, Mte Bianco.
W. Laeng, Nelle vallate meridionali dell' Adamello, P. Badile.

Among the first ascents described are the following :—

- R. Calegari, Sasso Manduino, cresta N. : J. A. Spranger, Torre
Costanza : A. Gristi, Pta Brasca : H. P. Cornelius, Mte
Combolo, Mte Salino, Vetta di Ron, P. Ligonico : G. Quaglia,
Pointes de la Partie : U. di Vallpiano, Picco Gamba (Mte
Bianco), Pta Isabella : E. Fasana, Obelisco di Geisspfad :
A. Andreoletti, Cimo Pezzios : Luisa Fanton, Campanile
Luisa : M. Agostini, Torre Elbel, Torre Sappada : E. Pian-
tanida, Dente di Popera : F. Pergameni, Roccia Viva (Gr.
Paradiso) : G. Guiglelmi, M. Lera, Pta Corna.

Mazama. Vol. 4, no. 3.

December 1914

10 × 6½ : pp. 136 : plates.

Among the articles are the following :—

- E. C. Sammons, Rainier over Tahoma Glacier.
- W. E. Stone, Ascent of Mt. Sluiskin.
- B. A. Baxter, From St. Helens to Rainier.
- A. J. Montgomery, Mt. Jefferson.

The plates are very good.

The Mountaineer. Vol. 7.

Seattle 1914

10½ × 6½ : pp. 104 : plates.

S.A.C. Jahrbuch. 49. Jahrgang 1913 bis 1914.

Bern 1914

10½ × 7½ : pp. viii, 424 : plates, some col.

This contains :—

- R. Liefmann, Wanderungen in der Umrahmung des Rheins.
- E. Imhof, Wanderungen im Gebiet der Lentahütte.
- G. Thoma, Durch Dick und Dünn.
- W. Tappolet, Eine Ferienfahrt im Berner Oberland und Wallis.
- C. Gruner, San Martino und die Palagruppe.
- C. Täuber, Wanderungen in den Karpathen.
- W. Schibler, Eine Durchquerung des Kaukasus.
- P. X. Weber, Die Bedeutung des Pilatus in der Alpenkunde.
- F. W. Sprecher, Ueber Ortsnamen des Taminagebietes.
- A. Heim, Der Uto.
- A. Ludwig, Terrassen, Stufen und Talverzweigung in den Alpen.
- J. Lüders, Noch einmal Rudolf Meyers Besteigung des Finsteraarhorns.
- G. Mayer, Neue Touren in den Hochalpen des Dauphiné.

— Beilage. Sonnige Halden am Lötschberg von F. G. Stebler.

10½ × 7½ : pp. viii, 119 : ill.

— **Alpina.** Mitteilungen des S.A.C. 22. Jahrgang. Redigiert von Dr. E. Walder. Zürich, Tschopp, 1914

11½ × 8½ : pp. iv, 237 : ill.

This volume contains among other articles the following :—

- E. Schiess, Ueberschreitung d. Grünhörner.
- X. Wetzstein, Ueber die Hohen Tauern.
- R. Richter, Wettersteingebirge : Alpspitze, Zugspitze, Dreitorspitze.
- K. Bühler, Eine Besteigung d. Zwölferkofels.
- E. Berchtold, Besteigung des Frümfels über die Südwand.
- Besuch der Clubhütten des S.A.C. im Jahre 1913.

It appears that in 1912 there were 74 huts visited by 30,000 persons : and in 1913, 80 huts visited by 34,000 persons. Only 20 per cent. of those persons were Swiss.

— **Reductions de taxes et Prescriptions pour la Carte de Membre 1915.**

4 × 2½ : pp. 16.

New Books, etc.

Alden, Wm. G. *Glaciers of Glacier National Park.* U.S. Depart. Interior.

9½ × 6 : pp. 48 : ill.

Washington 1914

Balch, Edwin Swift. *Mount McKinley and Mountain Climbers' Proofs.*

10½ × 6½ : pp. 142.

Philadelphia, Campion, 1914

The author prints side by side quotations from the accounts of ascents by Cook, Lloyd, Browne, and Stuck. He argues from their critical comparison that 'the final verdict will surely be that Cook made the first ascent of Mount McKinley; Lloyd the second ascent of the South Peak and the first ascent of the North Peak; Browne an almost complete ascent of the highest summit; and Stuck the third ascent of the S. Peak.'

Campbell, Marcus R. *Origin of the scenic features of the Glacier National Park.* U.S. Depart. Interior. Washington 1914

9½ × 6 : pp. 42 : ill.

- Dellenbaugh, Fred. S.** Frémont and '49. The Story of a Remarkable Career and its Relation to the Exploration and Development of our Western Territory, especially of California.
New York and London, Putnam, 1914. 18/- nett
9 × 6 : pp. xxiii, 547 : maps, plates.
- A full story of a famous explorer of the Rockies of the United States.
- Douglas, James Archibald.** Geological sections through the Andes of Peru and Bolivia. In Quart. Journ. Geol. Soc. London, vol. 70, no. 277.
8½ × 5½ : pp. 50 : plates. April 25, 1914
- Letonneller, Gaston.** Chamonix, sa vallée et ses glaciers au xviiiè siècle.
In Rev. de Savoie, Paris, t. 1, no. 2. 29 février 1912
10 × 6½ : pp. 117-124.
- Morton-Marshall, Capt. F. W.** Our trip to the Kolahoi Glacier. In Wide World Mag. London, vol. 34, No. 4. October 1914
9½ × 7 : pp. 46-56 : ill.
- Mummery, A. F.** My Climbs in the Alps and Caucasus. With an introduction by Mrs. Mummery and an appreciation by J. A. Hobson.
6 × 4 : pp. 379, portrait. London, etc., Nelson [1914] 6/-
- Rey, Guido.** Peaks and precipices. Scrambles in the Dolomites and Savoy. Translated by J. E. C. Eaton. London, Unwin, 1914
10½ × 7 : pp. 238 : plates.
- Staal, J. J.** Geen Sneeuwbergen op Nieuw-Guinea! In Tijds. k. nederl. aardrijksk. Gen. 2 ser. d. 31, no. 6. 15 November 1914
9½ × 6½ : pp. 774-777.
- Stuck, Archdeacon Hudson.** The ascent of Denali (Mount McKinley). A narrative of the first complete ascent of the highest peak in North America.
8 × 5½ : pp. xix, 188 : map, plates. London, Bickers, 1914
— Ten thousand miles with a dog sled. A narrative of winter travel in interior Alaska. London, Laurie (1914). 16/- nett
½ × 6 : pp. xix, 420 : map, plates, some col.
- Trevena, John.** Adventures among wild flowers.
7½ × 5 : pp. vii, 304 : plates. London, Arnold, 1914. 7/6 nett
- Turner, S.** Aorangi. A brief history of the climbs of Mount Cook. In Otago Witness Christmas Annual. 1914
19 × 13 : pp. 6 : ill.
- Young, Geoffrey Winthrop.** Freedom. Poems. London, Smith, Elder, 1914
8½ × 5½ : pp. viii, 148. 5/-

Older works.

- Allom, T.** Views in the Tyrol. 16 of the 20 parts in which it was published.
- Boeck, Kurt.** Durch Indien ins verschlossene Land Nepal.
9½ × 6½ : pp. xvi, 319 : plates. Leipzig, Hirt, 1903
- Bossoli.** Panorama del Monte Generoso. Milano, Tensi, n.d.
112 × 11 : outline.
- Reprinted from Boll.C.A.I. Milano, Tensi, n.d.
102 × 8½ : uncol.
- Burlingham, Frederick.** Among the red needles, Chamonix. In Badminton Mag. London, vol. 35, No. 208. November 1912
9½ × 7 : pp. 551-561 : ill.
- Campbell, Alexander.** A journey from Edinburgh through parts of North Britain : containing remarks on Scottish landscape ; . . . Embellished with forty-four engravings, from drawings made on the spot, of the lake, river, and mountain scenery of Scotland. London, Longmans, 1802
10½ × 8½ : pp. xxiv, 408 : viii, 396 : aquatint plates.
- Chamonix.** Souvenir de Chamonix. 10 photographs. n.d.
4½ × 6½
- Dill, J. R.** Panorama de l'Aeggischhorn. Berne, Dill, n.d.
45 × 8½ : col.
- Panorama des Alpes pris sur le Gornergrat près Zermatt.
84 × 9½ : col. Berne, Dalp, n.d.

- Dill, J. R.** Panorama d'une partie des Alpes bernoises pris sur l'Aeggischhorn dans le Canton du Valais. Dessiné d'après nature et lithographié par J. R. Dill. Berne, Dalp, n.d.
50 × 11 : col.
- Dumas.** Swiss travel being chapters from Dumas' 'Impressions de Voyage.' Edited by C. H. Parry. New Edition. London, Longmans, 1895
6½ × 4½ : pp. viii, 254.
- Fay, Charles E.** Alpine Climbing in America. In *Munsey's Mag.* New York, vol. 24, No. 6. March 1901
9½ × 6½ : pp. 810-822 : ill.
- Gastaldi, B.** Panorama delle Alpi viste dall'Osservatorio astronomico di Torino. C.A.I. Disegno del Sig. A. Gilli. Torino, Loescher, n.d.
9 × 6 : pp. 5. Pan. 144 × 9 : reprinted from *Boll. C.A.I.* No. 16.
- Helm, Albert.** Panorama von der grossen Mythe. Schaffhausen, Weidmann, 1867
7½ × 5 : pp. 8 : Pan. 76 × 7½, uncol.
- Mendelssohn-Bartholdy, Felix.** Reisebriefe aus den Jahren 1830 bis 1832. 2. unveränderte Aufl. Leipzig, Mendelssohn, 1862
8 × 5½ : pp. iv, 340.
- Millin, A. L.** Voyage en Savoie, en Piémont. Paris, Wassermann, 1816
2 vols., 7½ × 4½ : pp. vii, 376 : 415.
- Schupple, Ad.** Die schönsten Alpen-Blumen. 12 chromolith. Tafeln nach der Natur gemalt von Ad. Schupple. Einsiedeln, Benziger, n.d.
10½ × 7 : col. plates.
- Walls, C. S.** Sierre and Montana. Zurich, Orell Füssli, n.d.
7½ × 4½ : pp. 63 : ill.
- Woodward, Marcus.** Wild, water, and rock gardens. In *Pearson's Mag.* London, vol. 25, No. 148. April 1908
9½ × 6½ : pp. 361-371 : ill.

NEW EXPEDITIONS IN 1914 AND 1904.

Mont Blanc Group

MONT BLANC DU TACUL (4249 m.=13,941 ft.) BY S.E. ARÊTE.—August 24, 1914. Barone Luigi de Riseis, with Henri and Adolphe Rey.—From the Rifugio Torino cross the Col des Flambeaux and bear E. up the branch of the Géant Glacier contained between the S.E. ridges of the Mt. Maudit and the M. B. du Tacul to the foot of the great snow couloir which, descending nearly from the summit, seams the S. face of the latter peak. (Cf. Kurz, 1914 edition, p. 225, and more particularly Ferrari, 'Nella Catena del Monte Bianco,' 187 seq.)

Then bear to the right by loose and easy rocks and reach the little arête which starts from the N. Aiguille du Diable. Follow this for about half an hour, then, after crossing a small couloir (falling stones), climb the rocks on its left side until you reach a narrow ledge at the foot of the N. Aig. du Diable (cairn). Follow the left side of the couloir for a few minutes more, then bear to the right in order to ascend its centre in a parallel direction. Climb the steep and difficult rocks which form the head of the couloir by standing on each other's shoulders, and reach the main S.E. arête of the M. B. du Tacul on the N. Col du Diable (about 7 hrs. from the Col du Géant).

Climb two of the gendarmes on the ridge and turn the third on the eastern face. Regain the rocky arête and follow it until it becomes a narrow snowy crest leading to the foot of the final pyramid, whence loose and difficult rocks enable one to gain the southern and subsequently the northern summit (11½ hrs.) from the Col.

TIME.

Started from Col du Géant	4.30 A.M.
Reached Great Couloir	6.0 "
" ledge (cairn)	9.30 "
Started from cairn	9.50 "
Reached S.E. arête	12.0 NOON
Halt until	12.50 P.M.
Reached S. Peak	3.30 "
" N. "	4.0 "
" Col du Midi (descent)	5.10 "
" Col du Géant	7.30 "
From Col du Géant to summit 11½ hrs., including halts.	

[The great S. couloir of the M. B. du Tacul is shown in the illustration, 'Ferrari,' p. 195. The main S.E. arête, on which several previous attempts had failed, is shown in 'Ferrari,' between 202 and 203, 'Panorama N.E. from the summit of M. Blanc,' the arête having been gained from this side on the now successful expedition. Its other side is shewn in 'Ferrari,' p. 193 and 194. Cf. also an interesting note in 'Mont Blanc Führer,' par. 205, particularly as to the Col and Aig. du Diable.]

[It may be as well to record here that the second ascent of the great S. face of the M. B. du Tacul mentioned in 'Ferrari' 249 was by no means a repetition of the first (see trace of route in 'Ferrari' 210), which followed mainly the right or W. bank of the great couloir and finally emerged on the S.W. arête some distance from the summit. The second party (August 17, 1904; J. P. Farrar with Daniel Maquignaz and Ernest Simond), in view of the obvious danger of stones in the couloir, bore from its foot at first away to the right, and then N.W. under the rocks of the flank of the main S.E. arête, until in ¾ hour from the foot of the couloir, by a very difficult iced chimney, they gained a short arête (30 minutes) high up on the E. bank of the great couloir, when they took to the rocks on the right. Following this bank, rocks, and some snow-slopes, in perfect safety, the great couloir was only entered at its very narrow apex, where about 30 ft. of almost vertical snow led to the main arête, immediately to the left of the lower summit, which was gained in just under 4 hours from the foot of the couloir (including 12 minutes halts). The higher summit was easily reached in 9 minutes more.

The general line of ascent is at a converging angle to the main S.E. arête.

The ascent is quite an interesting one, and is an alternative route up M. Blanc for those who already know the ordinary Midi route, which crosses the flanks of the M. Blanc du Tacul and M. Maudit at some way below their summits.]

LA TOUR RONDE (3792 m. = 12,441 ft.). DESCENT BY THE S. FACE. Marchesina Emanuela Spinola, Barone Luigi de Riseis and E. G. Oliver, with Henri and Adolphe Rey and a porter.—August 19, 1914.—We left the Rifugio Torino at 7 A.M. and reached the top of the Tour Ronde by the Col des Flambeaux and S.E. arête at 10.30. We found very bad snow and frequent avalanches in the steep couloir by which one gains the arête, and had to keep on and close to the rocks on the true left of the couloir. We left the summit at 11.30, keeping for a few minutes along the west arête towards the Col de la Tour Ronde. We then descended the S. face, at first by a steep rib of rocks alternating with snow, for about an hour. On reaching the bottom of the rocks we descended directly the steep snow-face to the Brenva Glacier (rather over half an hour from the bottom of the rocks).

The snow, which had been exceedingly bad on the other side, was here in excellent condition. In a dry season the face would probably be all ice, and a descent by this route impracticable.

We reached Courmayeur by the Brenva Glacier at 5 P.M.

VARIOUS EXPEDITIONS IN 1914.

Mont Blanc Group.

THE BRÉVENT (BY THE CHAMONIX FACE).—This climb is not uncommonly recommended at Chamonix nowadays to those who want a scramble either for an off-day or when the weather has made the mountains in the Mont Blanc range impossible. The route lies up a gully for a good three-quarters of an hour; a traverse to the left is then made and a chimney followed to the top. The rock is everywhere rotten, and the danger from falling stones considerable. In addition, in more than one place several large boulders have become very loose in the gully above mentioned. Joseph Ravelin, who made the first ascent by this route in 1906, and with whom I did it this season, told me that the route formerly lay over the boulders, which were perfectly safe. Now, however, it is necessary to take the greatest care not to touch them, owing to their dangerously loose condition. On the way down by the ordinary path it is easy to turn aside for a few steps and obtain a view of the top of the gully (which is not climbed but left where

the traverse begins). In the upper part it is nearly vertical and full of large stones, ready to fall at any minute. Since the route lies under these stones for at least three-quarters of an hour, it is evident that for this reason alone the climb is one to be avoided, and altogether it is most certainly not to be recommended to anyone looking for a pleasant day's scramble in the neighbourhood of Chamonix.

A. M. CARR-SAUNDERS.

[The first ascent of this face was made in 1906 by the late M. Beaujard, led by Joseph Ravel. It has since been many times repeated. A detailed account of the expedition by M. Cl. Joublot, together with a marked sketch of the route, is to be found in 'La Revue Alpine,' 1909, 357-362.]

ALPINE NOTES.

'BALL'S ALPINE GUIDE.' VOL. I. 'THE WESTERN ALPS.'—Copies of the new edition (1898) of this work, price 12s. net, can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART I.—A new edition (1907) of this portion of 'The Alpine Guide,' by the late John Ball, F.R.S., President of the Alpine Club, reconstructed and revised on behalf of the Alpine Club under the general editorship of A. V. Valentine-Richards, Fellow of Christ's College, Cambridge, is now ready, and can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C. It includes those portions of Switzerland to the N. of the Rhône and Rhine valleys. Price 6s. 6d.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART II.—A new edition (1911) of this portion of 'The Alpine Guide,' by the late John Ball, F.R.S., President of the Alpine Club, reconstructed and revised on behalf of the Alpine Club under the general editorship of the Rev. George Broke, is now ready, and can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C. It includes 'those Alpine portions of Switzerland, Italy, and Austria, which lie S. and E. of the Rhône and Rhine, S. of the Arlberg, and W. of the Adige.' Price 7s. 6d.

CORRIGENDA.—Vol. xxviii.

P. 370, for 1462 read 1492 (the original documents relating thereto are printed in Dr. Coolidge's edition of Simler).

P. 374, read *Col dei Viso* ; *cache* for *câche*.

P. 377 note. We are informed by Dr. Coolidge that this is the

' French ' route on which Lieut. Bujon was killed in 1891—see ' *Revue Alpine*, ' 1907, pp. 294 and 296.

P. 378, read *Col de Vars* and *Barcelonnette*.

P. 380, read *Col de Vallonpierre*.

P. 382, read *Col de Chalance* (crossed by Dr. Coolidge in 1887), who states that its N. side is also quite easy, and that the couloir on the *Col de la Muande*, crossed by him in 1880, is also quite harmless.

RETIREMENT OF THE REV. WILLIAM SPOTSWOOD GREEN, C.B.—Mr. Green, who is well known to all mountaineers as the explorer of the New Zealand Alps and of the Selkirks, and by his books ' *The High Alps of New Zealand* ' and ' *Among the Selkirk Glaciers*, ' has now retired from the Chief Inspectorship of Irish Fisheries. He was lately entertained at breakfast by the President and Council of the Royal Zoological Society of Ireland, and we cannot do better than reproduce the following remarks of one of his colleagues, Mr. T. P. Gill, secretary of the Department of Agriculture for Ireland.

Mr. T. P. Gill, in the course of his letter, wrote :

' You are certainly entertaining a very eminent and a very remarkable Irishman. His friends of the Royal Zoological Society know, as all his friends do, the fine and lovable qualities of his character. They know the daring and adventurous spirit which early in his career won him a place amongst explorers and travellers. They know his eminent services to science. But perhaps they do not know, as well as I have had the opportunity of doing during nearly fifteen years of intimate collegueship, his exceptional gifts as an administrator, and his zeal in doing practical work for the benefit of Ireland. For more than twenty years in the office of Irish Fisheries, in the Congested Districts Board, and in the Department, his has been the chief mind devising and applying measures for the development of the Irish fisheries, sea and inland. And he brought to this work, at which he is a master expert, strong common-sense, an intimate knowledge of the people, and a broad human sympathy, tempered and regulated by a fine Irish sense of humour— inestimable and rare things to find in combination with the qualities of the expert. I think it is practically true to say that Mr. Green is personally acquainted with every fisherman along the Irish coast and on our rivers and lakes, and in every fisherman's cottage his name is a household word.'—Extract from the *Dublin Express*, Jan. 18, 1915.

THE CALL OF THE BLOOD.—Among the many good Zurich ' *Akademikers* ' none will dispute the palm for daring and ability on a great mountain to George and Maxwell Finch. They both took the engineering course at the Zurich Polytechnicum. When the war broke out George Finch was on the staff of the Royal College of Science, whilst Max Finch was on the engineering staff of the Furka railway. Without troubling about any commissions they

both immediately enlisted as privates in one of the service battalions of the Royal Fusiliers. George Finch is now a subaltern in the Gunners, while his brother may shortly be transferred to the Royal Engineers, where his special experience would of course be valuable. They both hail from Australia, which has furnished so many good soldiers for the guard of the Empire.

THE GUIDE KONRAD KAIN.—It will be remembered that Kain made a journey to New Zealand in 1914. The record of the ascents made is given in 'A.J.' xxviii. 345-6. He has now been appointed, by the New Zealand Department of the Interior, one of the official guides for the Mount Cook district. He is certain to find many willing pupils among the keen mountaineers of the Island.

CLUB HUTS.—An article in 'Alpina' of August 1 discusses in a very pertinent manner the burning question of the crowding of huts. It is pointed out that the existing huts amply suffice for some years to come for members of the S.A.C. and associated clubs, and the very obvious question is asked why the S.A.C. should continue to build new and enlarge its old huts for the benefit of 'outsiders.' The very acute remark is also made that this free use of the Club huts tends to militate against climbers joining the S.A.C., inasmuch as they enjoy almost as great privileges as members without paying the subscription. The issue before the S.A.C. is to find a means by which, while limiting the use of its huts to its own members and those of reciprocating clubs, it shall be made possible for young climbers of slender means to join the Club.

It has for some time been increasingly obvious that the overcrowding of the huts has made their use to the mountaineering members of the S.A.C. and affiliated clubs nothing less than a purgatory.

Some interesting figures of the number of visitors in 1913 are given, including the following huts :

	Total Number of Visitors.	Members of the S.A.C.
Bétemps	813	149
Schönbühl	377	83
Bertol	656	114
Chanrion	542	176
Orny	695	63
Britannia	740	287
Blümlisalp	1689	121
Mutthorn	1319	178
Concordia	556	161
Finsteraarhorn	260	98
Strahlegg	279	61
Gleckstein	309	77
Clariden	1089	166
Tschierva	1902	72

The percentage of members of the S.A.C. using the huts, compared with the total number of visitors, is for the huts in the different districts as follows :

Valais	22 per cent.
Bernese and Vaud	19 ”
Schwyz and Uri	23 ”
Grisons	14 ”
Tessin	49 ”

Any alteration in their old policy 'of the open door' which the Committee of the S.A.C. may decide to make has obviously the most ample support in these figures.

THE MATTERHORN HUTS.—The Hörnli hut is to be enlarged by the addition of a top floor to serve for sleeping accommodation. The obstinate resistance of the commune of Zermatt is the reason for the long delay in carrying out this elementary improvement.

Little progress could be made with the building of the Solvay hut owing to the enormous masses of snow.

A NEW GUIDE TO THE PENNINE ALPS.—The S.A.C. has determined to bring out the much needed new Guide to the Pennines. It is understood that it has been able to come to terms with the author of the 'Climbers' Guide' to use the very valuable notes which he has accumulated, so that a thoroughly reliable guide-book may be expected. It will be in German.

JAHRBUCH DES S.A.C.—It has been decided that owing to the War the next volume shall be published in 1916, thus dropping one year as was also the case in the Franco-Prussian War of 1870–1.

THE BOUQUETIN IN THE SWISS ALPS.—A further attempt is to be made to acclimatize the bouquetin in the Swiss Alps. The small colony on the Graue Hörner is reported to be doing well, and four specimens have now been put in the Piz d'Aela reserve between the Albula Valley and Oberhalbstein.

THE GROSSGLOCKNER.—Reference was made in 'A.J.' xxviii. 334–5 to a proposed sale of this mountain, the German buyer of which had intimated his intention of closing it to travellers. It is now stated that the German buyer has allowed the time fixed for completion to pass so that the sale has fallen through, for which no one will be sorry.

DEATH OF PIERRE GASPARD.—The doyen of Dauphiné guides, the proud conqueror of the Meije, has gone to his rest. He died at his home at St. Christophe on January 15. He was born on March 29, 1834.

An obituary notice of this great guide will appear in the May number of the JOURNAL.

DEATH OF JOSEPH CROUX.—Many of our readers will learn, with much regret, the death of this well-known Courmayeur guide, at the comparatively early age of about fifty-seven. It is hoped to publish details of his mountaineering career in the next number.

DEATH OF A VETERAN SWISS SURVEYOR.—The death on January 4 at Bern is announced of Herr Jacky Tayler at the age of eighty-two years. For no less than the last fifty-seven years he had been intimately associated with the Federal Topographical Bureau. He was the last survivor of the cartographers who worked under General Dufour, and was in active employment at the Bureau almost to the end. During the course of his long career Herr Jacky Tayler made many important ascents, but as these were practically all accomplished when surveying he has published little or nothing concerning them. Most of these ascents were in the Bernina, Albula, and Adula ranges. An interesting letter from him dealing with a trip in Vals Bregaglia and Codera [1882] will be found in the S.A.C. Jahrbuch for 1910. His death will be widely regretted.

NOTES ON THE CAUCASUS.

THE expeditions carried out by MM. Egger and Miescher referred to in 'A.J.' xxviii. p. 410 were as follows :

Kurmütschi (4058 m.)—Andurtschi (3914 m.).

Dschan-tugan-Tau (3899 m.).

Baschkara-Tau (4129 m.)—Gadül-Tau (4120 m.) and the snow summit (3900 m.) S. of Gadül.

Elbruz (on ski).

Tschegegem-Basch (4501 m.).

Tiu-Tiu-Basch (4413 m.).

Unnamed points 4369 m. and 4365 m. S. and N. of Freshfield's Pass.

Koja-ugu-ausch-tschaft-Baschi (3877 m.).—'Alpina,' 1914, p. 210.

HIMALAYAN NOTES.

DR. F. DE FILIPPI'S ASIATIC EXPEDITION.—The fourth Report of the work has now been received by the Royal Geographical Society, and by the courtesy of Mr. D. W. Freshfield, its President, we are permitted to reproduce an outline by Dr. de Filippi himself of the work of the expedition :—

The expedition was able to complete the whole of its programme in sixteen months and a half.

In the domain of geophysics, the gravimetrical survey (made by the Survey of India) in the plains of Hindustan has been joined by that of Russian Turkestan (made by the Military Geodetic Institute) by means of a chain of stations across the mountainous regions between Northern India and Central Asia, and through Chinese Turkestan. In addition the complete system has been connected with the European net through a fundamental station, the one of Genoa.

Fourteen stations were made, and in spite of the difficulties met with, on account of the exceptional conditions under which we had to make our observations, they were carried out by the most precise scientific methods. Eight pendulums were always observed. The gravimetric apparatus was always used without a support, and was generally placed on a large rock embedded in the ground, and with this method we obtained always very small variations in the value of the flexion. Where buildings were lacking, a large tent specially constructed was used, in which temperature variations could be maintained within the necessary limits. The geographical co-ordinates of each station were rigorously determined, and topographical data of neighbourhood were collected, with addition of photographic views and panoramas. The expedition was provided with chronometers and astronomical instruments.

On account of the peculiar features of the regions crossed by the expedition, the analysis of the results should lead to interesting conclusions on the influence that mountain masses, altitude, &c., exercise on the value of gravity. The stations were made at heights varying from 5000 to 17,000 feet above sea-level.

At all stations observations were also made to determine magnetic inclination, declination, and force; and at Skardu, taking advantage of the length of our sojourn, the daily magnetic variation was studied.

Wherever the expedition stopped to make geophysical observations, regular meteorological data were collected and pilot-balloons sent off, and, weather permitting, observations of solar radiation were made by means of various pyrhelimeters. Particularly remarkable in this respect is the station of Skardu, which was open during four months of the winter 1913—14, and the one on the Depsang plateau at an altitude 17,500 feet, where uninterrupted observations were made for two and a half months.

In collaboration with us, pilot-balloons were sent up from various stations of the Indian Meteorological Department at similar hours, and it is hoped that these observations may lead to some conclusions concerning the circulation of the winds, more especially in regard to the monsoon.

Without the aid of maps and illustrations it is difficult or

impossible to describe the geographical work, therefore I limit myself to a few short observations. The eastern extremity of the chain of the Karakoram mountains was, previous to this expedition, very slightly known. About 1865, a topographer of the Indian Survey, Mr. Johnson, had made surveys of the caravan routes between Ladakh and Central Asia. He had seen the front of a glacier, from which rises the Shyok, one of the principal tributaries of the Indus, and had given it the name of Remo. But he had been unable to show either its extension or the direction and the position of the valleys through which it flows. Nor was he able to ascertain the position of the watershed. The explanation of this glacier and of the neighbouring portion of the Karakoram was the work that the expedition accomplished last summer. The Remo is a glacier of unexpected size and importance. Its area is more than 300 square miles in extent and is formed by three large rivers of ice, each about 20 miles in length and 3 to 5 miles wide. The glacier has many peculiar characteristics, and its basin is, as it were, a transition between valley and plateau. This is only an instance of a more or less general phenomenon which we found prevalent in our explorations of the region. The most interesting fact, undoubtedly, is that from the Remo rises the river Shyok, a tributary of the Indus, discharging its water into the Indian Ocean, and also the Yarkand, one of the large rivers that loses itself in the sands of Central Asia.

The discovery of the source of the river Yarkand led later to a systematic exploration of all its upper basin. This work was much hampered by persistent bad weather. Nevertheless, thanks to the sustained efforts of all, it was possible to triangulate and survey about 5000 square miles of country.

Particularly interesting was the determination of the differences of longitude by means of time signals sent by wireless telegraphy from the wireless station at Lahore, and received simultaneously at the headquarters of the Trigonometrical Survey of India at Dehra Dun, and by us at our various stations. Before and after the transmission local time was determined by star observation. Thus, the difference of longitude could be calculated very exactly, and so it will be possible to show—with the help of the latitudes—the deviation of the plumb-line at all our stations situated in the valley of the Indus, and at the Depsang station. Also exact co-ordinates of the Karakoram and Central Asia stations have been obtained, and this should be of the greatest use to correct the old maps, and for all future topographical work in the region.

The vast mountainous zone situated between Western India and Central Asia did not interfere with the transmission of signals, which were always received quite clearly, even in the distant stations of Yarkand and Kashgar.

I have still to mention the geological researches. These covered a much vaster area than that included in the itinerary of the expedition—viz. a large portion of Balistan and of Ladakh, some of the

high plateaux of Western Tibet, and the eastern extremity of the Karakoram. A large quantity of fossils was collected, which will make it possible to assign a date to the formations crossed by us; the extension and the limit of the past periods of glacial age were also especially studied. It is hoped that with the material collected it will be possible to form some sort of a rational classification of this complicated system of mountains based on their geological composition.

Prof. Dainelli, in his numerous geological excursions, also collected abundant material for the study of the anthropo-geography of Balistan and of Ladakh. Up to the present time this has not been systematically studied, and so many contradictory assertions regarding the races that inhabit these regions have been circulated

In addition, the expedition has brought back abundant illustrative matter referring to all the fields of its activity.

DIARY OF A TRIP IN BARA BANGHAL, LAHOUL, ZASKAR IN 1914

July 5.—Left Dharmsala; arrived Palampur.

July 6.—Marched from Palampur to Beijnath.

July 7.—In morning, marched to Bir; in afternoon crossed Salethar Pass, 9500 ft.; arrived at Gundla after dark, in rain.

July 8.—Marched to Piakch, in rain.

July 9.—Reached Paniartu bivouac, about 12,000 ft.; some rain on way.

July 10.—Crossed Thamser Pass (15,000 ft.); climbed small, easy peak of 16,000 ft. whilst waiting for coolies to arrive; reached Bara Banghal village same evening. Perfect day.

July 11.—Rest, and obtained fresh coolies to take me into Lahoul. All declared the Bara Banghal or Sha Pass to be impossible and never crossed, but said the Lahmi Pass was close to it and quite easy, and one of my twenty coolies said he knew the way.

July 12.—To 'Drizzle Camp'—a very wet day's march.

July 13.—To camp on moraine of E. Lahmi Glacier, about 13,000 ft.; poor weather, grand scenery, amidst 18–20,000 ft. peaks.

July 14.—Our 'guide' coolie took us up 'Watershed Pass' (about 16,800 ft.), which, instead of leading N., led W. and looked down into W. Lahmi Glacier.

Climbed peak, close by, looking for real pass, and returned defeated and re-pitched camp.

July 15.—With Rifleman Jitram Gurung, crossed 'Watershed Pass,' and reached fine climbers' pass at head of W. Lahmi Glacier, but no good for coolies; returned in evening to find guide and other orderlies had discovered the real pass and moved camp up glacier; very tired after 12 hours' day without halts. Perfect day.

July 16.—Crossed Lahmi Pass, about 17,500 ft., up steep shale and rock; coolies on bare feet marvellous where I had to use hands. Little snow plateau on top, and very dangerous and steep descent in

rotten rock. Went ahead to cut down a little ice-slope to the bergschrund leading to glacier below, and had narrow escape from stones dislodged from above by coolies. Down a long snow nullah till dark and camped in it. Perfect day.

July 17.—After $\frac{1}{2}$ hr. got out of nullah and found ourselves near village Muling in Lahoul. Our pass does not seem to have been used for 14 years, when our guide crossed as a small boy on his father's back. Reached Kyelang same afternoon. Perfect day.

July 18 and 19.—Rest, refit, and up hill behind to photograph.

July 20.—Marched to Jispa; heavy thunderstorm and weather broke badly.

July 21.—Marched to Topo Tokpo nullah; here turned off Baralacha route and went up Palamao nullah; camped in rain.

July 22.—Moved on up nullah to near side nullah running up to Shingo Là Pass. Wet day.

July 23.—Explored up main nullah; weather poor, so decided to cross Shingo Là, hoping to get better weather further N. Sent for coolies.

July 24.—Up to a bivouac about 15,000 ft.

July 25.—Climbed 'Golind Peak,' about 17,800 ft. Morning poor, did not start till 5.15 A.M., easy shale scramble; traversed; difficult descent through cornice and down a steep snow-slope to a glacier in Shingo Là nullah, with Riflemen Jaising Gurung and Jitram Gurung.

July 26.—Struck camp and marched up Shingo Là nullah in rain; left two orderlies at base camp.

July 27.—Crossed Shingo Là (16,722 ft.) in driving snowstorm, nearly lost way and got off track amongst crevasses—ordinarily an easy snow-pass crossed by ponies and yaks. Camped on N. side in Zaskar at about 15,300 ft. on first grass; delightful situation amongst 19–20,000 ft. peaks.

July 28.—Up Camp View Peak, with Rifleman Jaising: easy shale and huge, corniced snow-cap, about 18,500 ft. 10 A.M. to 3 P.M. cloudy.

July 29.—'Snowstorm Peak,' about 18,800 ft., with Rifleman Jaising. A rather strenuous climb in blinding storm most of way, but had route firmly in mind luckily; one very steep snow-wall of 500 ft. impossible but for crampons. 7 A.M. to 2.30 P.M., with only few minutes' halt on account of the cold.

July 30.—Scrambled up the 'Bivouac Arête' alone for photography, about 17,500 ft. 11 A.M. to 2.30 P.M. Fair day; weather improving.

July 31.—Perfect day. Tried 'Shingo Là Dent Blanche,' via the 'Buttress' and 'Buttress Aiguille'—difficult climb, with Rifleman Rabia Thapa; rock and corniced arête. Stopped at about 18,500 ft. by impossible gendarme. Mountain coated in new snow from recent bad weather. Descended to N. side of peak to a glacier and had great difficulty getting off it. 4.50 A.M. to 4.30 P.M.

August 1.—The 'Silver Cone,' about 19,500 ft., with Rifleman Jaising, via Snowstorm Col (at top of same steep snow-slope near Snowstorm Peak). Last 500 ft. very fatiguing, along corniced snow arête in deep snow, though slope gentle. A perfect day. 4.20 A.M. to 2.30 P.M.

Aug. 2.—Climbed 'Camp Nightcap' with Rifleman Rabia. Up steep shale, then rocks, iced couloir, and more rocks; dislodged a stone, which damaged one finger rather badly, but had to cut up final snow-slope and through projecting cornice (the 'Nightcap'). Began to snow before reached top; descended by snow—one pitch of 300 ft. very steep—to Shingo Là; back to camp in driving storm. 8 A.M. to 3 P.M.

Aug. 3.—Snowed all day and bitterly cold—felt it rather, as had left bed and all luxuries, such as chair and table, at base camp.

Aug. 4.—Explored glacier W. of 'Nightcap' with Riflemen Jitram and Ajabsing. 11 A.M.—3 P.M. Back in snowstorm; sent off to Kingdiak, first village in Zaskar, for coolies.

Aug. 5.—Snowed all day.

Aug. 6.—Cleared in morning—perfect day—snow thawing, avalanches crashing all round. Coolies came up.

Aug. 7.—Back over Shingo Là in deep snow—gave coolies bad eyes. Reached base camp at dusk.

Aug. 8.—Up to bivouac on Pyramid Peak, but returned before night in bad weather.

Aug. 9.—Rainy day.

Aug. 10.—Cleared afternoon; hastened towards Pyramid Peak; bivouac in drizzle at about 14,500 ft. Rained in night.

Aug. 11.—Started 5 A.M. in drizzle up Aiguille Noire, about 16,500 ft. up arête; good going to Aiguille Blanche, about 18,000 ft. or more; very difficult descent and traverse of dangerous snow-covered slabs. Sent back Rifleman Ajabsing and Jitram, and went on with Jaising only. Reached a col and got up to the Pyramid Shoulder, about 18,500 ft. 2 P.M., very tiring; first gendarme on real ridge showed us unwisdom of going on; turned back about 18,600 ft. and 2.30 P.M.; difficult descent, reached rucksack 5.40, on Aiguille Noire; 10 minutes' rest, first since 7 A.M. Began to snow, and were benighted at 7 P.M.—*first time we had left lanterns behind.* Eventually reach camp at 11 P.M.

Aug. 12.—Left at 10 A.M. and marched down to Jispa—about 15–18 miles—by 6 P.M.

Aug. 13.—Reached Kyelang, meaning to go off towards W., but found a telegram recalling me to Headquarters; heard first war news.

Aug. 14.—Crossed Rang-ka-la Pass (14,800 ft.) to Gundla, 12 miles.

Aug. 15.—Double marched to Koksar.

Aug. 16.—Double marched over Rahtang Pass, 13,400 ft., to Manali.

Aug. 17.—To Naggar; no coolies to be had, so could not get on.

Aug. 18.—Double marched to Karaun.

Aug. 19.—Three marches, with aid of pony, to Dhelu, over Babboo Pass, 10,000 ft. ; men and coolies and bedding did not come till late, or early next day.

Aug. 20.—Three marches, on three ponies, to Dharmsala. (From Jispa to Dharmsala about 180 miles.)

H. D. MINCHINTON,
Lt. 1st (K.G.O.) Goorkha Rifles.

REVIEWS AND NOTICES.

Freedom. Poems by Geoffrey Winthrop Young, Author of 'Wind and Hill.'
London : Smith, Elder & Co. 1914. 5s. net.

WHEN Mr. Young's previous volume of poems* was reviewed in this Journal, we were told that they who love the mountains truly would find in the author a certain friend. Mr. Young's new volume will assuredly increase the friendship. The very name of 'Freedom' awakens an answering chord in every climber's heart.

For his inspiration Mr. Young goes to nature—to the sea, and the field, and the mountain. He is no mere follower in the footsteps of other singers : convention he regards not. His metres are largely his own, and it is not always on the first perusal that a reader grasps the whole of his meaning. In fact, he sometimes seems to perplex us purposely. But this we forgive him for his freshness, his frankness, his obvious sincerity.

But we are here most concerned with mountains, and for us

There is great easing of the heart,
and cumulance of comfort on high hills.

Here is the first stanza of the poem entitled 'The Lonely Peak' :

L'Isolée is a very lovely peak,
looked at from every side,
veiled in sheer darkness for a summer week,
white-veined at winter-tide ;
aloof on sombre walls, in wind and sleep,
she makes her lonely stand ;
the menace of hoarse glaciers from the deep
dies past on either hand.

Here are two stanzas from 'Mountain Speed' :

O the winter joy of the flying of feet over snow-clad hill,
the rush and the snow-leap vying with the flight of our will ;
the hiss of our ski, and the sighing of speed that frost cannot still !

Like the pouring of glacier on ocean, in fiords of the sea,
like the flood of a people's devotion, in arms to be free,
is our soaring of passionate motion o'er mountains, the swirl of our ski !

* *Wind and Hill.* Poems by Geoffrey Winthrop Young. See 'A.J.' vol. xxiv. pp. 700-1.

There are many other poems from which we should like to quote did not want of space forbid, but we feel that we cannot omit part of the poem called 'The Avalanche':

with a sob
soft as of rending silk, and rather felt
than heard, the coronet of flaming snow
died from the sky; drifting and frothed with light,
spinning in silver ripples like thin mist,
rising in billows on the resisting wind,
alive with malice and an evil mirth,
swift as its hate it swept upon our dark;
furtive in the first distance, with a hiss
shrill and insistent, filling all the hills
with whispered warnings; soon with gathering speed
purring in vibrant passion, till the rocks
pulsed with the murmur, and a hollow roar
rolling in hoarse repulse from crag to crag
burst in short thunder, as the avalanche
shattered upon the glacier's riven face,
and moaned to silence in the soft crushed snow.

We observe in Mr. Young's pages a not infrequent note of pessimism which we hope in his next volume will have mellowed into the same genial sympathy with man's life as Mr. Young shows for the child's life in his delightful poems on childhood. The whole tone of the book is so fresh and frank, so rich in the music of words, and so penetrated with the love of all that is most beautiful in nature, that we commend it most heartily to all who know and love the mountains.

The volume is beautifully printed, and the cover becomingly 'sober-suited,' as Freedom should be.

A Climber in New Zealand. By Malcolm Ross. London; Edwin Arnold. 1914. 15s. nett.

MR. MALCOLM ROSS was one of those fortunate individuals who formed that band of pioneers of New Zealand Alpine climbing. Fired by the Rev. W. S. Green's attempt on Mt. Cook in 1882, a party of young men without any previous experience set to work to climb Mt. Cook, and in 1894 they were successful. Mr. Ross joined them towards the end of this time, when all was virgin country. Those who are fortunate enough to possess a copy of the two volumes of the 'New Zealand Alpine Journal' which were published 1892-95 will have accounts of the earlier work, while all who have read Mannering's fascinating 'With Axe and Rope in the New Zealand Alps' will be glad of an account of the final success.

The account of the crossing of the pass at the head of the Tasman Glacier, which had been published only in the Christmas number of one of the New Zealand illustrated papers, will be welcomed as a reprint of a really first-class expedition. But let anyone, even if he is first-class on rock and ice, be warned by this and similar stories, and

not attempt a West Coast river without a West Coaster who knows how to 'tackle bush.' Zurbriggen's difficulties down the Copland are a classic example as well as a warning. Several other climbs are reprinted which are worthy of being preserved.

The book is not confined to the Mt. Cook district; one chapter deals with some scrambling in the North Island, while 'In Kīwi Land' gives a description of that beautiful semi-tropical forest where the charm never palls even if the rain seldom ceases, a district but little visited on account of its bad reputation for rain, but one which appeals to those who know it as few other parts of the world can. The last chapter gives an account of the first crossing of Mt. Cook, a climb of which strangely varying accounts have been written. This account may be relied on.

It is a little difficult, from the narrative, to be sure of the years in which some of the climbs were made, and, as this is the only place where an account in print is obtainable, dates would have been interesting. There is a misprint on p. 166; Mr. Low's accident was in 1906, not 1908, and Fyfe made the first ascent of Malte-Brun on March 7, 1894, not 1895 (p. 17).

Mountaineering and Exploration in the Selkirks: a Record of Pioneer Work among the Canadian Alps, 1908-1912. By Howard Palmer, Corresponding Member of the Geographical Society of Philadelphia, F.R.G.S. With two new Maps and 219 Illustrations. G. P. Putnam's Sons, New York and London, 1914.

MR. PALMER'S book is a notable addition to Alpine literature. One is inevitably tempted to compare it with Mr. Wheeler's well-known work, but such a course would be fair to neither. Mr. Wheeler was concerned with many other matters besides mountaineering, and gives the narrative of his own not inconsiderable performances in that line only a secondary place. With Mr. Palmer the mountaineering interest is paramount. It is true that he too has some general 'Geographical and Historical' chapters, but they are of minor importance, their only noteworthy feature being his critical account of Walter Moberley's journeys in the Northern Selkirks, as to which he is able to speak with an authority which was not possible ten years ago. On the other hand, when he claims that he has made mention of 'all the new climbs accomplished in the Southern Selkirks since 1902 with Glacier House as a starting point' he is doing himself less than justice; and we believe that somewhere, either in the text, the notes, or the appendices, he has said all that could or need be said about every known mountain of importance in both the Northern and Southern Selkirks, with the solitary exception of Mount Bonney. And in the great majority of cases the information given is that of first-hand experience. During each of the first three of his five seasons' climbing he spent some part of his time in incursions into the ranges to the S. of the Canadian Pacific Railway. After a chapter disposing of the more interesting

expeditions which can be made from Glacier House itself, he describes these incursions chronologically in Part II. of the book. Every year from 1908 to 1912 he devoted periods of varying length to the exploration of the almost untrodden regions to the N., and, in particular, to a protracted series of attacks—which finally resulted in victory—on Mount Sir Sandford. The story of Mount Sir Sandford forms Part III., and the rest of the book is occupied by some useful and instructive appendices.

Considering the remarkable advantages offered by Glacier House as a 'centre,' climbing has hardly been carried on from it with as much ardour as might have been expected. There have been numerous ascents of Mount Sir Donald, and no doubt many more unrecorded expeditions among the other peaks close at hand, but one learns with some surprise that only five parties (mostly American) have ventured far enough to accomplish the ascent of Mount Dawson, and that till Mr. Palmer appeared on the scene not one, except that of the Topographical Survey under Mr. Wheeler, has penetrated into the regions S. of Donkin Pass, since the brilliant campaign of Messrs. Topham, Huber, and Sulzer in 1890. Possibly the very fact that Glacier House does resemble a Swiss centre has militated against its popularity, and the more arduous problems of travel in the main chain of the Rockies have made a more powerful appeal to exploratory enthusiasm. But Glacier House has a special little travel-problem of its own: the only convenient access to the majority of the peaks situated too far southwards to be climbed from the hotel is from the heads of the valleys running up into the range from the W.; there are, however, at present no trails up any of these valleys, and the one available way of reaching them is by crossing a series of passes, beginning with the Asulkan, which, though of no great difficulty, involve ice-work and some climbing, and are of course quite impracticable for horses. Consequently, as the 'Climbers' Guide to the Selkirks' has frequent occasion to remark, all camp outfit must be carried on human shoulders. And a sufficiency of human shoulders was hard to find. Canadian porters were disinclined to go above the snow-line, while the Swiss guides at Glacier House would not carry heavy loads. Mr. Wheeler, with special aims and with ample resources at his disposal, had solved this difficulty by an elaborate system of supply-camps and the employment of numerous porters. But it seems to have been sufficient to deter all other visitors to Glacier House till Mr. Palmer and two like-minded companions, Mr. E. W. D. Holway and Mr. F. K. Butters, determined to surmount it by dispensing with guides and doing practically the whole of the portage themselves. In pursuance of this heroic resolution they crossed the Asulkan Pass with a camp-outfit and a week's provisions, and when the latter were exhausted went back to Glacier, after several successful climbs, for more. Knowingly or unknowingly, they were following the example of Mr. Topham, who in 1890 had been driven, more

than once, to precisely the same expedient.* On their return they proceeded to cross Donkin Pass, and at once found themselves in a veritable guideless climbers' paradise. A long series of new expeditions was begun by the first ascent of Mt. Cyprian, and the second ascent, by a new route, of Mt. Wheeler. On the descent from Cyprian they discovered and devoured the contents of a tin of corned beef abandoned in 1890 by Topham. Six years previously Mr. Wheeler and his companions had done the very same thing.

So well satisfied were the party with the reward of their energy that in 1909 the programme was repeated. On this occasion they went straight through to 'Bishop's Camp' beyond Donkin Pass and secured two new peaks, Mt. Kilpatrick and Mt. Augustine, besides finding a new way up Mt. Dawson, before their food supplies gave out. The return to Bishop's Camp was made, in spite of fairly heavy loads, in a single day, and then entirely new ground was broken by the passage of Purity Pass to the Battle Glaciers. Unfortunately, bad weather precluded any chance of trying conclusions with the fine peaks of the untouched Battle range.

In 1910 a new objective was chosen, Glacier Circle, unvisited since 1890; Mt. Topham was added to the list of new ascents, and Mt. Macoun climbed on the way back. Then Messrs. Palmer and Holway paid Bishop's Camp a last visit, which was distinguished by the fact that a packhorse carried their loads to the summit of the Asulkan Pass. Two days later their powers were taxed to the utmost to accomplish the most difficult and exciting of all their climbs in this region, the ascent of Grand Mountain. Mr. Palmer's graphic narrative of this, his last expedition in the Southern Selkirks, closes Part II., and we pass on to the story of Mt. Sir Sandford.

This magnificent peak, then unnamed, had made a great impression on Dr. Collie's party when they were struggling up the Bush valley in 1900, and had been unhesitatingly pronounced by them to be the highest peak in the Selkirk range; 'but,' they added prophetically, 'we do not altogether envy him [its first explorer] the journey to its base.' Twenty years before Mr. Palmer, Dr. Coleman had started hopefully down the Columbia on a similar quest, the search for Mt. Brown and Mt. Hooker, intending to make his way to them partly by water and partly on foot. This was not the right way to reach Mt. Brown and Mt. Hooker, but it turned out to be the right way, if not the only way, of reaching Mt. Sir Sandford, and the packhorse, which cuts so prominent a figure in all the stories of travel in the Rockies, does not make an appearance in Mr. Palmer's narrative.

* It may be remarked in passing that Mr. Topham's achievements were considerably greater than the cursory description in the *Alpine Journal* (xv. 418-21) would lead one to suppose. A much more adequate idea of the latter part of his trip may be obtained from Mr. Huber's narrative in the 'Jahrbuch' of the S.A.C. xxvi. 280-88.

The earliest expedition in search of Mt. Sir Sandford did not start till 1906, and failed to get anywhere near its goal. Some members of the party tried again in the following year, but the venture had a painful and tragical ending. Mr. Palmer devotes a chapter to these attempts, and to an expedition by the brothers Shaw, who travelled overland from the railway, and after overcoming immense difficulties actually succeeded in reaching the southern base of the mountain not long after Mr. Palmer's first journey, but were unable to make any attempt to climb it. This was in August 1908. Mr. Palmer, who had selected the river route, started down the Columbia on July 17. The whole topography of the region was, however, still wrapped in profound obscurity; he chose the wrong branch of the Gold river, and had to content himself with a Pisgah-view of the great peak. But the right route had been discovered; in the following June, after twelve days' arduous labour, a way was forced to the northern base of Sir Sandford, and the first attempt to climb it took place on July 1. The condition of the snow, however, compelled an early retreat, and lack of provisions prevented a longer stay. In 1910, thanks to the hard work of the previous year, Sandford camp was reached in five days from Beavermouth, and the day after their arrival the party set out on their second attempt in confident expectation of a fairly easy victory. They met with a very decided repulse, and fared no better when the attack was renewed ten days later. Mt. Sir Sandford was turning out to be a tougher proposition than had been anticipated. One of the splendid peaks of the Adamant range, immediately to the north of Sir Sandford, was then ascended, evidently affording a very fine climb, and, with this success to console them, the party were again obliged to retreat by the exhaustion of their food-supply.

The campaign of 1911 was prepared for with far greater care than any of the previous ones, and lasted from early June till late July; but weather conditions were extremely unfavourable, and in the interval between the fourth (June 18) and fifth (July 12) attempts on Sir Sandford a violent storm raged uninterruptedly for three weeks. The main quest was then abandoned, and the party made a trip of the highest interest, crossing a long way westward of the main axis of the range, and opening up a very large tract of unknown country. From Mt. Goldstream, their westernmost point, a view was obtained which indicates that there are still many glaciers and snow-clad peaks to be investigated in the Northern Selkirks, though none are likely to be found rivalling those of the Sir Sandford massif in scale or character. After the return to Sandford camp another fine peak in the Adamant range was scaled, and the party then betook themselves to Glacier House, but instead of going southward finished the season with a trip up the north branch of the Illecillewaet river. Ascents of two more new peaks, Mt. Sorcerer and Mt. Holway—the latter a climb of

some difficulty—enabled them to supplement and appreciably extend the topographical information already obtained on Mt. Goldstream.

In 1912 Mr. Palmer and Mr. Holway decided to employ Swiss guides, and on June 17, accompanied by Rudolf Aemmer and Edouard Feuz, started from Beavermouth for the fifth and last time. The end came quickly. Sandford Camp was reached on June 23, and the first ascent of Mt. Sir Sandford was accomplished the very next day. But the victory was no easy one. The mountain which had foiled so many assaults offered a stubborn resistance, and almost till the last moment success was doubtful. The climb was not only difficult but dangerous, but Mr. Palmer considers that its character depends largely on the amount and condition of the snow, and that in more favourable conditions a line of ascent both easier and free from risk could be taken. On the 26th, Mt. Adamant, the highest peak of the Adamant range, falling only a little short of 11,000 ft., was climbed. Feuz compared the ascent to that of the Schreckhorn, and the story of the expedition, though following so closely on the thrilling narrative of the conquest of Sir Sandford, has in it no element of anticlimax, and forms a worthy close to Mr. Palmer's mountaineering in the Selkirks. The indefatigable Mr. Holway in 1913 ascended Mt. Beaver and Mt. Duncan, the most southerly points yet attained in the range, and found that in this direction too it is far from being exhausted.

But whatever further discoveries may be made by later explorers, these two climbers must always occupy a unique position in relation to the Selkirk range. Their work was done with a most satisfying completeness, and the book in which Mr. Palmer has told the story of it possesses the same quality. So full of matter is it, indeed, that the bald summary here given has done scant justice to its literary merits. But not only will all future visitors to the Selkirks find in Mr. Palmer an indispensable and invaluable guide: they and many other readers will be charmed with his power of crisp and energetic narrative, his knack of giving an individual character to each expedition, and his whole-hearted enjoyment of a good climb.

The illustrations are excellent, and of quite exceptional topographical interest. The idea of giving an index of them instead of the usual list was a very happy one, and greatly facilitates their use as an accompaniment to the narrative.

PROCEEDINGS OF THE ALPINE CLUB.

The ANNUAL GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, W., on Monday, December 14, 1914, at 8.30 P.M., The Rt. Hon. Lord Justice Pickford, *President*, in the Chair.

The following candidates were balloted for and elected members of the Club—namely, Capt. Lawrence Wilfred Bird and Mr. Harry MacRobert.

The PRESIDENT, in accordance with the provisions of Rule 29, declared the following gentlemen to be duly elected for 1915 :—

As *President* : The Rt. Hon. Lord Justice Pickford (re-elected).

As *Vice-Presidents* : Mr. George H. Morse (re-elected), and Mr. George Yeld in the place of Mr. E. A. Broome, whose term of office expires.

As *Honorary Secretary* : Mr. C. H. R. Wollaston (re-elected).

As *Members of Committee* : Mr. R. W. Lloyd, Dr. O. K. Williamson, Mr. J. E. C. Eaton, Mr. G. E. Gask, Mr. C. F. Meade (re-elected), and Mr. J. H. Clapham, Mr. W. T. Kirkpatrick, Mr. Claude A. Macdonald, and Mr. Harry Walker, in the places of the Rev. George Broke, Mr. C. Cannan, Mr. W. N. Ling, and Capt. E. L. Strutt, whose terms of office expire.

Dr. H. D. WAUGH proposed, and Mr. R. W. LLOYD seconded, the proposition that Messrs. E. B. Harris and F. W. Newmarch be elected Auditors, to audit the Club accounts for the current year. This proposal was carried unanimously.

A hearty vote of thanks to Mr. Richard L. Harrison for his services as Auditor for the past eight years, proposed by the President, was carried unanimously.

In declaring the election as Vice-President of Mr. George Yeld, the PRESIDENT said :—

He is an old member of the Club who has been for many years, and still is, devoted to mountaineering and the mountains, and has been Editor of the Journal for the past eighteen years. During that time he has undertaken a great deal of hard work and has given an immense amount of time to the service of the Club, and I am quite sure that we are all of the opinion that he is a very worthy successor to Mr. E. A. Broome whose services we are sorry to lose.

The PRESIDENT continued : I think it would be well if I say a few words on the circumstances of our Meeting here to-night. We meet in circumstances that have never before existed in the history of this Club and circumstances which I am sure we all hope may never again exist as long as the Club shall last. I am not going to enlarge upon them. We are now involved in such a war as the country has never experienced, and I think I am probably not wrong in saying, in such a war as the world has never seen, and in these circumstances it became necessary that we should decide what should be done in regard to the Annual Winter Dinner of the Club, and the Club arrangements generally. The Rules provide that the Winter Dinner shall be held unless the Committee see good reasons that it should not be held. We had necessarily to come to a decision some time ago, and we were unanimous in thinking that owing to the state of things then existing, and likely to continue, in this country and the world generally, it was not right that the Dinner should take place. We had nothing before us at that time to show the action likely to be taken by other Societies, but we thought that it was a matter on which we ought

to make up our own minds, and that is the conclusion to which we came. We have since learned that other dinners and functions of a similar character usually held by other Societies have been abandoned for this year. At the same time the question of the Winter Exhibition of Pictures which is usually held at this time was considered. We were informed that if we decided to hold the Exhibition we should be unable to get any pictures from foreign Contributors, and should have very great difficulty in getting them from British Artists and Contributors. We, therefore, decided for that reason, and also because the Exhibition is very closely connected with the Dinner as a part of our festivity, that it would be better to give up that Exhibition and, on the whole, that this Meeting which it was necessary to hold for the election of officers should be held only to carry out formal business. I hope that the Committee's decision will meet with the approval of the Club.

Having said these few words, I regret to say that I have now to call your attention to the deaths of two Members, which have occurred since our last Meeting.

Mr. E. B. C. Trevilian was a very old Member of the Club, having been elected as long ago as 1863. He died on March 24 last. I am afraid he was hardly known to any of us, but I think that the Club would wish me to make this brief reference to his death.

The other Member lost to us is Major J. B. Corry, D.S.O., who was killed in action a short time ago. He was elected a Member of the Club in 1908 and had a distinguished career as an Officer in the Royal Engineers. He served most of his time in India and consequently had few opportunities of visiting the European Alps. It is unnecessary for me to say more than these few words about him as you will find a Memorial notice of him in the November number of the Journal which will shortly be in your hands.

Others of our Members have been wounded and injured at the front, but I am glad to say that these are the only deaths of Members to which I have to call your attention.

However, only in the last few days, the death has occurred of one whom I ought to mention although he was not a Member of the Club.

Melchior Anderegg died at the age of eighty-six only last week. Probably those Members of the Club who have climbed with him are now very few, but his name is a name that is known to anybody who climbs or takes any interest in the mountains at all. Nothing would, I think, be gained by drawing comparisons between him and other guides of his own or later times, but I think everybody will acknowledge that, whatever his exact position may have been, he was a very great guide. He began his guiding under conditions which were entirely different from those which now prevail. In his day there was a great deal more exploration to be done in the Alps than is now possible. In those days climbing necessitated exploring the mountains, and I think that is shown very strikingly when

one looks at the list of his first ascents. Many of them are very good climbs and very difficult, but we find amongst them such mountains as the Rimpfischhorn, the Alphubel, the Blümlisalhorn, the Oberaarhorn, and the Monte della Disgrazia. The inclusion of these mountains in his list of first ascents shows that he began at the time when climbing meant, not only mere climbing, but exploration as well. I dare say many of you remember the eloquent testimony that was paid to him by the late Sir Leslie Stephen, Mr. C. E. Mathews, Mr. Horace Walker, and others at the Winter Dinner in 1893, on the occasion, as it was said, of his retirement. As a matter of fact he did not retire until some two or three years afterwards, but he thus had the opportunity of hearing from those Members of the Club with whom he had been associated their appreciation of him. Most of those who knew him best are dead. I regret that it is not possible for us to hear the tribute that any one of them would have paid to him. Looking through Cunningham and Abney's book 'The Pioneers of the Alps' I found an appreciation there by Mr. Mathews which, I think, sums up as well as anything could the opinion of those who knew him. He says:—

'The men who could equal Melchior in his best days as a pathfinder or a cragsman may be counted upon the fingers of one hand, whilst for the combination of qualities which made a guide first rate, capacity, boldness, true prudence, unvarying courtesy, and sweetness of disposition—there is a consensus of opinion among competent judges that he has no superior.'

I have received a letter from Mr. D. W. Freshfield in which he says, referring to the association of Leslie Stephen and Melchior Anderegg:—

'I never climbed with him, but sometime in the eighties he joined Leslie Stephen and Loppé and myself for ten days in winter in the Oberland. We went to the Wengern Alp, up the Faulhorn, over the Scheidegg, and up the Urbach Thal. The trip ended in a walk up to Zaun, a supper at Melchior's cottage, and a perilous descent to Brienz in the moonlight through the snowy woods. It was, I believe, Stephen's farewell to Melchior (one always thinks of him as Melchior, as one did of Dévouassoud as François). The mutual attachment of Stephen and Melchior was very deep and visible at all times.'

And he finishes up by saying:

'Stephen and Melchior had, widely as their lives were apart, in many respects, characteristics in common, which made each delight and expand in the other's company. It is a great pleasure to me to look back on these winter tramps.'

The quotation of this letter naturally leads me to speak of Mr.

Freshfield. Two days ago, on December 12, Mr. Freshfield celebrated the fiftieth year of his connection with the Club. He joined when he was very young, and he was introduced to the Alps very early in life, no doubt as a result of Mrs. Henry Freshfield's association with them. The delightful books she has written on her expeditions in the Alps are known to many of our Members. For fifty years he has been a very devoted Member of the Club. I think with the exception of the Secretaryship he has served all the offices of the Club, having been President not very many years ago. I do not know the countries he has not visited, but I believe he has visited almost as many as our other much-travelled ex-President, Viscount Bryce. In the fiftieth year of his Membership of this Club he fills the very distinguished office of President of the Royal Geographical Society, and I think it is an occasion on which the Club would wish to offer him their hearty congratulations.

At the same time I am sure the Club would not wish to omit the names of other Members who have this year completed their fiftieth year of Membership but that our united congratulations should be accorded to:—

Mr. T. Howse who was elected a Member on February 2, 1864. He has been most assiduous in his attendance at all our Meetings and the Club is his debtor for the Herbarium which he presented to it and which he has recently re-arranged, and also for his work in re-arranging the Geological collection.

Mr. R. D. Wilson who was elected on March 1, 1864. He also has been a constant attendant at our Meetings, although I am sorry that he is not with us to-night.

The following gentlemen we congratulate just as heartily, and we wish that they were able to attend our Meetings as often as the two gentlemen I have just mentioned:—

Mr. F. T. Bircham, who was elected on April 5, 1864;

Mr. W. Grylls Adams, F.R.S., who was elected on April 5, 1864;

Mr. C. Finch Foster, who was elected on June 7, 1864;

M. C. de Candolle, who was elected on July 5, 1864; and

Mr. Oscar Browning, who was elected on December 12, 1864.

Our venerable ex-President the Rt. Rev. Bishop G. F. Browne, was also elected as long ago as 1864, but as he retired in 1876 and was not re-elected until 1895, he has not yet completed his fiftieth year of Membership.

There is now only one other matter about which I have to speak. It is in regard to the Belgian Relief Fund.

It was suggested by Mr. Godfrey A. Solly at one of our Meetings of the Committee that as His Majesty the King of the Belgians was an Honorary Member of the Club, it would be a graceful act if the British Members were to send him some contribution to be applied to the relief of his distressed subjects as he thought fit, the contribution being sent as a personal offering from his fellow-members of the ALPINE CLUB. It seemed at first that there was

some doubt, owing to the numerous other claims upon Members, whether the contribution would be such as the Club would like to offer. We thought that to send some very small sum would neither be a pleasure to us nor to His Majesty and we came to the conclusion that if we could send him something like £500, it would be worthy of the Club. There was some little doubt among Members of the Committee whether this sum could be raised, but I am most happy to tell you that within forty-eight hours of the Appeal being sent out we had received over £500, and the total subscriptions received amounted to £1054 19s. 6d. This is more than the total amount originally announced because, after the Fund had been closed, we received something like £8 more, one subscription coming from Yokohama, another from Vancouver, and yet another from somewhere in the wilds of India. The fact of these subscriptions coming in from these distant places shows, I think, the interest and sympathy of the Members of the Club in the Fund and the object for which it was raised. I think I should mention that some of our American members expressed a wish to join in the gift and did so. The money was sent to His Majesty through the Belgian Minister here, and I have received a letter from the King through his private secretary which reads as follows :—

‘ MONSIEUR LE PRESIDENT,—Le Roi a été heureux d'apprendre que le CLUB ALPIN, dont Sa Majesté se félicite d'être un membre dévoué, a eu la délicate attention d'offrir un don généreux au Belgian Relief Fund.

‘ Sa Majesté remercie cordialement tous les membres de leur gracieuse souscription et leur adresse l'expression de Sa vive sympathie.

‘ Veuillez recevoir je vous prie, Monsieur le Président, l'assurance de ma haute considération,

‘ Le Secrétaire,
(signed) ‘ J. INGENBLEEK.’

I think the Club is indebted to Mr. Solly for his admirable suggestion, and I wish to thank the Members of the Committee and all the Members of the Club for their splendid response to the Appeal which has had such an admirable result. You may be interested to know that the number of subscribers was 379.

Another matter on which I must congratulate the Club is that we have secured the services of the Honorary Secretary for another year. You must all know that it is a most onerous post. When I accepted the Presidency I knew, of course, that it was a most responsible position, but I must say that I find the position is not nearly so onerous as I thought, and the only reason for this is that I receive such valuable help from the Honorary Secretary.

Sir ALEXANDER KENNEDY called attention to the fact that he had presented to the Club two wood carvings by Melchior Anderegg

portraying the late Sir Leslie Stephen and Sir Alfred Wills, and said that Melchior Anderegg was a real artist in wood carving.

The PRESIDENT drew the attention of Members to the admirable statuette by Anderegg of his cousin Johann Fischer of Zaun recently presented to the Club by Mr. Henry Wagner to whom hearty thanks were due.

Mr. JOHN J. WITHERS mentioned that there had died recently two guides whose names had not so far been mentioned—namely, Pierre Gaspard sen., and J. B. Rodier, whose chief work had been the exploration of the Dauphiné Alps.

Mr. H. SCOTT TUCKER asked the President whether any record would be kept of Members serving in His Majesty's Forces.

The PRESIDENT said in reply, that he thought it would be a desirable thing to keep such a record, but pointed out that unless Members so serving sent in a note to that effect to the Hon. Secretary there would be great difficulty in compiling such a record.



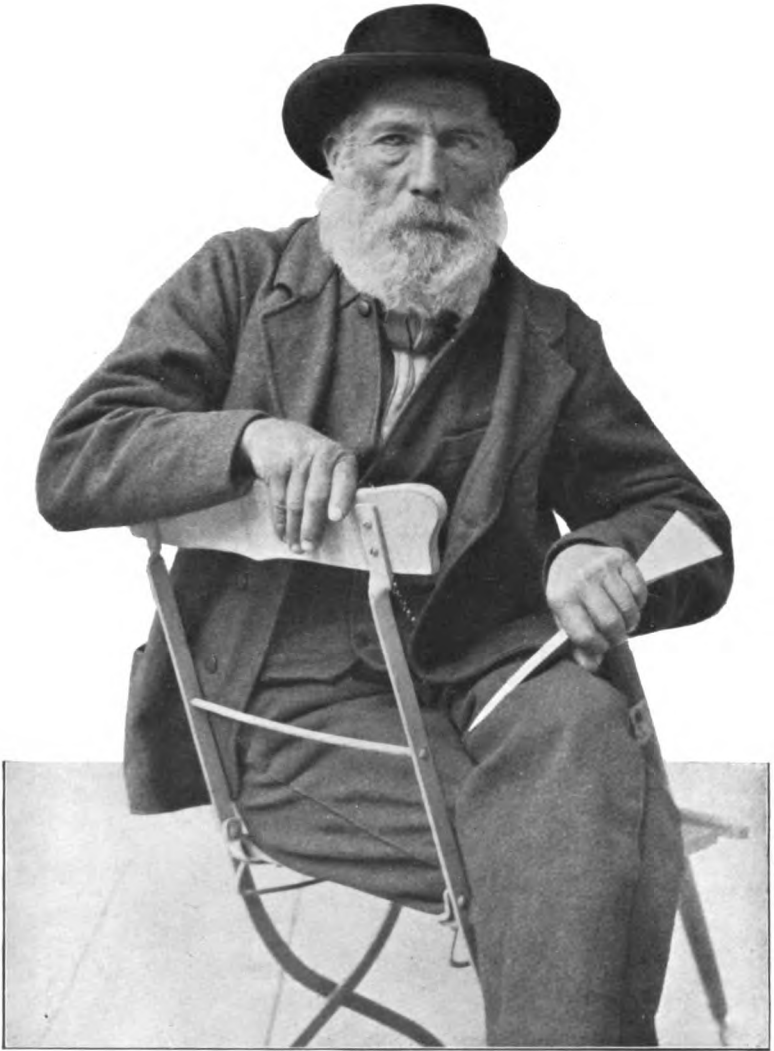
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The Map of the Valsesía face of Monte Rosa.

Owing to unavoidable delay in delivery this Map will be posted to Members in about three weeks. It is not desirable to allow anything to interfere with the punctual appearance of the Journal.

Map of the Yalovian Lake
Alvina Wood

The map shows the location of Yalovian Lake in the
vicinity of Alvina, Alaska. The lake is situated
in the northern part of the state, near the
Canadian border. The map includes the names of
the surrounding towns and the names of the
rivers and streams that flow into the lake.



Mrs. Aubrey Le Blond photo.

Swan Electric Engraving Co., Ltd.

CHRISTIAN ALMER.

(Taken in 1892.)

THE ALPINE JOURNAL.

MAY 1915.

(No. 208.)

I.—THE FIRST PASSAGE OF THE SESIAJOCH.

Printed from the MS. Journals of the late A. W. MOORE.

[This vivid description of a magnificent expedition, far too seldom repeated, is well worthy of its author, a great mountaineer and an equally great writer. The grandeur of the expedition, which, combined with the New Weissthor and the Colle delle Loccie, reveals in all its glory the inimitable splendour of the eastern and southern faces of the Monte Rosa chain, has been pointed out in a late volume of this JOURNAL (xxiv. 523-5). The mountaineer, reading Moore's brilliant description, cannot fail to become filled with the desire to follow in his steps. Incidentally the expedition afforded a notable instance of the superb qualities of leadership so often exhibited by Almer then in his prime.]

The party consisted of A. W. Moore and H. B. George, with the guides Christian Almer of Grindelwald and Matthäus zum Taugwald of Zermatt, the elder brother of Johann zum Taugwald, of whom Mr. Whymper published a short biography, reproduced in the third edition of his 'Guide to Zermatt.' Matthäus died September 1872. There are still worthy representatives of the family among the Zermatt guides.]

Note on the Illustrations.

The magnificent photograph of the Val Sesia face of Monte Rosa, taken by the famous mountaineers, the brothers G. F. and G. B. Gugliermine, from the Tagliaferro, has been presented

by them to the Club. Mr. G. F. Gugliermina has, with great courtesy, prepared the route-marked photograph as well as the synopsis of all the lines of ascent made on this face. He has also been good enough to undertake the supervision of a large scale map of the Alagna basin now in course of preparation for the ALPINE JOURNAL, as the Siegfried map does not cover any portion of this splendid face. The route-marked photograph should be studied alongside a similar photograph of the Macugnaga face which accompanies a paper 'The Passes across the Weissthor Ridge,' by W. M. Conway in 'A.J.' xi. 193-203.

Together, that paper and the photograph and synopsis now presented, deal exhaustively with the whole Italian side of Monte Rosa.

The frontispiece is a photograph taken, in 1895, by Mrs. Aubrey Le Blond, of Christian Almer, a name of imperishable renown, the leader of the first Sesia expedition.

The contemporary portraits of A. W. Moore, Hereford B. George, and Horace Walker are reproductions from photographs kindly lent by Miss Walker and Mr. Alex. Mortimer. The full-length portrait of Almer is from an old photograph in the possession of the Club, and probably presents him very much as he was in those far-off days.

The full-page picture of Jakob Anderegg is from a photograph also lent by Miss Walker through the good offices of Mr. Solly and is believed to be the first published picture of that splendidly daring guide.

The members of the Alpine Club will doubtless wish to tender their best thanks to the Signori Gugliermina, whose names are so well known to all English mountaineers, for the great labours undertaken for their instruction, and also to the others who have been so helpful in enabling the Editor of the Journal to worthily present to the Club these records of the past.

WEDNESDAY, July 9, 1862.—Weather fine.

We were off at 5.15 A.M. [from Mattmark], the morning being lovely, and we not in the least fatigued from the labours of yesterday. Soon after leaving the inn the path becomes very rough, so much so that I could scarcely believe it possible for mules to traverse it, as I am told they do, but it is quite easy and agreeable for pedestrians, for the first hour rising but little. At the end of that time, having crossed to the left bank of the torrent, we halted for a few moments before



HORACE WALKER.



HEREFORD B. GEORGE.



CHRISTIAN ALMER.



A. W. MOORE.

CONTEMPORARY PORTRAITS.

(1863-1870.)

commencing the last ascent. This lies along ledges of rock for half an hour, overhanging the Rosswang [Thäliboden] Glacier, which is smooth and little crevassed. Over it lies a Pass as easy as and shorter than the Moro, leading to Ceppomorelli, some distance down the Val Anzasca, but as there is no view of Monte Rosa from the summit it is rarely traversed except by the natives. The rocks were the pleasantest I have ever passed, affording singularly good footing; in fact the stone seemed to bite into the boot, and not being in the least steep, and at 6.45 A.M. we reached the edge of a plateau of snow, in first-rate order, hard and crisp under the foot, sloping very gently up towards the summit of the Monte Moro Pass, which we surmounted at 7.15 A.M. As we crested the ridge, 9890 ft. in height, one of the grandest views in Europe burst upon our delighted gaze; the whole chain of Monte Rosa was before us, forming a magnificent amphitheatre, stretching from the Pizzo Bianco to the Cima di Jazzi; the sky was cloudless, and the mountain, falling in one sheer precipice from the summit of the Höchste Spitze to its base at the Macugnaga Glacier, was open to our view. The view behind was also fine, comprising the Dom, Täschhorn, the range of the Saasgrat, and in the far distance the Oberland, but it was little regarded in presence of the prospect in front of us. I reconnoitred with great care the ridge running from the Pizzo Bianco to the Signal Kuppe and Zumstein Spitze, and Almer agreed with me that, supposing the descent on the other side practicable, it might be possible to effect a passage from Macugnaga to Alagna across it.¹ The Turlo will always be the shortest route between the two places, but a mountaineer not pressed for time would probably be glad to substitute a new and interesting route for that dreary Pass.

Having feasted our eyes on the glorious panorama, we commenced the descent at 7.35 A.M. In a few moments we came to a steepish slope of snow stretching down some distance, which, though very hard, was tempting for a glissade, so down Taugwald and I went, in the approved style, but keeping the pace moderate, as bits of rock cropped out here and there which had to be avoided, and in a few moments reached the bottom; but Almer and George, having an insuperable objection to that amusement, could not be persuaded to join us, and descended in a more deliberate manner. Once off the snow the unpleasant part of the descent began. The path was steep,

¹ This has since been done, by Messrs. W. E. Hall and J. A. Hudson.—27/1/63. A. W. M.

very faintly marked, stony, and overgrown in many places with grass and rhododendra, concealing holes and clefts into which one slipped with a jerk, to the risk of ankles &c.; the heat too was intense, and the flies, as we descended, most annoying; but in front of us, whenever we raised our eyes, was Monte Rosa, and the sight of that always sufficed to restore our tempers, occasionally perhaps a little soured, to their usual equanimity. Having left behind us some fine waterfalls, under which we should have liked to have placed ourselves, we at length gained the valley, and, crossing the stream, walked into the still unfinished hotel, belonging to Franz Lochmatter, the well-known guide at Macugnaga, at 9.35 A.M., in 4½ hours from Mattmark, including our halt at the top. The guides were anxious to stop here till noon, but we determined to be off again at 11.30, and thought that hour much too late, but did not wish to oppose our friends. Lochmatter himself was absent, having crossed to Zermatt yesterday by the Weissthor, with an English gentleman, so that we were disappointed in our hopes of a chat with him as to our plans, and in default passed the time in the consumption of Asti wine and some very tolerable cutlets. So soon as these were demolished, at 11.30 A.M. we started for the Turlo Pass, the heat, which earlier had been great, being now almost intolerable, and beyond anything I have ever felt, and the prospect of climbing a notoriously dull, stony Pass, of 9000 ft. in height, in such a temperature, was not altogether agreeable. We avoided the hamlet of Borca by following a path leading through luxuriant woods to the entrance of the Valle Quarazza, on reaching which we all took off our coats and girded up our loins for work. The path for some distance keeps on a level, passing from one side to the other of the stream, according to the necessities of the ground, and as the valley is pretty, with well-wooded rocks on each side, the walk was by no means unpleasant; but as we advanced it became more and more sterile and stony, the only attractive objects being two magnificent cascades, falling from the range of the Pizzo Bianco, and at 1.30 we reached some chalets, at the foot of the real ascent, where was a solitary young woman, from whom we got some bowls of delicious milk, with some difficulty, as she could not understand a word we said, and we had to express our wants by pantomime. The path from here winds up very steep slopes, completely overgrown by dwarf rhododendra, and these are succeeded by steeper slopes covered with loose stones, which stretch up apparently without end. Up



these we toiled with many groans until 3.25 P.M., when, having found water, we halted to refresh and rest, George being far from well, and complaining that his feet were burnt and cut to pieces; mine, from having been longer at it this year, did not suffer so much. After a halt of 25 minutes we again set off; close above our heads, enveloping the summit of the Pass, was a canopy of mist, which extended as far north as the Moro Pass and Monte Rosa, and there ended abruptly, for we could see that on the Swiss side the sky was as clear as ever. At length we got off the rocks on to a gentle slope of soft snow, which brought us to the summit of the Turlo Pass, 8977 ft. in height, at 4.30 P.M.. As there is at any time little or no view from this point, we were not much disappointed at the state of the atmosphere, and after resting 10 minutes commenced descending along the side of a slope of shaly débris, a sort of stuff which, though unpleasant to mount, affords very good going in descending, and we soon reached the highest pastures, near the bank of a gloomy lake. The walking over these was pleasant enough, after our long course of stones, and following a little stream we at length found ourselves fairly in the Val Sesia, with a most tempting green knoll close at hand, on to which we mounted and threw ourselves on the grass at 6.10 P.M. In front of us were the southern peaks of Monte Rosa, the Ludwigs Höhe, the Parrot Spitze, and the Signal Kuppe, but the two latter absorbed our regards, as between them we hoped to make a Pass direct to Zermatt; the mist at first partially enveloped the chain, but it gradually cleared and allowed us a perfectly clear view. Long and anxious was our survey, but the feelings of myself and George were those of utter hopelessness, as we gazed at the tremendous line of precipices before us, so utterly absurd did the idea seem of any human creature attempting to scale them, but not a word was spoken as Almer examined the range deliberately with my telescope. At length he laid it down, and never were the responses of an Oracle of old awaited with greater anxiety than were the words which were to fill us with hope or damp us with disappointment. 'I think,' he said, 'that we cannot reach the *col* between the Parrot Spitze and the Signal Kuppe, the couloir is too steep, but we may be able to pass over, or nearly over, the summit of the Parrot Spitze itself; *es is sehr schwierig, aber, ich glaube, möglich.*' (It is very hard, but, I think, possible.) Of course we jumped at the idea, and as Taugwald also thought we could get over we started down the Val Sesia again at 6.40, filled with ardour; old

Tugs (Taugwald) led at express pace, and, leaving all examination of the beauties of this lovely valley till the morrow, we tore along and reached the Albergo di Monte Rosa at Alagna at 7.35 P.M. They served up a capital dinner, after which we mentioned our project to the host, who, though highly applauding it, gave us but little encouragement, saying that such an idea had never been heard of, but that a party of natives had once tried to pass direct to Macugnaga, but had been unable to descend on the other side. There were no English or French in the hotel, so we went early to bed.

Thursday, July 10, 1862.—Weather fair.

After breakfast this morning we went into the church [at Alagna], which is a large, handsome building, with several showy altars and some rather grotesque pictures, and, like most of the churches in these valleys, is far superior to what one would expect to find in such a retired position.

Having seen to the provisions necessary for our voyage, we lounged away the morning till 1 P.M., when we dined, and at 2.15 P.M. we left the Inn, *en route* to the highest chalets, amidst a perfect storm of good wishes from the landlord, whose interest in our expedition had increased materially. We had told Almer to engage a porter to carry up blankets and provisions to the chalets and to accompany us in the morning as long as the route is tolerably easy, and I never saw a more villainous-looking specimen of humanity than the individual he had contrived to pick up. With a low forehead, shaggy eyebrows, sunken eyes, and a slouching, stooping gait, he more resembled a gorilla than a man, and was fit for no other employment than that of a beast of burden.

Our principal object in making so early a start had been to allow the guides time to reconnoitre the route and make up their minds as to the exact course we must pursue, but as we walked up the lovely valley by a path nicely shaded and commanding most picturesque views of rocks and waterfalls the clouds came over, and when we reached, at 4.50 P.M., some chalets from which we ought to have got a grand view of the range the peaks were enveloped from top to bottom in mist, which showed no signs of moving. We consoled ourselves by drinking bowls of cream, rich and cold as ice, and discussed as to whether we should push higher up or stop where we were for the night, and, as the porter declared there were no chalets higher up, and the night did not promise well for a bivouac, we determined to come to an anchor. While Almer and Tugs went in to make things comfortable, we

threw ourselves on a grassy eminence above the chalets and watched in the hope of the mist lifting; we were tantalised several times by a partial clearance, and on one occasion managed to see the lower portion of the Sesia Glacier and the base of some rocks which Tugs believed to be a portion of the Parrot Spitze, and which we agreed was the point to make for first in the morning; but the fog soon came down again, and after lying out in the vain hope of another lift till 7.30 P.M. we gave it up and went in to supper. The chalet was rather a large one, and in one corner was a recess in which was a sort of shelf strewn with hay; on this the guides had put some blankets with the knapsacks for a pillow, thus making a very tolerable bed, to which we betook ourselves after imbibing quantities of hot coffee, but it was long before sleep visited my eyes. There was only one little window in the place, which, with great difficulty, we persuaded the guides to leave open, and as a large fire had been lit for culinary purposes the heat was intense; and having given George the outside or coolest place of the bed, I, squeezed in between him and the wall of the chalet, suffered martyrdom, but managed to get some broken snatches of sleep, on waking from one of which I saw by the light through the window that the moon was shining, an evidence that the weather had improved. After 11 P.M. I never closed my eyes, but lay as quiet as possible and wished for day.

Friday, July 11, 1862.—Weather fine.

I lay in misery till 1.10 A.M., when, hearing the guides, who were occupying a corresponding recess on the opposite side of the chalet, moving about, I made my escape from the bed, and opening the door went out, with a headache, faint and feverish. The cool air was inexpressibly delicious and soon restored me; the moon was shining, but was on the point of disappearing behind the ridge separating us from the Val de Lys. The sky over our heads and down the valley was quite clear, but an obstinate mass of mist rested on the peak over which we hoped to pass, as if determined to resist our advance. However, there was no question about starting, and the guides busied themselves in the preparation of coffee while we finished our toilette. Where the porter passed the night I know not, but, having regard to the position of the building from which he was seen making his way, we have reason to believe that he shared quarters with the pigs.

I made a tolerable breakfast, but George complained of seediness and could eat but little, and at 2.35 A.M. we started,

the 'Sennerin' declaring that she should soon see us back again. Our first point was the moraine of the Sesia Glacier, to reach which we proposed to descend to the bottom of the valley, follow the stream to the foot of a long, steep slope of débris and stones, and climb straight up it, but the porter declared that such a course was quite impracticable, it being impossible to cross the torrent. Although we did not put implicit faith in his statements, we did not like to fly in the teeth of his local knowledge, so placed ourselves for the present under his guidance, and a pretty dance he led us, taking us by a most circuitous route completely round a ravine, which joined the main valley just above the chalets, at the mouth of which we should have passed had we descended as proposed. As it was, we scrambled along ledges in the side of the rock, which would have required care in broad daylight, and, in the state of semi-darkness in which we were, were particularly awkward, and, in passing some cascades which fell over the rocks at the head of the ravine, got completely soaked, being obliged literally to scramble through the water, a very comfortable thing at the beginning of a long day. On reaching the opposite side of the ravine, what was our surprise to find a very comfortable-looking chalet, our porter having assured us the night before that there was no human habitation above our sleeping quarters. In reply to our abuse he made some trivial excuse, but the real fact was he had never calculated on having to go some distance with us in the morning, and had, therefore, stopped at the chalets most convenient for his return to Alagna. Below us was now the slope of débris mentioned before, on to which we much wished to descend, but the rocks fell in one sheer precipice at our feet, and it was out of the question, so turning our backs on it we began climbing the slopes of rock mingled with grass behind the chalet. These were easy, though steep, and we should have made good progress but for George, who was extremely unwell, sick, faint, and giddy, and we were, therefore, obliged to go very slowly, and make numerous halts. At length, on reaching the edge of a barren waste of stone stretching up to the moraine of the glacier, I started off on my own account, leaving Tugs, Almer, and the invalid to come on more leisurely, and climbing straight up reached the moraine, where the others joined me at 5.35 A.M. On our right and behind us was the icy sea of the Sesia Glacier, while in front was the whole length of the valley, whose course we could follow for miles towards the south. As we were to take to the ice immediately we determined to breakfast, and I was pleased to find by the

state of my appetite that I had recovered my usual vigour. George, too, managed to get down some bread and honey, which somewhat revived him. At 6.10 A.M. we were again on the move, and clambering down the moraine stood at the edge of the glacier, which was so torn and riven by crevasses that Almer judged it advisable to put on the rope at once. The highest peaks were still enveloped in mist, but before us were the black rocks we had observed last night which we supposed to be the base of the Parrot Spitze, and towards these we steered. The glacier, though much crevassed, was at first free from snow, but when about half-way across we found deep fresh snow concealing the crevasses to a great extent, so thought it best to dismiss the porter in order that he might run no risk in returning alone; the last words he said were that he should wait on the moraine of the glacier until we returned, so sure was he that we were attempting an impossibility. I was provoked, and had a good mind to suggest that I might as well defer paying him till the same period. Having rearranged the baggage we continued our march, and, having re-crossed the remains of some avalanches fallen from the cliffs on the right, found ourselves separated from the rocks by a steep slope of ice with the usual bergschrund at its foot; this was crossed without much difficulty, and climbing up along the side of the slope, with a fearful chasm below us, where every step had to be cut with the axe, it being pure ice, we set foot on the rocks at 7.40 A.M.² These proved by no means terrible, and for the next two hours we were climbing steadily up a sort of natural staircase; not that the steps were either very regular or very easy, but there was no mistaking the line of route, and the difficulties were just sufficient to keep us in a state of pleasing excitement without keeping the nerves in too great a state of tension. All the time we were completely out of sight of the great peaks, and, not having been able to get a clear view of the localities, were not without apprehension that we might be climbing a wrong buttress, or find ourselves stopped by some

² [The route followed nowadays lies to the W. of the Parrot Glacier, whereas Moore's party kept to the E. of this glacier, having immediately on their right the Sesia Glacier and the very steep couloir leading to the actual depression of the Sesiajoch. They are clearly shown on the route-marked photograph. There is, of course, now the Val-Sesia hut which serves the modern route.]

Mr. Gardiner (*A.J.* viii. 379) appears to have been the first to follow the modern route.]

insuperable obstacle. Great was our satisfaction, therefore, when, on turning a sharp corner, we found ourselves at the top of the first series of precipices with the Signal Kuppe apparently within a stone's-throw. Almer gave a shout of triumph, declaring that we should be on the top in two hours, or, as it was now only 9.40 A.M., at 11.40, with which pleasing idea we sat down to grub. Our perch commanded a magnificent view, free from a single cloud, the day having turned out gloriously fine, and the last speck of mist having vanished from the sky. Before us was the Italian Plain, hazy, of course, as usual, but the Lakes of Maggiore, Lugano, and Orta were distinctly visible, while as far as we could see the Ticino wound along like a silver thread. Immediately on our left was the ridge running from the Signal Kuppe eastwards, and I carefully examined the south side of my proposed pass from Macugnaga to Alagna, which seemed perfectly practicable; in fact, the difficulties would be trivial compared with those on the north side, which I reconnoitred from the Moro and did not consider insuperable. At 10.15 A.M. we broke up our encampment and again set off. Above us stretched a slope of snow which thinned off gradually until it became a mere knife-edge; while passing this, I tried the angle of ascent with the clinometer and found it 42 degrees. This arête ended at the foot of some rocks which, for a few steps, were easy, but we soon found ourselves in a regular fix; all progress in a straight line upwards was completely barred by a sheer precipice of rock which rose above us hopelessly smooth, but bulged out rather over a gully on our left, on the other side of which the rocks also rose steep and smooth. I feared that we had come to a full stop, but Almer, having cast a glance upwards to satisfy himself it was really no go, prepared to cross the gully, a matter of considerably difficulty, as on our side the footing was very precarious; on the other it was almost *nil*, a shelving knob about two inches wide being the only support for the foot, while the bulging rock above-mentioned overhung the gully, which must have been five feet across, and fell heaven knows where, but so steeply that a stone dropped from the rock would have fallen some distance before it touched it. Almer got across somehow, and clambering up the opposite side made himself fast behind a rock, ready to bear the jerk if any of us slipped. George followed, but when he had reached the further side, the rope being rather short, I had to stride across the gully to allow of his being pulled up alongside of Almer, so that while that operation was being performed there was I,

bent double to avoid the overhanging rock, with one foot on one ledge and the other on an almost imperceptible knob, the stride being an uncomfortably long one, with many hundred feet of absolute depth below me, and, it may be imagined, I was not sorry when George had joined Almer, leaving him free to pull me up, when I had the pleasure of watching a similar operation performed on Taugwald ; and, when we were all on the ledge together, although nothing was said, I think we were slightly astonished to find ourselves there. From this point the difficulties thickened rapidly, and our progress was necessarily slow, every foot of ground being gained with the greatest exertion. Almer led, and with the help of a shove from George hoisted himself up to each successive ledge, those behind remaining still till he, having secured himself, announced that he was ' ganz fest,' quite firm, and ready to bear the jerk in case of anyone slipping ; but, exercising the greatest caution, not one of us had a serious slip during the whole day. By help of a pull from the rope and a push from behind each man in succession then joined Almer, and so the game went on ; there was no rest, no ceasing from labour, but with faces streaming with perspiration we slowly forced our way upwards, though we could never see more than a very few feet above us, and were consequently always labouring under the fear that we might come to some insuperable obstacle. The ridge up which we were climbing was for the most part rock, but occasionally we came to a knife-edge of snow forming the only access from one mass of crag to another ; these we passed in the orthodox manner, with our feet on one side of the ridge and our alpenstocks on the other, and although on each side the slopes fell sheer for thousands of feet, and in case of a slip, which was only too possible, nothing could have saved us, we crossed them with perfect indifference, which was indeed our security. We could not repress our admiration at the way in which Almer was leading us up. In fact, on only one occasion did he hesitate as to the route to adopt. In front of us was a piece of rock more awkward than any we had yet passed, on our right was a couloir³ stretching upwards to the top of the ridge and down to the glacier which we had left hours ago. After some consultation we left the arête and got into the couloir ; at the edge under the rocks was a little snow, but in the middle was hard blue

³ [This is the great couloir leading to the actual depression of the Sestajoch. It is enormously steep towards the top and has never been ascended.]

ice, the exertion of cutting steps in which was fearful, more especially when standing on a slope which could not have been less than 70 degrees. We soon repented our choice, and after a few steps Almer gave the word to retreat ; so, turning in our steps with most emphatic cautions from him not to slip, we regained the ridge and, with the aid of the invaluable rope, having passed the present difficulty, continued our gymnastics, and at length, at 1.55 P.M., reached the top of the crags and found in front of us a slope of snow forming the actual dome of the Parrot Spitze. I estimated that half an hour would bring us to the top, but soon began to mistrust my calculation ; the slope was inclined at an angle of 50 degrees, sometimes more, rarely less, and consisted of ice with just enough snow on it to give tolerable footing if the feet were placed with care. Here George's weight ($13\frac{1}{2}$ stone) told against him and almost at every step the snow gave way with him, and he slipped forward, thus doubling, in his case, the fatigue, always sufficiently great, of climbing straight up so steep a slope, and he being at last almost exhausted, we sat down, having cut ourselves seats in the ice. There was the Italian Plain, there were the Lakes, -Maggiore, Lugano, Orta, and Como, as we had seen them hours before ; the silvery stream of the Ticino could still be traced, and in addition, on our left in the far distance, were the peaks of the Bernina and the Ortler Spitze, while on the extreme right rose the grand obelisk of Monte Viso ; but the air was cold, the afternoon was getting on, and we were still on the wrong side of the range, so at the risk of George thinking me unkind, after a very few minutes' halt, I suggested the propriety of moving on. Making for a point on the shoulder of the mountain, just to the right of and a little below the actual summit, we slowly ascended, but the slope seemed endless and the ridge ever the same distance off. I was walking on, with my eyes open, but mentally shut, almost in despair of ever reaching the summit, when, in a moment, we saw before and below us the great plateau of the Monte Rosa Glacier, with all the well-known peaks. We had won the victory and were on the crest of the ridge which here divides Switzerland from Italy ; it was 3.20 P.M., so that the ascent from the chalets had occupied us thirteen hours. While Almer, Taugwald, and I howled promiscuously, George threw himself on the snow ; in a few minutes he was better, and then with three thundering cheers we relieved the gladness of our hearts. On the right, below us, was the actual Col, separating us from the Signal Kuppe, which, however, is quite inaccessible from

the south side ; close on our left and not more than a hundred feet above our heads was the summit of the Parrot Spitze, which is nothing more than the highest point of the snow ridge on which we were standing, and which we could have reached without the slightest difficulty by simply following the ridge, but as time pressed we did not think it worth while doing so. Considerably below us was the Col de Lys, from which rose the fearfully narrow snow arête leading to the top of the Lyskamm ; beyond the latter rose the Twins and the Breithorn, with the Matterhorn, which, from this point of view, looks awkward and almost ugly, and is eclipsed in beauty by the Dent Blanche and Weisshorn. The height of the Parrot Spitze is 14,577 [14,639] feet, the point at which we crossed the chain is certainly over 14,400 [14,515] feet, thus depriving the Col de Lys, which is 14,040 [14,084] feet, of the honour of being the highest pass in the Alps.⁴ As first discoverers we had the right of baptism, so we christened the pass 'Sesiajoch,' and having written our names, etc., and placed them in an empty bottle in a cranny of the rocks, we commenced the descent towards Zermatt at 3.30 p.m., Taugwald relieving Almer of the lead, being now on ground familiar to him, but before leaving we cast a glance down the way we had ascended. Our track up the last snow slope was, of course, clear, but the next thing the eye rested on was the Sesia Glacier, some 7000 feet below, the great precipice which had taken us $6\frac{1}{4}$ hours to ascend being, in consequence of its steepness, quite invisible ; there was not a sign of it. The sun had told with considerable effect on the northern slopes, and a cross between a run and a glissade soon brought us to the great plateau of the Monte Rosa Glacier at its south-eastern angle, where it is shut in by the Parrot Spitze, the Signal Kuppe, the beautiful Zumstein Spitze, and the black crags of Monte Rosa herself. Crossing to a point almost under the Lyskamm we halted at 4.20 p.m. to eat, and never did four people sit down to cold meat and red wine in a state of greater enjoyment, nor, I may say, with better appetites, for we had fairly earned our food. At 4.45 we again set off, pounding through the deep snow and frequently encountering a huge crevasse which had to be turned by a long detour ; one of these chasms was the largest and grandest I have ever seen, and would, I think, have held three or four London houses with ease, but we avoided

⁴ [The Silbersattel between the Nordend and the Dufourspitze is 14,732 ft. and several passes are higher than the Lysjoch.]

them all without much trouble. About half-way down, the glacier flows over a mass of rock, and is, consequently, torn and rent by crevasses below that point; passing these is a matter of some difficulty even in the early morning when the snow bridges are firm, and, of course, late in the afternoon of a hot day the difficulty is much increased. Taugwald, however, led us through the maze with great skill, our chief difficulty being the extreme softness of the snow, and I often had occasion to congratulate myself on my light weight, which carried me over places where George went through. However, we at length left the worst part behind us, and, wading through snow up to our hips, reached the rocks of *Auf der Platte*, at the foot of *Monte Rosa*, at 6.30 P.M., and cast off the rope which we had had on for 12½ hours. But we still had a long walk before us over the *Gorner Glacier*, which was covered with slush, turning into water under the foot. Dodging among the crevasses, we marched rapidly across the glacier and left the ice at 7.45 P.M., just as the sun was sinking behind the ridge of the *Col d'Erin*. It was a grand sunset. *Monte Rosa* was bathed in that delicate rosy colour so well known to all Alpine travellers, while the *Matterhorn* stood out clear against one of the most gorgeous skies I have ever witnessed, but our thoughts wandered from the glorious scene towards the *Riffel Hotel*, supper and (most pleasant thought of all) bed. So we pushed as rapidly up the steep path overhanging the *Gorner Glacier* as the treacherous nature of the ground would allow; it was nearly dark when we reached the open ground at the base of the *Riffelhorn*, and the path thence to the hotel seemed unusually long, but at 8.40 P.M. the goal was reached, and *Seiler*, whom our shouts had brought to the door, imparted the pleasing news that there were no beds, the house being full, but that he would do the best he could for us. Our disgust may be imagined. On entering the *salle*, which was quite full and horribly stuffy, an Englishman who was going up the *Breithorn* in the morning, on hearing where we had come from, insisted, in spite of all we could say, on giving up his room, which contained two beds, to us, a piece of the greatest generosity, which entailed his passing the night himself on the floor of the dining-room. While we were at supper, *Whympfer*, who was going with a party up *Monte Rosa*, came in; he had been driven from the *Matterhorn* early in the week by bad weather and his guides knocking up, but talked of again crossing to *Breuil* and trying it alone. Before I went to bed I went to the door and looked out. The moon, nearly at the full, was shining with marvellous



JAKOB ANDEREGG.

"A fine, handsome, fair man, with a profusion of beard, and apparently as strong as a horse."

(A. W. Moore, in "The Alps in 1864.")

brilliantly, decking the grand semicircle of peaks from the Breithorn to the Weisshorn with a glory quite unearthly and indescribable.

Saturday, July 12, 1862.—Weather fair.

The various parties setting off on their expeditions created a fearful row at about 2 A.M., but they only disturbed me for a moment. We left the Riffel at 7.55 A.M. and tore down the, to me, familiar path, reaching the Monte Rosa Hotel at Zermatt at 9.5; here we breakfasted, and I settled with honest old Taugwald, who was in a state of rabid delight at our success of yesterday, which enabled him to crow over his brother Johann, who had tried the Matterhorn⁵ with Whymper and failed. Having paid a visit to Clemenz of the 'Mont Cervin,' who received us with open arms, we bade farewell to Zermatt at 10.45 A.M. and turned our faces to the Oberland. The day was cloudy, and therefore the walk to Visp, which we reached at 6.15 P.M., was not unpleasant, though long and monotonous; we met several parties on their way up the valley, mostly English, but our walk was altogether without incident, and the sight of the Hôtel de la Poste was very welcome. In the hotel was a solitary Englishman, who seemed rejoiced at our arrival and dined with us; we did not omit to celebrate in champagne our new Pass, and also my birthday. We had intended to go on to Brieg after dinner, but the landlord came in and pressed us to stop the night, offering to drive us to Viesch in the morning for a moderate sum; so, as the night was rather threatening and we rather lazy, we yielded to his entreaties and ordered bedrooms.

II.—THE SECOND PASSAGE OF THE SESIAJOCH.

[The party consisted of A. W. Moore and Horace Walker with the guide Jakob Anderegg of Meiringen and a casual inhabitant of Interlaken as porter.]

Orta, Monday, July 3, 1865.—Weather fine.

We had ordered a boat overnight, and in it, at 3.20, started for Pella, on the other side of the lake. The passage occupied only twenty-five minutes, and was a thing to be remembered. The air was perfectly still and deliciously cool, while the colour of the sky, where the first signs of dawn were appearing, was marvellous; so also, by the time we reached Pella, was the

⁵ [This attempt, from the Italian side, is recorded in *Scrambles*, 5th edit. pp. 94-5.]

purple of the hills on the eastern shore as the dawn gained strength. We agreed that in all our journeys we had never witnessed so fair a scene. From Pella, two hours by a shady path along the side of a pleasant glen, rich with vines and fig trees, brought us at 5.50 to the low Col di Colma, above the Val Sesia, where we were greeted by a most glorious view of Monte Rosa, seen at the head of the valley, towering up into the cloudless morning sky. The view is good from the Col itself, but better from an eminence to the S. of it, whither we adjourned. The Signal Kuppe and Parrot Spitze, with the Sesiajoch between them, were seen to great advantage, and carefully examined through the glass; their appearance was simply terrific, and, had I not made the Pass in 1862 with George and Almer, we should certainly have declared the ascent of this tremendous wall, which we were on our way to repeat, an impossibility. Contrary to what we had expected, from our experience elsewhere, there seemed to be much snow on the rocks.

Turning down at 6.5, we contrived to miss the main path, but hit upon a tolerable track which led us at 7.15 through pretty woodland scenery into the carriage-road up the Val Sesia, along which we had a dusty twenty minutes to the Hôtel d'Italie at Varallo, where we ordered breakfast, and a char to take us on.

Varallo is at the foot of a 'Monte Sacro' of great celebrity and much interest, but we were too anxious to get on to afford the time necessary to visit it, while I personally was far from well, the heat and good living of the last two days having disagreed with me. As soon as breakfast was over, at 8.45., we started in a trap with two horses for Mollia, where the carriage road comes to an end. The Val Sesia is sinuous and well wooded, and the scenery throughout picturesque, especially between Varallo and Balmuccia. The road is also good, so that the drive would have been very pleasant but for the heat, which was overpowering. The signs of prolonged drought were very visible; the main stream was very small, the minor lateral torrents were dry, while the ordinarily copious tributary which flows from Val Sermenza was reduced to an insignificant rivulet, in which, however, the exquisite colour of the water was remarkable.

We reached Mollia at 11.40, and, after a glass of beer at a wretched cabaret, at once resumed our journey on foot up the now narrow valley by a stony but not steep path. At 1.20 we were abreast of Riva, and for the first time came in view of Monte

Rosa, of which the peaks visible were the Signal Kuppe and Parrot Spitze, both seen to perfection, and looking little less formidable than from the Col di Colma. Above Riva the path crossed to the right bank of the stream and degenerated into a horrible paved track which lasted into Alagna, where we arrived at 1.55.

After an excellent dinner at the Hôtel Monte Rosa, we started again at 3.40, having chartered one Andrea Reali, an active fellow, to carry our baggage and show the way as far as the highest chalet, where we were to sleep. Jakob [Anderegg] had also picked up a certain Jean Michel, of Interlaken, who was anxious to get across to Zermatt on his way home, and volunteered to come with us for five francs. The path for some distance keeps on the right bank of the stream, wending through the ruins of an ancient landslip which must have been on a grand scale; it then crosses to, and continues on, the left bank through scattered woods and over rough ground, without any special feature except where the drainage from the upland glen which leads to the Turlo Pass makes its final plunge into the main valley in a fine waterfall. At 5.30 we reached the chalet where George and I had passed the night in 1862; from near here the view of the glacier-filled cirque which extends from the Schwarzhorn⁶ to the Cima del Pizzo [Cima della Pissa] is extraordinarily fine. The glacier itself is of moderate extent, and not particularly striking, as its principal branch falls from the ridge joining the Cima del Pizzo to the Signal Kuppe in gentle slopes; but the mountain wall which bounds it on the W. and S.W., and runs from the latter peak to the Schwarzhorn,⁶ through the Parrot Spitze, Ludwigs Höhe and Vincent Pyramide, is stupendous. A vast buttress of the Parrot Spitze separates the Sesia Glacier from the less extensive but steeper Piode Glacier, and gives birth to a huge moraine by which the line of separation is continued from the base of the rocks; it is up the face of this buttress that the ascent of the Sesiajoch must be made.

A further walk of fifty minutes by a good track over slopes, first of rhododendron, then of grass, brought us at 6.20 to the highest chalet of Vigne Sopra (I believe); the same distance

⁶ [As Sir Martin Conway pointed out, many years ago, in an article (*A.J.* xii.) which should be carefully read by every student of the topography of the Monte Rosa chain, this Schwarzhorn which is marked in the Dufour map as a summit on the S.E. buttress of the Parrotpitze *does not exist*. Moore means the 'vast buttress' referred to a few lines further on and clearly shown on the photograph.]

in 1862, in the dark and with an ignorant local guide, had cost us two hours of toilsome work. The chalet is on a sort of shelf under overhanging rocks, and, like its lower neighbour, commands a fine view; the accommodation is not so good, but the herdsmen made over to us their hay-bed, and we had nothing to complain of. The weather, which at one period of the day had looked unsettled, recovered itself by the time we retired for the night; I had not imitated it, and was still very unwell.

Tuesday, July 4, 1855.—Weather fine.

My night was disturbed, and when we rose at 2.30 I was as little fit for a 'grande course' as was possible to be. The sky when we started at 3.10 was quite clear, and held out a prospect of perfect weather, which, happily, was fulfilled.

A faint track up the steep slopes behind the chalet, which became more stony as we ascended, led us without difficulty to the moraine on the left bank of the Sesia Glacier, at a point high above its termination, where access to the ice was easy. This point we reached at 5.0, and there dismissed our Alagna porter, who had done his work well. A few minutes were spent in readjusting our baggage, and we then descended the moraine on to the ice, and steered across it towards the base of the rocks of the Parrot Spitze. A short hour took us to the other side, to the foot of the great couloir which descends between that peak and the Signal Kuppe. This couloir, of which a direct ascent is quite impracticable, develops at its lower end, where it merges in the glacier, into formidable séracs which give rise to frequent avalanches; the ice was covered with their débris, over which we had to pass in order to get on to the rocks. Just here there is certainly some little danger, but the exposed passage is short,⁷ and by 6.20 we were in safety on the rocks, not however without an alarm on the way, caused by an ominous 'crack' given by the threatening mass overhead just as we were in the line of fire. Fortunately the alarm was a false one, as we could scarcely have got out of the way, the slope being steep and intersected by 'schrunds.'

After a halt of twenty-five minutes we commenced the upward climb, Jakob leading, I following, Walker behind me, and Michel bringing up the rear; the last proved a great encumbrance, and had, in fact, to be dragged and helped by Walker over every place which presented any difficulty. For

⁷ [It is not necessary to go so high before taking to the rocks which go anywhere.]



JAKOB ANDEREGG.

"Of Jakob Anderegg I must add that he showed himself on this as on other occasions to be a first-rate man. He is a powerful, very good-looking fellow. He is always good tempered, as strong as a horse, willing to take any trouble, and on bad places as handy and steady as a man can be."

Sir Leslie Stephen, in 1864: A. J. II.

"He returned with a tower of strength in the person of Jakob Anderegg. Jakob was a rougher man than his better-known relative Melchior, and with less experience than he, but he was a splendid specimen of humanity, with more dash and determination than any Swiss I ever knew."

Mr. E. N. Buxton, in 1865: from "Short Stalks."

[A rather remarkable likeness to a celebrated portrait of Stonewall Jackson will be noted.]

the next two hours the work was extremely hard ; we kept a pretty straightforward course, which might, perhaps, have been improved upon ; certainly this part of the way seemed to me very much more difficult than in 1862, and the ground is of that kind where keeping a few yards to the right or left may make a great difference. Nothing, however, could stop Jakob, who did not once change his direction, not even where a huge slab of smooth rock seemed an apparently insuperable obstacle ; up he went, and we perforce followed, trusting much to the rope.

At 8.40 we reached the top of a well-marked step in the ascent, where a snow-saddle⁸ connects the lower tier of rocks with those above. The view from here was glorious ; amongst mountains the distant Tödi and Bernina were conspicuous, while seemingly at our feet were the Italian plain and the Lago Maggiore, the latter quite clear.

We crossed the snow-saddle towards the next rocks, which looked very uninviting ; as, therefore, the great couloir on our right seemed at this point to be less steep than elsewhere and to offer an alternative route, we diverged into it. The inclination was rapid, but there was snow enough to render step-cutting unnecessary ; its condition, however, was treacherous, and a fragment of ice falling from above sufficed to cause an avalanche. We kept close to the rocks, and made fair progress, but, on a second fall occurring close to us, Jakob hesitated to persevere longer on the snow, and accordingly swerved to the left again on to the crags, which now formed an irregular, broken arête, overlooking the Sesia Glacier on the right and that of Piode on the left, the latter backed by the really stupendous cliffs of the Vincent Pyramide, a wonderful wall of rock and ice. The climbing proved of much the same character as below, possibly more difficult in itself, certainly requiring more care owing to there being a good deal of snow on the rocks ; still, the hold was usually good, and, except in a few places, there was nothing to cause serious anxiety. Two causes delayed us somewhat, Michel's clumsiness and my indisposition, but on the whole we made good way, and exactly at noon reached the point where the arête lost itself in the steep snow-slope which forms the upper part of the Parrot Spitze.

We had halted half an hour on the road, so now went on

⁸ [A party coming from the Colle delle Loccie, bound for the Val Sesia hut, branches off to the left at this point, keeping below the foot-wall of the Parrot Glacier over easy rocks.]

without further delay. The snow was in only moderate condition ; sometimes it bore us, sometimes it did not, while occasionally it gave place to ice. After ascending a short distance, we were tempted to try to reach the actual lowest point in the ridge between the Parrot Spitze and Signal Kuppe instead of the higher point where we had passed in 1862. The distance and the height above us seemed alike inconsiderable. We therefore steered to the right for a patch of rocks in that direction ; the ice was very steep, and the rocks, when we came to them, were scarcely practicable. The passage across their face by smooth and slippery ledges was the 'mauvais pas' of the day, and was effected in vain ; the couloir beyond proved to be far steeper, and the distance to the Col very much greater, than we had supposed, while the latter was crowned by a formidable overhanging cornice. We therefore turned tail, and retraced our steps on to the unexciting but safe slope, from which we had rashly deviated ; the ascent of this was laborious enough, and required care, as a slip would have had serious results, but it was straightforward, and at 1.45 we struck the ridge, within a couple of feet of the point hit by my party of 1862, as proved by the presence of the bottle which we had then left in a cleft of the rocks.

In other respects we had, I imagine, adhered pretty closely to our route of 1862 ; we had travelled a little, but very little, faster from the foot of the rocks to the Col, the ascent, which had then taken 7 hours and 40 minutes, having now been accomplished in a quarter of an hour less time, including halts on both occasions. In 1862 George had been unwell, as I had been this time ; in that year the passage had been new to the whole party, never having been before traversed by anyone ; this year the leading guide was equally without previous knowledge, and my former experience was of little practical service. The circumstances of the two expeditions were therefore very similar. Estimating the character of the Pass calmly in the light of two trials of it, I should describe it as a route continuously difficult, but at no point offering obstacles which need deter a party of fairly practised mountaineers, well led, from attempting it, either from the side of the Val Sesia or from that of Zermatt⁹ ;

⁹ [Mr. Coolidge on July 24, 1869, with Almer and Anton Ritz, of Blitzingen, made the third passage of the Col, from the highest chalet in Val Sesia to the summit, in the very fast time of 8 hours' actual walking.

The Pass, in mistake for the Lysjoch, was crossed, from the

at the same time, anyone trying to descend on the Italian side without knowing something of the ground might easily be led into serious trouble.

As regards the view from the Col there is little to be said. From a height of (probably) 14,800 feet, it could not be otherwise than striking; clouds, however, had risen on the side of Italy, while, truth to tell, the great peaks round Zermatt do not, from this direction, look their best, except the Lyskamm, which towered, a magnificent mass, on the other side of the Grenz Glacier.

Having replaced the broken bottle in its old recess, after renewing the names of our party of 1862, which had become obliterated, and adding our own, we commenced the descent at 2.30. We crossed the glacier towards the Lyskamm, and kept along that side for a long way, the snow being in fair order and the crevasses few, though some among them were of huge proportions; low down, where it became necessary to recross to the right bank, the route was less easy and the snow soft. The glacier at this point is a continuous but not steep icefall, and the best line of march requires some choosing; there was, however, no serious difficulty, and at 4.30 we reached the rocks of Auf der Platte, familiar to all climbers of Monte Rosa. The heat during the last two hours had been scorching, and the snow water furnished by the rocks was very welcome; not less so was the operation of casting off the rope, and a quarter of an hour's rest while it was being performed.

The serious work of the day was now over, so we made up our minds for the remainder of the way to take things easily; accordingly we dawdled down the rocks and across the Gorner Glacier, which was less slushy and disagreeable than usual at so late an hour; stopped for a few moments to admire a good-sized lake in the very middle of the glacier, surrounded entirely by ice cliffs and filled with water of the most cerulean blue,

Riffelberg to the Upper Vigne Alp, on August 11, 1869, by the Misses Pigeon with the guide Jean Martin of Vissoie and an indifferent porter. (*A.J.* v. 367-72 and viii. 379.)

Cav. Guido Rey's exhaustive article in *Boll. C.A.I.* xxvi. deserves the closest attention. In his enumeration of the passages he appears to omit that of Mr. F. Gardiner on July 29, 1876, with Peter Knubel, still a hale and hearty veteran, and his brother Hans, killed later in the same year on the Lyskamm. (*A.J.* viii. 379.)

A partial descent on the Italian side was also made by Mr. Ellerman with Abram Imseng and Louis Zurbrücken ('Delponte') in 1882. (*A.J.* xi. 120.)]

and sauntered up the familiar path along the slopes of the Gornier Grat to the Riffel Hotel, which we reached at 6.50. Thence, after ten minutes' pleasant converse with old friends, we strolled leisurely down to Zermatt, and at 8.20 entered the Monte Rosa Hotel, where we were delighted to find Mrs. Walker and Miss Barrett. Our day's journey had extended over seventeen hours, out of which something over fourteen and a half hours had been 'actual walking'; we were justified, therefore, in thinking we had earned the excellent dinner which Mr. Seiler put before us, and the not less excellent beds to which we subsequently betook ourselves, with the comforting thought that our two days' forced march from Orta was to be succeeded by a day of repose.

SUMMARY OF FIRST ASCENTS OF THE VAL SESIA FACE OF
MONTE ROSA AS NUMBERED ON THE ILLUSTRATION.

ROUTE.

1. Punta Vittoria. G. Farinetti. 13 Septembre 1872.
Guides : Gius. Guglielmina and Giov. Guglielmina.
Ref. : ' Boll. C.A.I.' vi. 318 and ' A.J.' xii. 68.
2. Cresta del Soldato et Punta Giordani. Pietro Giordani.
23 Juillet 1801 (n'est pas sûr qu'il ait rallié le
sommets terminal). 2^{ème} ascension : G. Farinetti
le 13 Septembre 1872.
Ref. : ' Boll. C.A.I.' i. 112 and v. 36.
- 2 bis. Piramide Vincent par l'arête S.E. (entre ce sommet
et la Pointe Giordani). Giovanni Calderini et Vittore
Zoppetti le 10 Août 1877.
Guide : Martinale ; porter : Garibaldi.
Ref. : ' Boll. C.A.I.' xii. 139.
3. Punta Vittoria da Von Decco. G. B. Origoni. 11 Sept-
embre 1895.
Guide : Carlo Martinale.
Ref. : ' Rivista C.A.I.' 1896, p. 201.
4. Punta Giordani par l'arête E. Fratelli Guglielmina, et
Rev. L. Ravelli. 28 Juillet 1908.
Guideless.
Ref. : ' Rivista C.A.I.' 1910, p. 117.
5. Piramide Vincent, face N.E. Vico Sanguinetti. 3 Sept-
embre 1902.
Guide : Giuseppe Cerini ; porter : Guglielmo Gug-
lielminetti.
Ref. : ' Rivista C.A.I.' 1902, p. 304.

ROUTE.

6. Colle Vincent. G. F. et G. B. Gugliermina. 8 Septembre 1896.
Guides : Mattias Zurbriggen and N. Lanti.
Ref. : 'Boll. C.A.I.' xxx. 13 seq., with marked sketch.
7. Piodejoch (Passo Ippolita). Luigi Gottardo Prina. 4 Septembre 1875.
Guides : Gius. Guglielmina and Pietro Guglielmina ; porter : A. Romelli.
Ref. : 'Boll. C.A.I.' ix. 272 ; 'A.J.' vii. 321-4.
- 7 bis. Ghiacciaio delle Piode (Branche W.). Variante. G. F. et G. B. Gugliermina et Natale Schiavi. 22 Août 1897.
Ref. : 'Boll. C.A.I.' xxxii. 306-7.
8. Colle Zurbriggen. G. F. et G. B. Gugliermina. 10-11 Septembre 1898.
Guides : Mattias Zurbriggen and Clemenz Imseng.
Ref. : 'Rivista C.A.I.' 1898, p. 335 ; 'Boll. C.A.I.' xxxii. 303 seq.
9. Punta Parrot (Colle Sesia). Variante. E. Canzio, G. F. Gugliermina et Giuseppe Lampugnani. 18 Juillet 1906. Guideless.
Ref. : 'Rivista C.A.I.' 1907, p. 115.
10. id. id. Variante. Giovanni et Basilio Calderini. 31 Août 1874.
Guide : Gius. Guglielmina ; porter : Necer.
Ref. : 'Boll. C.A.I.' x. 39 ; xxvi. 55.
11. id. id. Variante. G. Bobba, Guido Rey, et L. Vaccarone. 27 Août 1892.
Guides : Agostino Ansermin, Giov. Gilardi ; porter : P. L. Perron.
Ref. : Boll. C.A.I.' xxvi. 58.
12. id. id. H. B. George et A. W. Moore. 18 Juillet 1862.
Guides : Christian Almer and Matthäus zum Taugwald.
Ref. : 'A.J.' i. 49-60 and the present articles.
- 13.¹ id. id. Variante Costantino Perazzi (descente). 7 Août 1876.
Guide : Gius. Guglielmina ; porter : Viotti.
Ref. : 'Studer.' ii. 108-9 ; 'Boll. C.A.I.' x. 514.

¹ On this occasion Signor Perazzi's jacket fell into a crevasse and was cast up sixteen years later 778m. lower down. See diagram *Boll. C.A.I.* xxvi. 64.

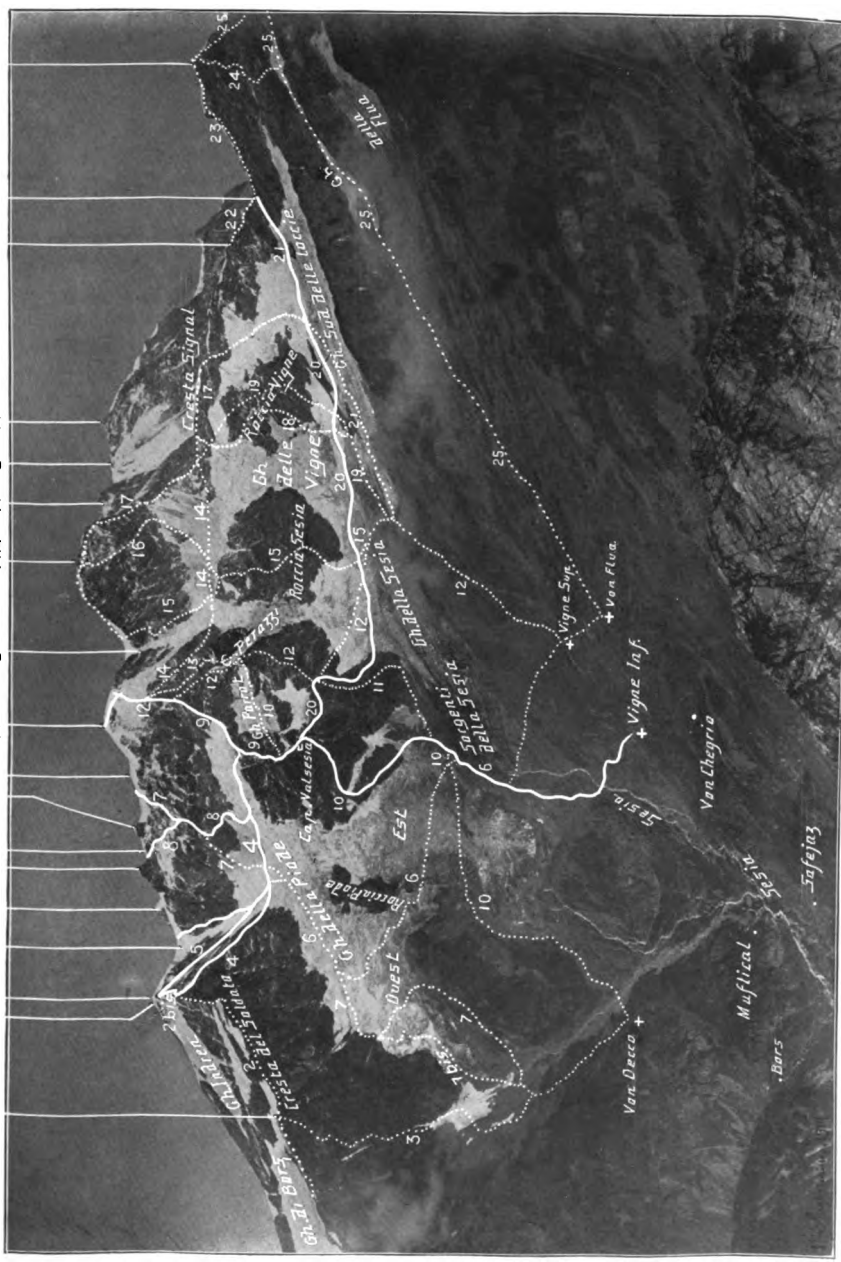
128 *First Ascents of the Val Sesia Face of Monte Rosa.*

ROUTE.

14. Punta Parrot et Colle Signal. John R. Ellermann.
28 Juillet 1882.
Guides : Abram Imseng and Louis (Delponte) Zurbriggen.
Ref. : 'A.J.' xi. 120.
15. Colle Sesia et Punta Gnifetti. G. B. Gugliermina et N. Schiavi. 15-17 Août 1898.
(Paroi Sud et Arête Sud-Ouest.)
No guides ; porter : N. Motta.
Ref. : 'Rivista C.A.I.' 1898, p. 293 and 'Boll. C.A.I.' xxxii. 290 seq. See also 'Rivista,' 1909 for another ascent, with marked sketch, p. 7.
16. Punta Gnifetti. Paroi Sud. A. Orio et Fabio De Zinis.
31 Août 1906.
Ref. : 'Guida Ravelli,' p. 582, and 'La Valsesia' (C.A.I. sez. Varallo), p. 157.
17. id. Arête Est.² H. W. Topham. 28 Juillet 1887.
Guide : Alois Supersax ; and an unnamed porter.
Ref. : 'A.J.' xiii. 414.
18. Colle Signal. Variante. G. F. et G. B. Gugliermina.
31 Juillet 1911.
Ref. : 'Rivista C.A.I.' 1912, p. 79.
19. id. Variante. Guido Rey et L. Vaccarone.
26 Août 1891.
Guides : Daniel Maquignaz and Antoine Maquignaz ; two porters.
Ref. : 'Boll. C.A.I.' xxvi. 61 seq.
20. À la Capanna Valsesia du Colle delle Loccie. Signor Bolaffio. 5 Août 1907.
Guides : J. Croux and another.
Ref. : 'Ö.A.Z.' 1907.
Farrar, Gask et Reade. 27 Juillet 1908.
No Guides.
Ref. : 'A.J.' xxiv. 523-5 and Mr. Reade's present paper.
21. Colle delle Loccie. J. A. Hudson et W. E. Hall.
12 Août 1862 (provenant de Macugnaga).
Guides : Franz Lochmatter and Alexander Lochmatter.
Ref. : 'A.J.' i. 75-77.

² The first *descent* from the Punta Gnifetti to the Col Signal by the E. arête was made in August 1911 by M. and Mme. Gino Carugat alone. They took three days from the hut on the top of the Punta to Alagna. No details have ever been published of this remarkable expedition.

Punta Vittoria.
 Pa. Giordani.
 Piramide Vince.
 Colle Vincent.
 Lyskaum.
 Schwarzhorn.
 Col Zurbrücken.
 Ludwigsöhe.
 Prodehoch.
 Punta Parrot.
 Colle Sesia.
 Punta Guiffredi.
 Hüt.
 Monte Rosa.
 Oespitze.
 Colle Signal.
 Nordend.
 Punta Tre Amici.
 Colle delle Locci.
 Punta Groben.



MONTE ROSA

ROUTE.

22. Punta Tre Amici. G. Farinetti, A. Grober et G. Prato.
2 Septembre 1867.
No guides.
Ref.: Vaccarone's *Statistica* at end of 'Boll. C.A.I.'
xix.
23. Punta Grober (M. Loccie). A. Grober et G. Antonelli.
3 Septembre 1874.
Guide: G. Necer.
Ref.: 'A.J.' vii. 320.
24. id. paroi Sud. E. Manfredi en 1901.
Ref.: 'Rivista C.A.I.' 1906, p. 474.
25. id. arête S.E. Fratelli Gugliermina, N. Schiavi
et G. Alliata. 19 Août 1896.
No guides.
Ref.: 'Boll. C.A.I.' xxx. 2.

Refer also for further valuable articles :

- 'A.J.' xii. . . . 'Monte Rosa from the South,' by
W. M. Conway.
- 'Boll. C.A.I.' xxvi. . . 'La Punta Gnifetti e il Colle Sesia,'
by Guido Rey.
- 'Boll. C.A.I.' xxx. . . 'Monte Rosa,' by G. F. Gugliermina.
- 'Boll. C.A.I.' xxxii. . 'Sulla parete meridionale del Monte
Rosa,' by G. B. and G. F.
Gugliermina.
- 'The Alps in Nature and History' (Dr. Coolidge), chap. ix.
and 'Alpine Studies' (Dr. Coolidge), chaps. xiv. and xv.
- 'In Valsesia,' by Professor G. Lampugnani (G. B. Paravia:
Turin. 1907)—a well-illustrated and delightfully written
brochure.

FOUR DAYS ON MONTE ROSA.

By HERBERT V. READE.

THE purest of human pleasures may, as Bacon opines, be a garden, but in this *JOURNAL*, at any rate, it may safely be asserted that the highest of human pleasures is to make a new Alpine expedition of the first order. By an expedition of the first order I mean, not one of those desperate climbs which can only be achieved by an exceptional party under the most favourable conditions, such as the crossing of the Col du Lion, or the ascent of the Finsteraarhorn by its N.E. face—climbs where success may seem almost beyond hope, and failure is likely to mean irretrievable disaster.

Nor do I mean any of those 'fancy' routes on unimportant peaks, or ingeniously devised passes leading to nowhere in particular. Such climbs may do great credit to the enterprise and skill of those who invented them, and may be well worth repeating if you find yourself in their neighbourhood, or if you wish to avoid an easy and conventional way from one centre to another; but few will put them down as climbs which ought to be done, and will have them in mind year after year until they are accomplished. I mean rather one of those expeditions which come to rank as standard or classical, which, though not necessarily among the great climbs of the Alps, are yet climbs which most mountaineers will expect to do sooner or later, which the old hand will confidently recommend to the young one, which are remembered with an abiding satisfaction. Such climbs need not be extremely difficult or laborious, but they must have, as Aristotle observes, a certain magnitude (*μέγεθος*), and it is essential that they should be among the big mountains. Minor peaks may afford admirable and delightful climbs but not first-rate expeditions. To give examples would be easy enough; to define a first-rate expedition in a way which would cover all and exclude none worthy of the name would perhaps be impossible; but I am not without hopes that some day one of our veterans may attempt a list, or, better still, that from some symposium may issue a *catalogue raisonné*, with references to the *locus classicus* where each expedition has been worthily described, notes, illustrations, and everything else which the younger generation may properly demand.

If the discovery of an indisputably first-rate expedition, which can be handed down to posterity, a *κτῆμα ἐς αἰεί*, be the highest of human pleasures, it is one that few climbers nowadays can hope to enjoy. But such expeditions have often been the joint work of several parties, separated, perhaps, by many years, and the finishing touch, the discovery of a new route which, in combination with a familiar one, makes a climb of the first order, has sometimes been added in quite modern days. Some such combination, indeed, is, in the case of peaks, usually required, for it may well be maintained that an ascent and descent by the same route can seldom be ranked as a first-rate expedition. Or again, the discovery of a missing link, the solution of a comparatively small problem, or a fresh combination of familiar elements, may reveal a far finer expedition than had previously been known, and yield a joy but little less than that of the pioneer. May it not even be greater? For the pioneer may have been all unconscious of his achieve-

ments ; he did not realise that he was creating an Alpine classic ; he builded better than he knew. He lived in those spacious days when virgin peaks and passes rose on every side, and guide-books served but to indicate ' the petty done, the undone vast.' His task was to explore, to attack the most imposing of the untrodden peaks, the most promising gap in a ridge which had never been crossed, or to make another attempt where some predecessor had failed. How was he to tell which, among his many first ascents, would be held a desperate adventure, seldom if ever to be repeated ; which would come—his route improved and his chief difficulties avoided—to be regarded as a ' good training walk ' or ' an easy day for a lady,' and which would finally by common consent be placed in the first rank ? To weigh, compare, and classify has been the work of later generations ; until a climb has been done many times, in varying conditions, it may not be possible to put it in its place. The tariff should express the final verdict, but how often are its classifications disputed, and how many climbs there are about the merits of which those who have done them most furiously differ ! But at any rate the climber of these later generations can draw upon a body of ordered knowledge, and has only himself to blame if he does not profit by the mistakes or the wisdom of his forerunners. He should form his standard as he improves his mountain craft, and though the ' first fine care-less rapture ' of the creative artist can never be his, he may attain to joys that the pioneer knew not, the joys of the ripe connoisseur who has seen all the best things from La Bérarde to Pontresina. If such an one succeeds in devising a fine new expedition, at least he is fully aware of his good fortune.

Yet another joy which may fall to the lot of the climber in these latter days is the revival of some expedition which has almost fallen into oblivion. Every reader of the older mountaineering literature knows that there are climbs, even among the big peaks and near the popular centres, which were highly esteemed by their discoverers, but are ' never done now.' Sometimes there is a reason for this—they have been superseded by a better route, or have been found dangerous—sometimes there appears to be none. For, indeed, the reputation of climbs is not always according to their deserts. Most, perhaps, are given their proper class, but some are awarded no marks, because no one in modern times has brought them up for examination. He who, incited by tales of ancient days to follow in the footsteps of his spiritual ancestors, rediscovers an expedition worthy of a first class, has almost the joy of a pioneer, and may claim that he has done the State some service.

It was the good fortune of our party in 1908 to do both these things, to retrace a long-neglected pass which deserves to rank as one of the finest ways from Macugnaga to Zermatt, and to put almost the finishing touches to an expedition, which had not before been completely accomplished, on the summit ridge of Monte Rosa. The first sketch of our tour, planned by George Gask and the present writer a year or two earlier, was modest enough: to cross the Colle delle Loccie from Macugnaga to Alagna, go to the Colle d'Olen and the Gnifetti hut, and thence by the Lys Joch to the Punta Gnifetti and follow the ridge to the highest point of Monte Rosa. When Farrar joined us it became much more ambitious. For a first day we were to cross the Cima di Jazzi from the Riffel to Macugnaga. Then, instead of going down from the Colle delle Loccie to Alagna, we were to make our way across the S. face of Monte Rosa to the new Sesia hut, cross no less a pass than the Sesiajoch to the Gnifetti hut, rest a day there, and then do something far finer than merely following the porters' trail up the Punta Gnifetti. Now of the Sesiajoch indeed terrible things were told, but our trust in Farrar, after the adventures in 1907 which have been narrated in an earlier volume,¹ was unlimited. Moreover there was a good hope that the party would be strengthened by V. A. Fynn, whose climbing hat alone would be enough to inspire confidence in any party, even if they had not seen him coming last down an ice-slope. So we gladly gave ourselves into his keeping.

The party first met at the old Gamchibalm hut. Gask and I had progressed by stages through the rain from Kandersteg to the Blümlis-Alp hut on July 7, and after finding the weather too bad for a start at 2.30, and again at 3.30, got off at 5.30, and were rewarded for our perseverance by a brilliant day on the Blümlis-Alp Horn. In the afternoon we glissaded and walked down from the hut in two hours to the new hotel at the Gries Alp, where Farrar joined us the next morning, having taken his first training walk on the Niesen and plodded up the Kienthal. It was raining once more, but we kept our appointment at the hut, and found Fynn, arrived from Mürren over the Sefinen Furgge, already in possession. Even with the four of us² the diminutive lean-to was overcrowded, but though the number of cubic feet per head must have been far below the standard approved for a common lodging-house, the quite unimpeded circulation of air between the sides and the rock-wall which formed the back ensured that it should never be overheated, if always overventilated. The

¹ Vol. xxiv. p. 293.

² [—and a friendly mouse—]

next day was perfect, and we enjoyed the Gaspaltenhorn, though the conditions ruled out a design of trying a descent by the S.W. arête, whose formidable towers and chasms were finally conquered by Geoffrey Young's party in 1914. We crossed the Gamchi-lücke and descended the Tschingel Glacier to the new inn at Selden, just 12 hours of actual going. Next day a porter conducted us in $2\frac{3}{4}$ hours to the finely situated hut at Wild Elsigen, on the very edge of the wonderful cliffs that enclose the Gastern-Thal. The path almost attains the dignity of a rock-climb in places, but the really exciting part of the walk was down in the valley, when we had to cross the glacier stream, the first section by a single plank found on its banks, and the second section by an unpleasantly rounded tree-trunk, only a few inches above a whirling torrent which made the head swim but offered no hope that, in case of a slip, the body could do likewise. On July 12 we traversed the Balmhorn from N. to S., a long and rather disappointing climb, for which we may not have found quite the best way. Our time to the top was $9\frac{1}{2}$ hours, $2\frac{1}{2}$ spent in ascending the E. face, on to which we were beguiled by a long horizontal traverse from the N. arête where that was blocked by a tower. Our descent, which began on the S.E. arête, ended on the easy S.W. face, which brought us to the Dala Glacier some way below the Gizzi-Furgge, our next stage. That was reached at 7, and Ried, by a very weary party, at 10.45, after $16\frac{1}{2}$ hours actual going. The weather had only just been good enough, a cold and misty afternoon ended in a showery evening, and the next day rain came down steadily, making it certain that the S. face of the Bietschhorn would be out of condition for some time. So on the 14th we moved to Zermatt and the Riffelhaus, feeling that, at any rate, we had made the best of the changing weather, and that the party had found itself.

The first attempt at the grand tour was singularly inauspicious. On July 18 we started in brilliant moonlight, but it was ominously hot even at 3.30 A.M., and we did not feel very confident. Such chances as we had of reaching Macugnaga that day were extinguished by a wilful and deliberate ascent of the wrong peak. The Cima di Jazzi was known to three of us only as an unimportant item in a view, and though our mentor had been up it, I will not be indiscreet enough to say how many years ago that occurred. From the upper part of the Gorner Glacier it is merely one of several undistinguished if not indistinguishable snow-humps, its superior height is lost, and without protest from those behind me I led them triumphantly to the top of the nameless

point 3655. Then we discovered what we had done, and as a large cornice extending some distance blocked any attempt to force a pass, we went round to the broad W. ridge of the Cima, and so to the top. But the mistake had cost us quite two hours, in which the weather had been getting worse, and as mist on the Italian side now prevented us from seeing any promising route down the E. face, we decided to make for the nearest pass, which was the Mittelthor. Not even this was allowed us. It was now snowing, with a strong wind; we could see nothing, and presently found ourselves on a rapidly steepening ice-slope, coated with a little loose snow, which demanded great care. When this disclosed a formidable bergschrund, it was obvious that there was only one thing to do. Steering by compass, we picked up our old tracks, and returned in what might almost have been called a blizzard, had not blue sky been visible at intervals, in time to catch the last train down to Zermatt. Twelve hours actual going from the Riffelhaus to the top of the Cima di Jazzi and back may or may not be the worst on record.

Well, it was all for the best. If we had got over to Macugnaga, we should only have spent an idle week there or ignominiously retreated to Zermatt by diligence and rail, for two days of unsettled weather were followed by three of rain, and it was not until July 21 that things improved. Then (without Fynn, who was called away) we took train to St. Maurice, diligence to Lavey, and walked up to the little village of Morcles, from which Farrar and I traversed, next day, the two Dents de Moreles, little rock peaks which make a great show from the Lake of Geneva, about as good a climb as was possible in the conditions, and with the descent to the station at Charrat-Fully in the Rhone valley, long enough (13½ hours actual going) to satisfy anybody. Here Gask, who had not been 'fit'³ and had turned back early in the day, rejoined us. We slept at Martigny, and on the 23rd returned to Zermatt. On the 24th we went up to the Riffelhaus again. I find a snappish note in my diary to the effect that we might very well have started the day before, and had wasted twenty-four hours of fine weather; but again, as things turned out, the delay was fortunate.

This time we decided to begin by nothing more formidable than the New Weissthor. Starting early, on account of the fresh snow, we were at the pass (4¾ hours from the Riffelhaus)

³ Owing doubtless to the extremely primitive sanitary arrangements at the 'hotel' at Morcles.

by 7.45. Few places so easily accessible can have so superb a view ; if it is not a popular walk from the Riffel it certainly ought to be. Range beyond range, just defined by the soft clouds floating in the valleys between them, the mountains disclosed themselves to southward and eastward, until the eye lost itself in the azure distance that seemed infinite. We could not regret our failure ten days earlier, when nothing of this was visible, though we now saw that a little luck would have taken us round the impracticable ice-cliff down which we had been cutting, and brought us to a place whence we might have followed tracks over our present pass. An hour of easy rock, and snow steep and soft but sound, brought us to the Eugenio Sella hut, and we were soon on a grassy hillside where we rested, bathed in a tumbling stream, and slept for three happy hours. On the way down to Macugnaga, which we reached in 8½ hours actual going from the Riffelhaus, we had our first view of the next stage in our journey, and it rather staggered us. Few passes can have a more formidable aspect than the Colle delle Loccie, as it there confronts you. Crevasses, séracs, ice-cliffs, and, finally, an ice-slope which, seen full in face as we had it, appeared almost vertical, and enough in itself to make the reputation of a pass, even if everything below it had been easy and straightforward. We could only reassure ourselves by the ancient formula 'it can't be as bad as it looks,' and in two of us there rose the unspoken thought that Farrar always enjoyed step-cutting.

Though the day had been short and easy, we thought it wiser to rest before the two expeditions which were to follow without a break, and spent twenty-four hours in Macugnaga, leaving the next afternoon for the little inn on the Belvedere, an hour and a half above the village, between the two branches of the Macugnaga glacier. We had a thunderstorm on the way, but it was of the kind that 'clears the air' instead of breaking up fine weather. The inn was primitive, and it was rather disconcerting to hear that there was no meat to be had. But there were chickens, it seemed, and who, we said contentedly, wants meat when he can have chicken? Well, there are chickens and chickens. There is the Oxford chicken, lean and athletic as befits the surroundings ; there are Surrey fowls, and there are *poulets de Bresse*. On this occasion the chickens were bantams, which, though served head and all to make the most of them, seemed more in the nature of a *hors d'œuvre* or savoury than of the main dish. However, with soup, macaroni, and cheese we did well enough, and for the next day required only butter, which was provided. The incident is recorded for the benefit of others.

On July 27 we were off at 3.20, on a path as far as the Petriolo Alp, then moraine, and dry glacier after two hours. There really is not much to say about the pass, except that it was, as we surmised, much simpler than it looked. The lower ice-fall was easy enough, and though big ice-cliffs overhung the right bank of the glacier, we were exposed only for quite a short time. Crampons helped us considerably, higher up. The route must, of course, vary from year to year. The 'Climber's Guide' speaks of rocks, by which difficulties may be avoided; we did not touch rock the whole time, and were never tempted to do so. The ice-work was interesting throughout, but never very difficult (I remember one place where I stood on the leader's shoulders to surmount a crevasse, and there was a slight difference of opinion as to whether it was necessary to remove my crampons first), and in $3\frac{1}{2}$ hrs. from first taking to the ice we were at the foot of the final slope. This, we must respectfully maintain against the authority of Ball, is not really steep, though when it is ice it would no doubt be found quite steep and long enough; we had good snow, and were up it in twenty minutes, and on the top of the pass in just six hours' actual going from the Belvedere.

The situation was fine, the view splendid, and the weather perfect, but the important thing for us was to discover the Sesia hut across the S. face of Monte Rosa, and this, with the aid of our old friend, Farrar's prismatic monocular, the ideal glass for a mountaineer, we were able to do. It lies on the rock buttress rising from the point marked 2783 on the Italian map. The traverse of the face under the Punta Gnifetti to get there may well look, from the valley below, a formidable undertaking, but it is, in fact, neither difficult nor dangerous. For most of the way we went on easy snow-slopes, and by descending a little, so as to strike the buttress near its foot, we were able to avoid any exposure to risk of falling ice from above. A little rock-scramble brought us in less than two hours to the crest of the buttress, and once there we were able to take off the rope and go at our ease. Only just below the hut was it necessary to cross a slope, for about ten minutes, over which hung some evil-looking séracs, and this could be done almost at a run.⁴ We reached the hut at 4.30, in $3\frac{1}{2}$ hrs. from the top of the pass, and our last anxiety was removed when we found some fuel there, left by a previous party. We knew that none was regularly provided, but to carry wood over the

⁴ We were protected by the footwall of the Parrot Glacier under the lee of which one could always crouch in case of any projectiles.

Colle delle Loccie was not to be thought of, and the alternative of telegraphing to Alagna for a porter to be sent up had been dismissed as extravagant and probably useless. Having a spirit-stove we were secure of hot food, but an unwarmed hut at that altitude would have been cheerless, to say the least of it.

We had gone early to bed, thinking ourselves as safe from interruption as any party in the whole range of the Alps, when noises unmistakably human assailed our astonished ears, and three Italians, equally astonished to find tenants already in possession, burst in upon us. The feelings which, in such circumstances, the most sociable of climbers find it hard to subdue, gave place to pleasure when we discovered that the disturbers of our peace were the brothers G. F. and G. B. Gugliermine,⁵ well-known explorers of the Monte Rosa and M. Blanc chains, with a clerical friend (Rev. L. Ravelli), and our satisfaction was complete when we learned that their object was not the same as ours. If two parties are to share a small hut, it is perhaps preferable that neither or (as in the present case) both should be guideless. The professional, unless he be one of the best, is apt to resent the interference of the amateur, and to insist that his own party shall have the first of everything; the division of the necessary labour is difficult to manage; and the compromise by which the guide, suitably remunerated, acts as cook and housemaid for both parties, leaving the amateurs free for the higher thought or the higher carelessness, makes the conscientious climber feel that he is hardly playing the guideless game according to the rules.

It was not advisable to move before daylight, but both parties were off soon after 4, the Italians starting up a rock-ridge, we, fortified by some useful information about our route, up a snow-slope. But a little higher up we rejoined them, and all breakfasted together at the top of the ridge, which was easy going for about $1\frac{3}{4}$ hours. Then they bore away to the left, to make a new route up the E. ridge of the Punta Giordani, which looked sound enough, and was safely accomplished.⁶ We went diagonally up a short snow-slope to the right, and in twenty minutes arrived at the main feature of our climb, a long steep rib of mixed snow and rock, mainly the latter, leading straight up to the summit ridge of Monte Rosa. But it seems that this is not the rib or arête which is

⁵ They are old friends of Farrar's, and they and he had much to say each to other. The padre was also splendid.

⁶ See route 4, p. 126. We were able to watch them all day, and they joined us again at night at the Gnifetti hut.

so vividly described in Mr. H. B. George's account of the first ascent ('A.J.' i. 49). Their rib was just a little further to the right, and is the one actually bounding the frightfully steep ice-couloir which might be considered the 'true Sesiajoch,' but is overhung at the top by a great ice-cliff, and is therefore quite impossible. A party coming from below, as they did, would naturally keep straight on up the possibly more difficult rib, but anyone coming across from the Loccie, as we did, would naturally go to the hut. Our rib was of the same general character, steep sound rocks, interrupted occasionally by little snow-arêtes, but must be distinctly easier, to judge by Mr. George's description.⁷ Their time on it, however, was only 3 hours 35 minutes, while we, a party of three against their four, took just 3 hours. We had thoroughly good climbing, but no real difficulty, and at 11.20 we were at the foot of the final slope, which is the same, whichever rib is followed. Here they had rather thin snow on ice, which required care; our snow was deep and soft, which meant steady ploughing for an hour before we reached the last rocks. Nothing fell while we were there, or seemed likely to fall, but in some conditions the slope might be dangerous. Another 35 minutes of straightforward climbing brought us to the summit ridge—their time also was about an hour and a half. There are some purists who insist on honouring with the title of 'the true pass' that depression in a ridge which happens to be the lowest, even if, as in the present case, it is hopelessly impassable. To me it appears that the true pass is the place where the ridge can most conveniently be crossed, even if it be somewhat indeterminate. The lowest point of the New Weissthör is equally useless, and the pass is about 100 ft. above it. We were only about 60 ft. above the top of the ice-cliff which crowns the couloir, and perhaps 100 ft. lower than the summit of the Parrot Spitze (4463 m.), which we reached in twenty minutes. Other persons have been disrespectful enough to deny that the Sesiajoch, as we and our predecessors did it, is a pass at all, and have even compared it to getting from one street to another over the roof of a house, merely avoiding the chimney-pots. It is true that a slight divergence to the left, on the final rocks,

⁷ Their route is No. 12, p. 127. Our route, No. 20, and theirs are very much the same until the level of the lower part of the Parrot Glacier, when they kept straight on and we bore away to the left for the hut. Of course, the position of the hut determines the line now followed from it to the summit. The hut is shown on the marked photograph and upon the map.

would have brought us straight to the top of the Parrot Spitze itself. But the fact remains that the Sesiajoch is a splendid route over the main ridge of Monte Rosa 'between the Parrot Spitze and the Punta Gnifetti,' from Alagna to Zermatt, and, pass or no pass, it ought regularly to be used. Yet it seems to be unknown to the present generation of Zermatt guides, and there is no record of its having been done by an English party for years. Why this should be so is a mystery. It was crossed by Moore and George in 1862, by Moore and Walker in 1865 ('A.J.' ii. 134), by Mr. Coolidge in 1869 ('A.J.' iv. 384), and descended by the Misses Pigeon, accidentally, in the same year, one of them being last on the rope. Mr. Gardiner mentions that he crossed it in 1876 ('A.J.' viii. 379), and Sir Martin Conway, writing in 1884, says that it was then well known, and 'has been crossed in both directions several times.' But of late years, perhaps from an undeserved reputation for danger, it seems to have dropped out.

From the Parrot Spitze we went down the easy snow-ridge in about fifteen minutes to a point from which we could see the top of the couloir, with its icy bastion, and, after re-ascending a little, ran down to the tracks leading from the Capanna Margherita to the Lys Joch, and were on the top of that pass in forty minutes. The weather had been perfect until midday, then it gradually clouded up, and now snow was beginning to fall; but in another hour, at 4.30, the tracks had taken us safely to the Gnifetti hut. The total going was just under nine hours.

In the night there was much thunder and lightning. Puzzled by what seemed to be a fixed light just outside the window of my room, I got out of bed to investigate, and found that a metal pipe, connected with the gutter which drained the roof, was glowing with a steady blue flame. The phenomenon was, I suppose, what sailors call 'St. Elmo's fire.' It snowed most of the next day, but we must have rested in any case, and the hut is comfortable enough, being almost an inn, with plenty of food, though no fresh meat or vegetables were provided. On the following day the weather improved, and after a fine afternoon and evening we resolved to start the next morning, not without some fears as to the amount of fresh snow that might be awaiting us.

The expedition that Farrar had planned was to traverse all the peaks of Monte Rosa in one day. Sir Martin Conway, in the article quoted above, had said that it might be possible for a quick climber, starting very early from the Colle d'Olen, to climb all the peaks from the Vincent Pyramide to the Zumsteinspitze and get down to the Riffel the same evening. The

Gnifetti hut has of course made any such expedition much easier, and all parts of the traverse had been done by various climbers, but no one, to Farrar's knowledge, had visited all the points, from the Punta Giordani to the Nord End, in a single day.⁸ Twelve peaks, all admitted to the sacred roll of those over 4000 mètres, in one expedition, would be a feast for the gods, and the two members of the party who had never been on the mountain until that week felt that if they could add this to the three previous climbs, nothing less than Caesar's *Veni, vidi, vici*, would do them justice.

The amount of the climb that could be done by lantern light was limited, so we did not start until 3.30. After following the Lys Joch route for ten minutes, we bore E. to the easy ridge running S. from the Vincent Pyramide, went up it for a little, then traversed on its E. side, ascended the snow field connecting it with the Punta Giordani, and easily reached that, our first peak (4055 m.), in 2 hours. To the Vincent Pyramide there was a straightforward snow-and-rock ridge. The rocks were a little awkward in two or three places, and it would have been quicker to traverse under the ridge, for the early part of the way, if the snow had been good; but, alas, it was only too clear that there had not been enough melting in the day and frost at night to consolidate what had recently fallen. We were sinking in already, and realised that a tremendous job lay before us. Less than an hour and a half took us to the top of No. 2, the Vincent Pyramide (4215 m.). We ran down a snow-slope, up to a broad ridge and along it, and in 50 minutes more were on No. 3, the Balmenhorn (4114 m.). A ridge led to the Schwarzhorn, No. 4, and at one place the rocks were not quite easy. On the top (4231 m.) we had a hasty meal at 9.15, then descended by a short steep snow-slope on the W., which was in the worst possible condition. The surface kept on coming away in large slabs, several feet square and several inches thick, and it seemed highly probable, in spite of all Farrar's skill, that one of them would take us with it. The spot was not one where, as Leslie Stephen said of the Eiger Joch, the rest of our lives would have been spent in sliding down a snow-slope, and that employment would not have lasted long enough to become at all monotonous. The friendly névé was only some fifty feet below us, but a tumble would have been at least disconcerting; and who could say that some distant telescope might not reveal the disgrace to the world at large? From that time until we arrived at the Punta Gnifetti the snow was heart-

⁸ It is believed that this has since been done.

breaking. Farrar, who had got the bit between his teeth owing to our having cast some doubts on the possibility of completing the proposed climb, insisted on leading throughout. 'If I can't do anything else, I can do snow-plugging,' he modestly asserted; and it was the longest bit of 'snow-plugging,' now mainly up-hill, that I had ever seen. To No. 5, the Ludwigshöhe (4346 m.), was 45 minutes of it. A short descent followed, then an hour and twenty minutes up to No. 6, the Parrot Spitze (4463 m.), where, though the ascent was mostly on a fairly narrow ridge, the snow was almost the worst of the day. Then, at 11.35, we followed our tracks of three days before for a short distance—not that they helped us!—but were soon able to run down to the path already marked by the feet of porters with provisions. This was a little better, but steady up-hill work, and the last bit the steepest. At 1.30 we were on point No. 7, the Punta Gnifetti (4561 m.); and after ten hours' going, with one halt of fifteen minutes for food, we felt entitled to an hour's rest and a hot meal in the Capanna Margherita. It was excellent, but the prices charged, very properly, to non-members of the Italian Alpine Club, made us resolve to join that admirable institution forthwith.

I was put on to lead for the rest of the way. Farrar's monopoly of the hard work had left me remarkably fresh, and Gask, who had led us up the Sesiajoch, remained as our balance in the bank, large enough to meet any emergency. To No. 8, the Zumsteinspitze (4573 m.), was a slight descent, then an easy ascent up a broad ridge, 35 minutes in all, with better snow. Then came a mixed arête, snow and rock, a good though not difficult climb, which we did in $1\frac{1}{4}$ hrs., going fast, to No. 9, the Grenzgipfel (4631 m.). No. 10, the Ostspitze (4633 m.), and No. 11, the Dufourspitze (4638 m.), took 15 minutes apiece of similar work.

But it was 5.15, and we had known for some time that the Nord End, our twelfthly and lastly, must be abandoned. The descent to the Silbersattel and the ridge leading to the summit, thick in new snow and apparently corniced in places, might have taken an hour and a half there, so that night near the top of the highest point (the descent direct from the Nord End would no doubt have been worse) was not a chance but a certainty, if we tried it.

Turning homewards, we were down at the saddle in 50 mins., and after a fresh spell of ploughing through the softest possible snow, at the Bétemps hut in another 2 hrs. It was consoling to hear, afterwards, that a lady there, hearing we had just come from Monte Rosa, put us down as a terribly slow party. At

10.15 we reached the Riffelhaus once more, 16½ hrs. actual going, 18¾ with all halts.

The fresh snow had beaten us, only that and nothing more. With reasonably good conditions we should have saved something like three hours, and included the Nord End comfortably. Farrar, in 1898, had gone in the reverse direction from the Punta Gnifetti to the Schwarzhorn in an hour and a half, a bit that took us nearly four hours, of which only about half an hour would be due to our having more up-hill work. Let no one think of it as a monotonous 'grind,' to be performed merely for the sake of adding peaks to one's record. There is a very fair amount of good climbing, the alternation of up and down, and the constant changes of view give variety even to the snow-walking, and the mere feeling that one is traversing one of the loftiest ridges in Europe, with the superb visions of Italy below, are enough to make the expedition one of the very first order. Combined with the other three days, it forms as fine a tour as can be found in the whole range of the Alps.

We thought we had earned a real off-day. But to the Riffelhaus came a message from Fynn that he was back in Zermatt and had just time for one more climb with us. The train took us down in the morning, but our legs had to take us up to the Trift Inn in the afternoon. Next day we made a leisurely and delightful traverse of the Rothhorn to the Mountet Inn, and the day after Farrar and I—the others going down the valley homewards—went back to Zermatt over the Trifthorn, shirking the Gabelhorn because we had not brought our crampons. So at least we said, but we might have found it a little long in any case. Farrar remained to take further advantage of the perfect weather. I had to return, feeling that I had 'done' more peaks in thirty days than anyone has a right to expect, and that though all of them were near the old centres, a climber who had slept in eighteen different places could not be called a 'mere centrist.'

IN THE CAUCASUS—1914.

WHOEVER once visits the Caucasus mountainland, that region of sublime beauty and strange half Oriental charm, must for ever long to return.

If he has been favoured with glorious weather and consequent great success of the travel and climbing plans, the longing may prove irresistible.

In the summer of 1913 I was entrusted by three friends with the organization and leadership of an expedition to the Caucasus. Mr. W. N. Ling, my sole comrade on many an ascent in the Alps and Norway, has related ('A.J.' xxviii. 131-44) the general account of how we fared that season. In 1913 I travelled out ahead of the party to Vladikavkaz, and had three days of fairly arduous work interviewing would-be dragoons, interpreters, and cooks, and organizing equipment and commissariat. Through a young Frenchman, I was introduced to a young Russian cadet of Danish descent—Mr. Rembert Martinson. His eyes sparkled when I unfolded the plan of campaign, and after obtaining the permission of his parents he came as interpreter and climbing companion.

Of small experience—he had visited the lower ends of some Balkarian glaciers and had ascended Kasbek, a climb of the order of Mont Blanc by the Grands Mulets—he proved an apt pupil in both rock-craft and icemanship. He was very useful in dealing with the frequently dilatory, erratic, and extortionate horse-owners and porters.

In 1914 another expedition was organized. To his and my great regret Ling found later that he was unable to join. Messrs. Johns and Young, the other members of the 1913 party, had calls in other directions. The party eventually consisted of three—Mr. R. C. Richards, Mr. H. Scott Tucker, and myself.

I was this time able to arrange beforehand by correspondence with my young friend Martinson many necessary details. He again came with me as aide-de-camp. We were this time able to engage a much better cook and a much better man than the lazy Imeritian of last year. Our cook this season was a Russian soldier of reserves named Alexander Miranoff. He was a small, quiet man, but a dandy in his way, and I was obliged to make him leave behind at St. Nikolai about half the large supply of bedding, extra clothes, and luxuries he (or his wife) had thought necessary for a mountain campaign. His shaving mirror, however, sometimes came in useful, as we had none of our own.

The party travelled out together from London by the quickest route, *via* Flushing, Berlin, Kalisz, Warsaw, and Rostov, and reached Vladikavkaz in exactly 4 days 8½ hours.

Thus the Caucasus is actually nearer in time than is Norway's climbing ground. Fortunately for the success of the expedition we arrived just after, not before, a terrific burst of rainstorms which had swept Europe from France to the Caucasus. At Mineralnia Vody we heard tales of trains and bridges swept away.

All the great rivers of Cis-Caucasia were out over the flat country for miles, and we had to proceed very cautiously over the undermined embankments.

One curious result of this flooding was the presence along the railway of millions of frogs—probably the same species as imitated by Aristophanes—their ‘croaking chorus’ almost drowned conversation whenever the train stopped.

July 8, the day of our arrival in Vladikavkaz, was a day of heavy wet, and little was done. On the 9th it cleared and I ordered three lineikas for the following morning. The lineika is a light, low vehicle, something like an Irish jaunting-car on four wheels. It is usually in the last stage of debility and senile decay, and the harness has probably seen many generations of the small and slight, but active, docile, and enduring horses.

We had been told at Vladikavkaz that it was quite impossible to reach St. Nikolai, the Cosak Post or Kazarma on the Mamison road, where we were to take to the hills. Roads and bridges had alike completely gone, and several villages as well. These last statements were an exaggeration, but not a great one after all.

My friends had ample opportunity of witnessing, not without a certain measure of admiration, what the ramshackle-looking vehicles were capable of coming through without disintegration, and what feats of equine acrobatics the little mares could perform with the cool ease of professional equilibrists.

This year's plan of campaign was complementary to that of last. In 1913, after a period of centrism from a base camp in the Adai Group, we traversed the Asiatic slopes of the chain, crossed to Elbrus and returned to rail at Naltshik. In 1914 the first part of the scheme was repeated. We were then to traverse, in a similar manner, the northern slopes and valleys. As Messrs. Richards and Tucker had only a limited time at their disposal, we were to drop down to railhead at Naltshik on August 4. Here I expected one or two others to join for a farther western campaign, including a raid by a new pass into Suanetia. The outbreak of the war, of course, found only half this plan accomplished.

On our way up the Mamison road we encountered our friend of last year, the handsome Cosak in charge of the St. Nikolai Kazarma, fishing the Ardon for trout with a net. He was delighted to meet us and placed three excellent rooms at our disposal for the night.

We pitched our tents on July 12 on exactly the same spot as last year. It could not easily be improved upon. Close beside us raced by the turbulent torrent of the newly glacier-

born Tsaya River. Opposite towered enormous cliffs tufted with pines—

‘ Rooted aloft on the rock,
Type of the North and of valour.’

Not far off a clear stream from the recesses of the Tsaya aiguilles prattled past. It furnished good drinking water and most refreshing baths. A few minutes' walk above the camp gave a beautiful tree-framed picture of the name peak of the group Adai, with its great N.E. hanging glacier. The Tsaya glaciers and their encircling peaks are not visible. Only the débris-covered snout of the united ice streams filling the bottom of the valley appears from round a corner to the left.

From this base camp several expeditions were made. The first, starting directly from the base (6300 ft.), reached the Tsaya-Karissart Pass—about 13,000 ft.—over the ridge of the Tsaya aiguilles between Tsaya and Dunti (Kamunta). This is an easy pass up a steep little ‘glaciette,’ on this occasion deeply covered with soft, bad snow. The lower part of the route is the same as that for the Tur Pass of July 10, 1913.

Fine views of a party of Tur were got, the sentinel buck outlined against the sky, on the extreme spike of one of the jagged aiguilles characteristic of the N. side of the Tsaya Valley.

One of the objects of the expedition was the discovery of a pass between the Tsaya glaciers and the great névé of Karagom. The topography shows that such a pass would have been a great convenience to the natives. No native pass exists. The inference was that any passage must be difficult. The nearest way—and Mr. Freshfield has suggested this as a possible route in his work on Caucasian exploration—lies between Adai itself and Songuta, the peak bounding the Karagom névé on the E.

On July 14 we pitched high camp on grass at about 9000 ft. below the terminal ice-cliffs of the hanging glacier of Uilpata.

Next morning, leaving at 3.5 A.M., we ascended the right moraine and got on the glacier above the formidable bulge of the snout. An easy ice-fall was then passed and we entered the lower basin.

This glacier is formed in a peculiar manner. I have not seen any exactly parallel in the Alps or Norway. Between Adai's (Uilpata) ice-clad N.E. face and the S.W. ridge of Songuta sweeps round a deep névé basin. Part of the ice from this pours over a great lip of rock stretching across between Adai's S.E. spur and Songuta's S. buttress. Another portion escapes through a deep gap cloven between Adai main peak

and its S.E. spur and flows down S.W. to join the N. Tsaya glacier. The great ice-crowned cliff forms, of course, a complete barrier to a direct ascent of the Uilpata glacier.

We attacked the steep S. rocks of Songuta to our right. The climbing was interesting, though hardly more difficult than the ordinary route of the Gabelhorn. Higher the angle increased. Just as the rock became somewhat hopelessly steep, a neat traverse along a ledge to the W. was discovered, which led under an overhanging edge into an ice and snow couloir coming down from the upper snow basin. Under present conditions this was not difficult and we ascended it. The direct Adai-Songuta col now became visible. Its appearance was not at all attractive. Steep snow-slopes, furrowed by many avalanche grooves, led up above the bergschrund to vertical-looking rocks, over which loomed threateningly huge cornices. We therefore turned to the right (E.) and made for a snow-plastered rock-rib which ran down for some way from one of the pinnacled rock arêtes of Songuta's S. face. The distance to these rocks was short, but the struggle to reach them was one of the stiffest I can remember. The angle was just about as steep as that on which large masses of fresh soft snow will lie, and it did. We had literally to wallow a trough upwards. We all, of course, took it in turns to lead. It was amusing to note how each one of us developed a critical impatience of the absurdly slow progress of the man in the fighting line, until he found himself there. The rock-rib, plastered as it was with ice and snow, was none too easy, but was a relief after the slope below.

At the top we found ourselves on a corniced gendarmed ridge on the other side plunging sheer down the south wall of Songuta. Passing along this ridge we gained the watershed somewhat on the Songuta side and higher than the Adai-Songuta col at 2 p.m. (about 13,300 ft.).

Splendid views from here were obtained of the ice-plastered E. and N. facets of the pyramid of Adai Khokh. To the E. the almost vertical—on the S. overhanging—rock towers of Songuta rose above our snow saddle. Every pinnacle not practically vertical was buried in ice and new snow. The discussion of a meal and of the question of attacking Songuta's final peak was brought to an end by the downrush of a fierce cold wind, accompanied by mist, thunder, and very heavy hail, and we turned for the descent at 2.50. I had previously, however, by descending a couple of hundred feet on the N., ascertained that the col is easy on the Karagom side. Owing

to care necessary to avoid avalanches, we did not get back to high camp till just before dark.

The next expedition was designed for the complete traverse of the N. Tsaya glacier, whose difficult ice-fall had repulsed last season's party. At the western extremity of this glacier rose three unascended mountains between Adai and Tshantshakhi. We hoped, if conditions allowed, to make the first ascent of one of these. A search for the elusive 'easy' Tsaya-Karagom pass was also included in our plans.

My friend Dr. Ronchetti had sent me a marked photograph showing his route of ascent of Adai (the third ascent and the *first* from Tsaya side); it also showed how he avoided the ice-fall and got over the central ridge into the upper névé of N. Tsaya.

Provisions for three days were collected and two hunters engaged as porters, and the party left at 7.10, a lovely morning as usual after the heavy thunderstorm of the previous afternoon.

Ten to fifteen minutes' walk through the thinning forest brought us to the 'Great Kosh' under the smoke-blackened overhang of a great cliff. Opposite are the high—100 ft.—terminal ice-cliffs of the Tsaya glacier. A good track up the left moraine leads in fifty minutes to first good water. Five minutes further 'Chough Nest' Kosh is reached, and just over the hour 'Tur Junction,' where a slight track breaks off for Tur and Tsaya passes. At 10 some fine meadows are reached, a first-rate site for a hut, just behind the moraine below the first ice-fall.

Before reaching this spot, another Kosh, 'The Doggeries,' is passed. We bestowed this name because it was guarded by a pack of particularly vociferous and bellicose, big, mastiff-like dogs. Though it is annoying and even disconcerting to some people to be surrounded by a number of wild beast-like animals, plunging in an apparent ecstasy of mad fury, with dripping jaws and bared white fangs towards one's calves, I think the danger of an actual attack is small.

There is a story of a Russian officer who, having shot one of these threatening dogs with his revolver, had to shoot its master as well, who attacked the officer in revenge. I cannot help thinking the officer must have got unnecessarily flurried. I have studied these dogs at many remote places and have never seen or heard of anyone being bitten by them, though they will snap at the heels or tails of horses readily enough. The dogs of a 'Kosh' or sheep or goat drove have well-defined

frontiers ; they will not come to attack over these frontiers, nor will they pursue an intruder beyond them.

Calm indifference is the usual best defence. If very obstreperous the argument of the 'heaved half brick' is considered by them quite sound and unanswerable. Ridicule answers with those possessed, as so many dogs are, of a keen sense of humour. They hate making themselves ridiculous. At a pinch an ice-axe thrust suddenly down their throats is sure to cause a disgusted withdrawal to the background. The men of the 'Koshes' rarely interfere to quiet the dogs, and in the absence of orders from those 'head dogs' of the pack, the 'under dogs' are merely faithfully performing the duty of harassing and driving off possible enemies. They are handsome beasts, usually with thick, bushy tails, and two of them would be a match for any prowling wolf.

Above the meadows the valley narrows suddenly, and the glacier pours down the fall—about 800 ft.—in fine séracs. The fall is passed on this side by ascending and crossing a rubble and ice gully, somewhat dangerous from falling stones, to a snow-slope above the steeper part of the fall. I was interested to observe how our hunters managed.

Last year we had two herdsmen here to whom we gave the loan of nailed boots. As the snow was hard I nicked steps for them. The Caucasians with their 'gloved' feet are accustomed to place the whole foot flat in order to obtain the best grip. Of our herdsmen, father and son, the older man still tried to follow out the old plan in his novel footwear ; the boy watched us carefully and imitated quite successfully our method of digging our toothed boot-edges into the slippery substance. These hunters, however, refused the loan of nailed boots. For the passage of the ice-fall they put on crampons made of knotted rope. As the surface was not too hard, these seemed to answer wonderfully well.

On our return, one of the men volunteered to show me a secret road through the rocks avoiding the dangerous part of the couloir. It was not exactly quite easy for a loaded man as he was, and I relieved him of his rifle. He seemed greatly scandalized and alarmed at what he evidently considered my unorthodox method of descending chimneys, face out, and jumping whenever a foothold appeared.

Above this ice-fall on the right is a steep bench of grass, the last grass here, rising to the wilderness of aiguilles forming the termination of the great S.E. spur of Adai.

Here we pitched tents on the levels cut out for our tents in 1913 (height 9300 ft.). By odour and other evidence, this is



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VOLOGATA: KARAGOM MASSIF.

H. Woolley, photo.

a favourite haunt of Tur, and our hunters disappeared in pursuit of the big goats when relieved of their load.

I employed a couple of hours in the afternoon in looking for a short cut to the N. Tsaya névé through the rocky walls on the left (E.) of the N. Tsaya ice-fall. The climbing was by no means always easy, and I always found myself cut off from the ice by vertical walls one or two hundred feet high. A passage here would be very useful.

We got under weigh at 1.5 on July 20, descended on to the glacier and worked over to our left to avoid the maze of séracs and huge crevasses caused by the falling-in of the N. Tsaya ice-fall. Contouring back we reached the foot of the 'Couloir Ronchetti' in 1½ hours.

This led easily up scree, ice, and snow—earlier probably all snow—to a col at 3.40 A.M., whence leads an easy and slight descent to the N. Tsaya névé above its formidable ice-fall. The couloir is just behind the sharp rock, the end of the spur of Mamison or the 'Curtain,' which, as it is the pivotal point in Mr. Woolley's panorama of the Tsaya peaks, might be called 'Woolley's Rock.'

The glacier is flat at first; in fact small lakes, as on the Argentière, form in the afternoon. It then steepens and the peaks at the head were slow in nearing. The scenery is very fine. The walls are everywhere steep. Not a single col that could fairly be termed easy could be seen. The most promising, but it would be a pass of over 14,000 ft., leads up the S.E. flank of Adai itself to the dip between that peak and its 'shoulder.' This col was easily gained from the Karagom side by the first party to ascend Adai, Messrs. Holder and Cockin with Ulrich Almer in 1890. The beautiful Grand Combin-like mountain of Tvilisis Mta attracted attention, but it is almost entirely a snow peak, and the snow was already getting heavy and crusted. To its right shot up very steeply a twin rock peak, the Double Peak of Mr. Freshfield's work, cleft by a vertical-looking snow and ice couloir fully 3000 ft. high. Its south-east ridge is adorned by a huge rock obelisk, whose boldness of contour is exceeded by nothing on the ridges of the Chamonix aiguilles.

But it was to the left of Tvilisis where our gaze turned oftenest. Here the N.E. face of Tshantshakhi, our conquest of 1913, presents itself as a rock face of a severity not easily surpassed on any other mountain in the Caucasus or the Alps. At 7.15 we reached the rocks at the foot of the S.E. ridge of Bubis (Double Peak). These rocks soar almost vertically upwards in great slabs of granite, and the ridge is here unclimbable.

Our plan was to ascend the couloir, utilizing a considerable patch of rocks breaking its surface, to our left, and gain the ridge above the great gendarme which we called the 'Prong.' The snow was good and sufficient on ice at about the holding limit—52 degrees—55 degrees—and the 2000 ft. went easily. The ridge, however, proved impracticable, the rocks almost vertical, and the structure very insecure. We were soon forced to leave it for the couloir. The snow up here was thin and the angle close to the limit of adhesion. While crossing a space between two rocks the whole layer under the feet of the two central climbers on our 100-foot rope slipped off. The end men were ready however and the slide was easily checked. The col was reached without further incident; then turning to the left—South—half an hour or so up a corniced arête and through a small cross-cornice placed us on the summit of the South peak of Bubis. On my copy of the Russian One-Verst map the peak has neither name nor height. Mr. Freshfield, from preliminary sheets sent him, has credited it with the figures 14,874 ft. It is therefore only second in height to Adai itself in the group. Its only possible apparent rival is the magnificent ridge of the Karagoms on the N. side of the long arctic trough of Karagom névé.

The peak is normally a very sharp rock peak, but two feet of powdery soft new snow had to be dug through to obtain the stones for the necessary cairn. On the N. side the great couloir is repeated, but in a shorter and easier fashion, down to the Karagom névé, but the S. peak turns one edge to the head of the Bubis glacier and must appear the dominating peak from that glacier.

Owing to the bad and tiring state of the snow on the upper N. Tsaya glacier, we did not turn in to our comfortable tents at the high camp till after dark.

The following morning the hunters came up and we shifted baggage to base camp again. That afternoon, as I was absorbed in demonstrating to Miranoff our cook the art of making 'Dropped Scones,' our camp was invaded by a bevy of young ladies. They were full of interest and admiration (?) for our domestic arrangements, and I could not help noticing that they eyed the scones as though not unwilling to make closer acquaintance with *them*.

I regret if we may have seemed inhospitable, but the ladies were many, young, and doubtless hungry; the scones were few, small, and very tender. It would have taken a miracle of the loaves and fishes order to meet the case. We therefore decided not to show partiality and did not offer them anything. They presently set off down the valley for their supper and night quarters at the 'Sanatorium.'

I asked Rembert about the ladies. It appears they came from the large cities of Russia. The route was over the Mamison Pass, with a side trip up the Tsaya Valley to the glacier. If they stayed at Tshantshakhi Kasarma they could reach that glacier in an easy half-hour from the road. Descending the Rion Valley they were to proceed to Kutais and Batum. Thence home across the Black Sea to the Crimea. The ladies were accompanied by one or two gentlemen and a few natives and horses, but most were on foot.

We met several of these parties on or near the Mamison Pass road in both 1913 and 1914, and their presence shows that the splendid air and magnificent scenery of the Caucasus are becoming gradually known and appreciated by the inhabitants of Russia's great cities.

The time had now arrived for us to set out upon our travels and to shift our base camp to the N. side of the range.

We planned to do this personally over the top of Tsaya Khokh and down the Karissart or Dargom Glacier to Kamunta.

Meanwhile the camp, in charge of the cook, was to proceed *via* St. Nikolai, the Sadon village and pass to the same rendezvous.

About 1 p.m. on July 22, after a morning of intermittent rain and packing, all the baggage was loaded on horses and despatched down the valley. We four now homeless wanderers turned up the track towards Tur Junction to seek some high hole of refuge for the night.

When we reached the 'Great Kosh' the rain, which had again set in, became very heavy, and a halt was called which turned out to be one of over two hours. Rarely if ever have I seen such rain. We looked out from our dry recess while Niagaras roared on the rocks above, and poured in solid sheets from the far-overhanging eaves of the Kosh. I was interested in watching some of our fellow refugees already here—the goats. Especially quaint was one cheeky little kid. It occupied, fully occupied, like an overgrown Mephistophelian dog in a too small kennel, a stone-built oven in one of the Kosh's enclosures. From the oven entrance protruded its profile, the jaws working steadily, the big brown eyes fixed in an introspective stare, doubtless going over the garnered fruits of past acquisition and study and preparing them for future use.

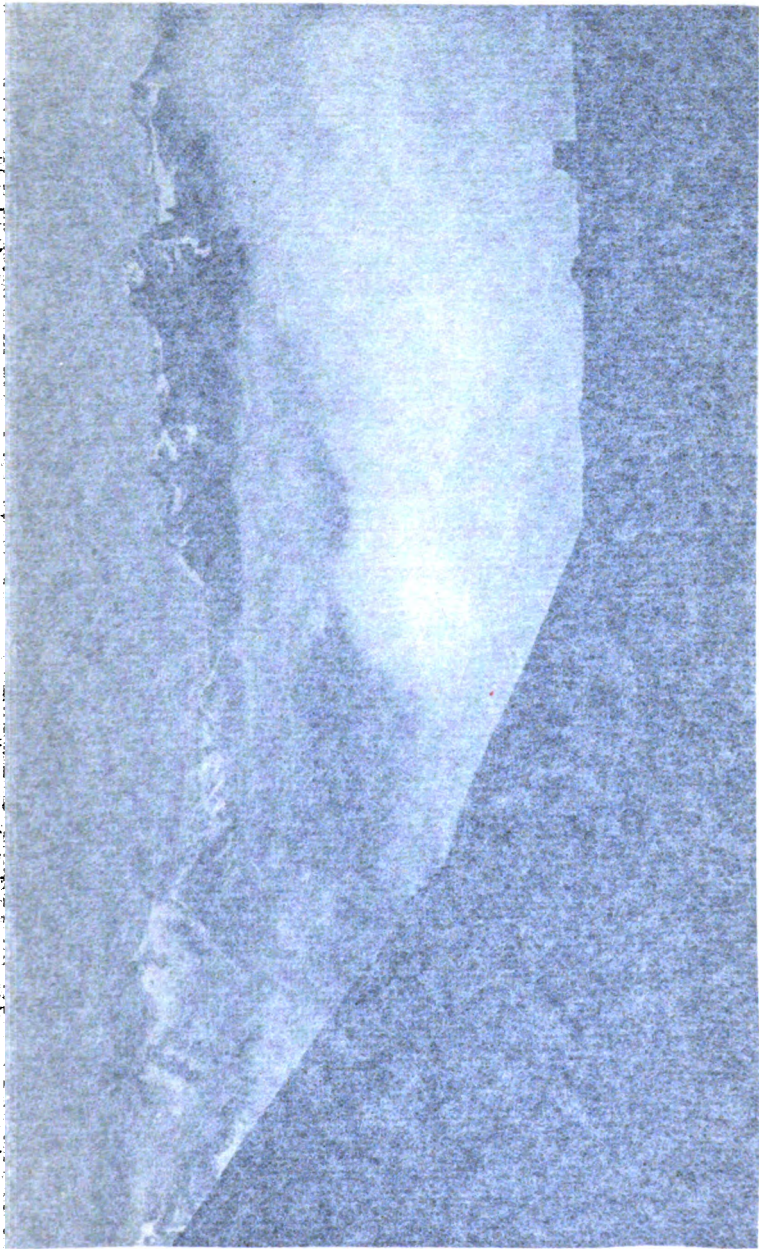
In a lull of the deluge we made a move and reached 'Boulder Kosh' just below Tur junction. There we stopped. Richards, after a gallant and long-sustained fight against the all-pervading wet, had at last succeeded in persuading some logs to burn,

when the horse leader parted with in the morning appeared. I am convinced that man has missed his vocation. His rôle is really the tragedian of melodrama. He was apparently almost fainting with exhaustion; his chest heaved, and he seemed quite unable to speak. We discovered afterwards that he had come up almost all the way on horseback. Nobody offered any vodka, for the very good reason no one had any to offer. He however accepted, with little enthusiasm indeed, a cup of 'chai' Richards had just succeeded in producing. He then delivered with dramatic tones and gestures his terrible tale of the 'Flood.' At first it seemed as though he must be referring to the old event, in connection with the South Caucasian group, of Ararat. That was, it appeared, however, a small and local affair compared with the present catastrophe. Then we gathered that horses, baggage, cook, all had been swept away; our informant was sole survivor.

That was perhaps a slight exaggeration, all were not exactly to say drowned. Owing to his courage and resource some, in fact all, had been rescued from a watery grave. The actual details of the rescue he seemed at first too modest to describe. For a long time we could not gather what had really happened or the extent of the disaster. Gradually it appeared that nothing at all had occurred. The party had started from the 'Sanatorium,' probably late, had soon met a small stream in flood across the path and had at once returned. Our plans for crossing Tsaya Khokh were, of course, now defeated. It was evident our cook was not a strong enough man to handle these 'children of Nature' with sufficient tact, or to be in sole charge of the pack train. We therefore descended to the 'Sanatorium' in the dark and obtained the loan of one of the little wooden open-air huts for the night.

Next morning the sun shone brightly on the beautiful berry-carpeted pine woods already dry again, and we left for Sadon.

The cloud-burst had been a heavy one and much damage had been done. The bridge over the Tsaya below the great gorge near Rekom had been swept away by the uprooted pine trees. We had to take the old track, which keeps the left bank and climbs up an irritating height to the very dirty village of Tsaya. The men of Tsaya were engaged in a shooting match. The children are numerous and less shy of strangers than in most mountain villages. They are in the habit of going across by the lower bridge into the Tsaya woods to gather wild strawberries. We met many on the track near the bridge. They were most persistent merchants of the delicious fruit.



Some Eastern Engineering in the

Liberty and Republics, Books from the East.

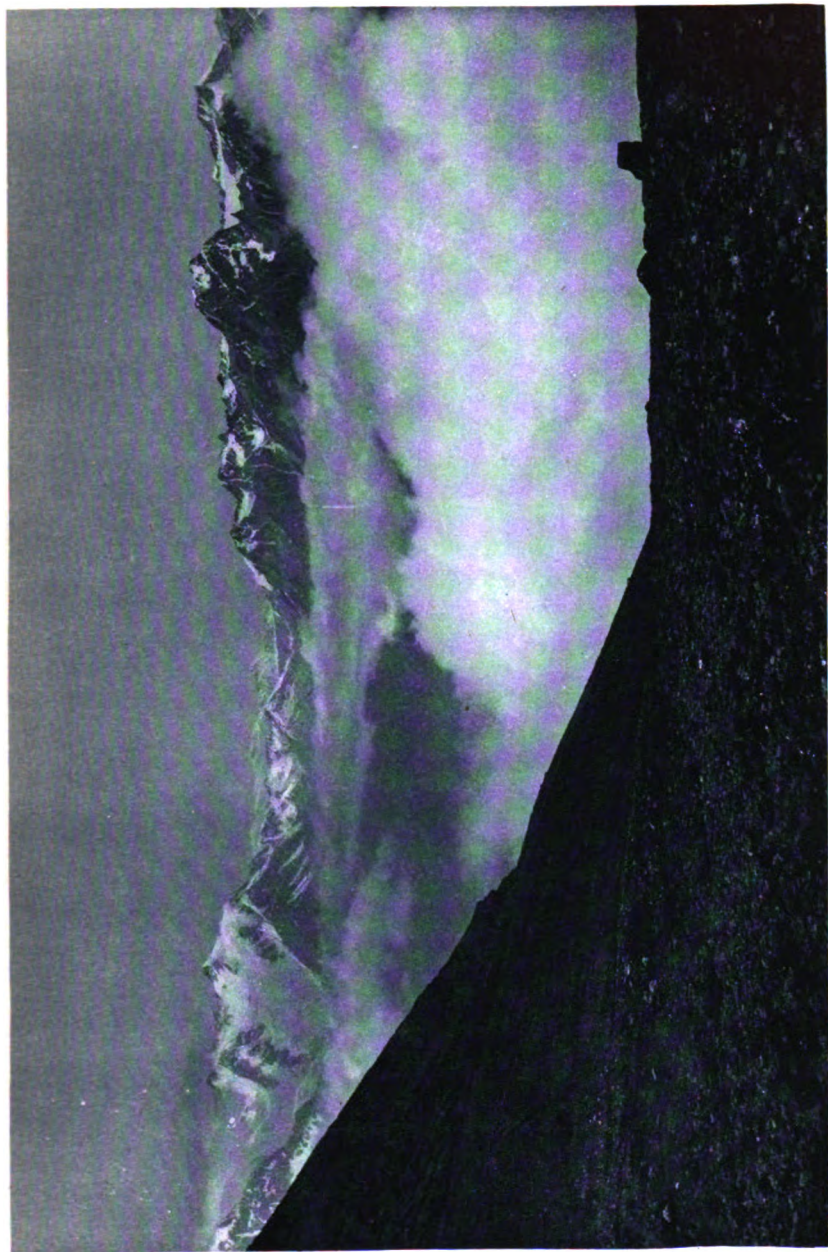
St. Anthony's

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H. Hooley photo.

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Laloda and Boghtobashi Peaks, from the East.

Stopping for a meal at St. Nikolai, we descended the Ardon and turned up the Sadon Valley to the mining village of that name.

Our cloud-burst had been quite a local one. They had had here in the beginning of the month a much bigger one. All the bridges except the one high up near Sgid were gone; the engineer's house and pretty garden at the foot of the valley quite destroyed; the turbine pipe track torn up and dispersed; and the valley floored with boulders from 20 to 40 ft. deep in places.

The village itself was as though bombarded. Many houses partly destroyed. Domestic work was going on as usual in some of these. The effect at a distance was as of a doll's house or, closer at hand, a theatre set piece.

We camped for the night in a disagreeable drizzle of rain below Sgid. On July 24 we walked over the Sadon Pass (8000 ft.) to Kamunta. It was a pleasant easy walk and a pleasant cool day. On the South the granite aiguilles of Tsaya were mostly cloud-concealed. On the North rose the great dolomitic-looking precipices and bastions of the limestone range of Kion Khokh and its neighbours. As marks the limestones everywhere, the grass was particularly green and rich. We got on the shales again at the pass and descended a long crumbly ridge to the fortress village of Kamunta.

Here we spent the night with two other travellers (from Vladikavkaz).

I was surprised to discover here among a few books in Russian one on a subject in which I was particularly interested—Aviation!

The inhabitants keep their dead above ground—the fact is obvious to more senses than one—in small stone houses near the top of the hill on which the village is built.

The following morning was very fine. We hired fresh pack-horses, and walked ourselves to Dsinago, the highest village in the Uruk-Karagom Valley.

The horse-owners would not take the short cut which climbs up over the Gular ridge and descends past Gular to Dsinago, as they said the track had been rendered impossible by the recent storms.

We went the long round down the Agimugidon to its junction with the Uruk, and up the Karagom Valley to Dsinago.

The latter part of the journey is a vast improvement on the first. We quit the bare, barren, ugly clay slates for the pine-clad slopes, the towering aiguilles, and the gleaming glaciers

and icefalls of the granites. The Karagom is a noble valley, and its mighty icefall, approaching 4000 ft. in height, which burst through the almost vertical walled gap cut down for 2000 ft. between Karagom and Nokausakhtseine massifs, is excelled in grandeur by no Alpine icefall.

At Dsinago we merely halted for a couple of hours. Here is a Government veterinary post, as it is here where falls in the much frequented glacier (Native) pass of the Gurdsizevke, between Gebi on the Western Rion and the N. side of the range. Dr. Sergius Lokelson, the officer in charge of the post, informed us that in 1913 more than 15,000 sheep had crossed this pass. Mr. Freshfield has described how he saw sheep jumping the bergschrund when his party crossed the pass from Glola in 1868. We obtained four donkeys here to convey the tents to the pine wood above the right moraine of the glacier.

Mr. Dent has described an animal he christened 'Cayenne' as so named because 'she was very strong, and a little of her went a long way.'

Our four were sturdy little beasts. There are many in this valley. Unfortunately, they seem to fancy themselves as nightingales and as cocks, and at sunset and dawn Dsinago is rendered an aural inferno by their rasping brays.

Base camp was placed at 6000 ft. on a small pine-covered flat, on the glacier's right bank, just above the snout.

Next morning, leaving the others busy with correspondence, washing, or other affairs, I took a walk up the glacier for two or three miles to the middle of the first icefall.

Here the crevasses became very numerous and large, and the connecting passages by ice flakes so thin and tottery that I cut a passage out to the right moraine (about 7400 ft.).

Owing, no doubt, to the heat at this level, the surface ice of the flakes was very treacherous. I had to cut down one 2-ft. thick wall for fully 6 ft. before reliable foothold could be made. On the ice I found the remains of a hooded crow.

I returned by the top of the moraine, by which there is quite a decent track in places. We engaged two porters and settled to throw forward a high camp and attack Skatikom. If that proved too distant, then another peak of the great mountain massif which, running from Skatikom to the eastern portal of the 'Mickledoor' of the Karagom Glacier, walls its névés on the North.

We left the low camp at 7.45 A.M. on July 27. First on the moraine, then by the glacier itself, then up a rubble gully to quite a good track along the steep walls above, we gained in

42°
40'

Scale 1:125,000 or 1 Inch = 1.97 Stat. Miles



Roads ———
Ehokh - Peak

Paths ———
Eax - Kasarna - Refuge
Heights in Feet

43° 40'

2½ hours a lovely little tarn. Well is it named the 'Blue Lake.' It lies pent between the 150-ft. high old moraine of the glacier and the steep rock slopes of the Saudor Ridge.

Beyond the lake the valley opens to a great grassy flat, with many long parallel ridges of old moraines now covered with turf and rhododendron. This is about 8000 ft.

We climbed to 9000 ft. up steep grass slopes in a due E. direction, and there placed the high camp.

From this camp, starting at 1.15 a.m. on July 28, we climbed two peaks of the northern Karagoms, Vologata, about 18,700 ft. and the highest peak—third of the Adai Group—Karagom East, triangulated as 2115 S. on the 1 Verst Map = 14,805 ft. I do not propose here to go into details of this expedition, which took almost the twenty-four hours. The other Alpine Club member of the party, Mr. H. Scott Tucker, has agreed to give his impressions of the scenes and events of the day, a most repaying one in every sense. The storm sunset over Dykhtau and Kosh-tantau, seen from 12,000 ft., was of awe-inspiring splendour. I have seen nothing in my life to equal it.

It is necessary to make a correction in the title of one of the peaks in Mr. Young's photograph, illustrating the view of these peaks published in the 'A.J.' for May 1914, in the paper 'Some New Climbs in the Caucasus,' by W. N. Ling. The one marked Skatikom is really Karagom East; the summit is not visible. The black peak in the nearer position is Skatikom, and the rocky peak in the centre Vologata. I was misled by Merzbacher's Map, which is unfortunately of minus value in this part of the range.

On the 29th after our great day we felt somewhat lazy, but lack of provisions drove us down a leisurely but rather heavily burdened walk to the lower camp, where we were heartily welcomed by the faithful, perhaps somewhat lonely, Miranoff. The fatted or fated (there is small difference) sheep had been killed two days before, and Miranoff soon served up an excellent and wonderfully varied meal, ending with pancakes, for even milk was flowing in abundance at Koshes not far off. We had a delightful reposeful afternoon, the weather splendid and the scenery most beautiful. Time was now, however, running out, and though Skatikom pulled, I felt it would not be fair to the others not to give them the chance to see at least something further west.

We therefore arranged to try the still unascended highest peak of the Laboda Group, which lies just S. of the Shtulu Pass between Digoria and Balkaria. On the 30th we shifted

camp down to Dsinago, and put up in Dr. Iokelson's enclosure, and on the last day of the month did some 'Travels with a donkey' up the Stir-Digor Valley and the Tana torrent.

There is a most picturesque gorge here, the rounded pine-clad hill of Kubus rising high above the stream on the N. An excellently engineered track, used for bringing down wood and hay, leads up through the steep part to meadow clearings above. The angle proved too much however for our small quadruped, and the bipeds, ourselves and a couple of porters engaged at Stir-Digor, had to do the packing the rest of the way.

At the haymakers' chalets—troglodytes' holes under huge boulders—we were invited to the inevitable sour—very—goat's milk by an old man and youth. The latter seemed about twenty. I do not know if I have ever seen, certainly not in Caucasia, a face of so perfect and classical a type. He could have sat for the head study of a Greek god of old.

The Tana glacier is more débris, smothered than any other I know in the Caucasus. It appears also to be in strong retreat.

We camped on soft moraine—quite comfortable though dusty—at 8100 ft. under the steep rock wall on the N. side.

Here our men told us a big drive in spring had resulted in the death of twelve tur.

We left camp at 8.45 A.M., the morning windy and misty. Rain threatened but none fell up here. Ascending a long ice hollow leading up N.W., we crossed to the left or S. and got on the Tana-Laboda glacier above the very steep wide ice-fall. The cliff over which pours the ice-fall is in places exposed. Above the steepest part the glacier is still subjected to great tension and the crevasses are numerous, long and wide, the connecting bridges thin and very narrow. We got a good line, perhaps the only one, and then gained the easy upper glacier.

At any rate the going was easy for those who did not have to walk first, for as usual this season the snow was in bad order. The rocky and icy E. buttress of Laboda looked steep—there is no deception: it is—but it was the shortest way and offered a prospect of some good rock work. We had a most enjoyable climb with a variety of interesting passages. The ice-slopes were steep and the snow thin, but it was just sufficiently holding to serve and little cutting was required. We did not move fast, but kept going fairly steadily, and at 12.45 quitted the last rocks and reached the top—14,169 ft. This was a corniced narrow ridge of ice 60 to 80 ft. above the last rocks. There were driving mists and only partial, but very fine, views, mostly confined to the neighbouring peaks



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Sierra Nevada from the S.W.

H. H. Gray 1916

of Bokhobashi on the other side of the Shtulu Pass. Leaving the top at 1.15 we got back to camp again by 5.30. Owing to the goodness of the bread this year, our Dsinago supply had already run out, and we therefore decided to shift camp the same night down to the entrance to the Tana Gorge, a rather heavily loaded march mostly in the dark.

Heavy rain came on at night. Next morning was fine and we intercepted a wood-cutter, whose donkey had most convenient panniers, to convey the baggage to Stir-Digor.

In Stir-Digor on our way up we had inquired for porters.

A man came forward, the usual typical Ossete mountaineer, holding out his hand and grinning genially.

His polite greeting from a Caucasian was unusual. He said 'Hullo, Johnny, what the hell you here for?' It appeared he had worked on the railway in Vancouver for two years. His acquisitions of anything except of English had however been small and he had returned.

It was this day, August 2, when bidding farewell to him at Stir-Digor that we got the first hint, though we did not recognize it as such, of the World War. He said 'You know—my brother he soldier—he go 'way—I do' know.' That evening at Dsinago the horse-owner, from whom we had previously hired horses to ride to the railway at Elchatova, came and said—we were to leave at four next morning—that we could not get any. All horses must go to certain places to be examined by the Russian authorities. We did eventually get horses, but on the way it was evident that horses were being collected for some purpose.

The limestone gorge of the Uruk is very fine. The road crawls in places in a none too wide or high nick, cut under overhanging cliffs above the dimly seen boiling torrent which roars some 200 ft. below. The pines give place to fine beech forests as the hills open out, and at Mahometansk one is already almost on the steppe, but a fertile and richly cultivated land hereabouts. We were too late for the ferry over the Tcherek, and only on the morning of August 4, after a disagreeable night, disturbed by flies and horses on the sandy bank of the river, reached Elchatova station. The station was in the hands of the military authorities, Rembert reported; 'It is war. Austria has declared war on Serbia, and because Russia has intervened in Serbia's defence, Germany has declared war on Russia.' The speedy and easy journey home was now out of the question. It took us, for of course we all kept together, practically the rest of the month. Martinson

and the cook we last saw jumping on one of the numberless troop trains rolling south.

Our route from Naltshik lay *via* Rostov, Sea of Azof, Kertch, Feodosia, Yalta, Sevastopol, Odessa, Varna, Constantinople, Piraeus, Patras, Corfu, Brindisi, Venice. Richards and Tucker left me at Milan. Here I called to see Dr. Ronchetti and was pleased to find that, though he lost half his foot on Adai, he is still able to climb. From Milan I proceeded by way of Zermatt and Geneva to Paris, leaving that city and arriving in London on September 2 (Sedan Day).

The naval squadrons passed through were of nine different nationalities—Russia, Bulgaria, Turkey, Germany (*Goeben* and *Breslau*), Great Britain and France (outside Dardanelles), Greece, France again, Austria (four torpedo boats off Pola), Italy, and, finally, a powerful British squadron sliding into the sunset off Folkestone.

I have been asked several times with regard to my opinion of the healthiness and the climate of the Caucasus Mountains. On both these points our experiences have been most favourable. None of our 1913 or 1914 parties suffered from any form of illness whatever. A medical and surgical outfit was of course taken, and I occasionally dosed natives who asked medical aid with something strong and tasty, yet comparatively innocuous, such as quinine. We, however, never touched it ourselves. Some difficulty was experienced in 1913 with the terrible leather and putty scones which pass for bread in the more remote parts. In 1914 we always managed to obtain good Russian bread (raised) or made pancakes and dropped scones ourselves.

The weather in 1913 was heavenly and far superior to all my Alpine or Norse experience, while in 1914, though we had violent storms of rain, these never lasted long. As a rule, a wet day means that the next and perhaps the next again will be perfect.

THE HIGHEST PEAK OF THE ADAI KHOKH GROUP,
CENTRAL CAUCASUS.

By HAROLD RAEBURN.

THIS is the peak called on the Russian 1-Verst Survey Map Adai (or Uilpata) and triangulated as 2177·7 sazhen (15,244 feet). It must be clearly understood that I only submit to the name Adai for this peak under protest. It appears on the Russian Government Map, and we must therefore accept

it. The original name of the mountain is, however, Uilpata. It is under this title that Dr. Vittorio Ronchetti describes it in his account of his climb from the Tsaya Valley, 'July 11-13, 1913.'¹

Along with other explorers in the group—Messrs. Freshfield and Tucker, Dr. Oskar Schuster, Dr. Vittorio Ronchetti, (probably) de Déchy—I have always found the natives applied the name Adai to one or other of the peaks, to the massif, in fact, on the S. edge of the group along and above the Mamison Valley and Pass. The highest peak, which is inside the group, was always styled Albat Tau or Uilpata, which is probably a corruption of the first name. The unfortunate transference of this outlying name of a massif, only the third in point of height of the group's ridges, to the highest point, has greatly assisted in obscuring the accounts of the explorations and ascents in the group hitherto published.

Adai (Uilpata) has been ascended three times. The first ascent was that of Messrs. Holder and Cockin with Ulrich Almer in 1890 from the Karagom Névé on the W.; the second in 1891 (?) by M. Kovtoradsé, of the Russian Survey, also from that side. The third, on July 11-13, 1913, by Dr. Ronchetti's party, from the Tsaya Valley on the E., was the first from this side.

The record hitherto in Alpine mountain literature stands, that the first ascent of the mountain was made by the Hungarian explorer M. de Déchy with Alexander Burgener and P. J. Ruppen in 1884.

De Déchy has indeed published in the *ALPINE JOURNAL* for 1885 an interesting and vivid narrative, written by himself in English, of his ascent, and how brilliantly Burgener got the party through the very difficult icefall of the N. Tsaya glacier and up the long and severe climb of the *double* peak beyond.

De Déchy also wrote an account of this ascent in German for *Petermann's Mitteilungen* in 1889.² This paper was accompanied by a map, of which I shall have something to say later on.

The chapter in de Déchy's charmingly written and superbly illustrated work '*Kaukasus Reisen und Forschungen*' (D. Reimers, Berlin, 1905) on 'Adai Choch' does not materially differ from the 1889 account.

A considerable element of doubt has nevertheless always existed as to the correctness of de Déchy's identification of his

¹ *Rivista C.A.I.* vol. xxxiii. No. 7, 1914.

² 'Das Massiv des Adai Choch im zentralen Kaukasus.'

peak of 1884 with the triangulated mountain of the Russian Survey.

For this de Déchy was himself responsible, as he shifted his claimed ascent from a lower peak (Tshantshakhi), unmeasured, on the outside of the group, to the highest, triangulated, peak near the centre of the group.

I propose to show here that the peak de Déchy really ascended was neither Tshantshakhi (the Adai of Freshfield and Tucker) nor the Russian Adai, but an entirely distinct mountain lying between these masses and now called Mamison or the 'Curtain.' It is at least 1000 feet lower than Adai, and several hundred feet lower than Tshantshakhi, but is nevertheless a fine mountain. To make this clear it will be necessary to trace the climbing history of the group from the beginning.

When planning the Caucasian campaign for our 1913 party I was greatly interested by the 'mystery of Adai Khokh' and also by the fact that though the massif is one of the most accessible, owing to its proximity to the Mamison Road, yet very few of its peaks had ever been climbed.

It was therefore resolved that the first part of the time at the disposal of our party should be devoted to working in the group from a base camp at the upper limit of the Tsaya pine forest. This plan was repeated in 1914. We also visited and made ascents from the Upper Mamison, Rion, and Karagom Valleys.

I have now visited fourteen peaks or cols, none under 13,000 feet, and all new, and think I have traced almost the exact routes followed by every previous explorer in the group.

As all who have read Freshfield's classic on Caucasian exploration will remember, the pioneers in 1868 visited the Adai group. They made a raid N. over the Caucasian chain by the old native pass of the Gurdshivzek, which leads from Glola and Gebi to the Karagom Valley, returning up the grand ice cataracts of the Karagom icefall, across the wide snow-wastes of the Karagom Névé, and descending to their starting-point by the ridge above the Bokos glacier. They climbed no peaks.

In Mr. C. C. Tucker's account of the 1868 expedition in the *ALPINE JOURNAL* (iv. 249) for 1869, however, a splendid and formidable peak is therein described under the title of Adai Choch. (This was Tshantshakhi viewed from the S.) 'Adai Choch presented arêtes more formidable in aspect than those of the Matterhorn as seen from Breuil.'

Mr. Freshfield also describes this peak: 'The first and most

striking object of all the summits before us occupied the position assigned on the 5-verst map to Adai Choch. *Three long ribs of rock and ice ran up into a sharp point and created one of the most striking mountain forms I ever saw, and the sides of the mountain were so sheeted with ice as to be, if not absolutely inaccessible, practically so for our party.* . . .

These descriptions are perfectly accurate and are enough in themselves to disprove de Déchy's first identification of this peak with his 'peak with two tops,' which he climbed from the Tsaya Valley on the N.E.

I now come to de Déchy's ascent. This I prefer to take from his work in German, as in the account in English in the ALPINE JOURNAL for 1885 there are certain mistranslations and omissions which have assisted in the befogging of English-speaking students of Caucasian mountain literature. We must remember that de Déchy was working with the old 5-verst map, whose omissions are very great and delineation very vague here. This hardly excuses the very fanciful additions and corrections in de Déchy's 1889 map, especially, as Mr. Freshfield points out, on the Karagom or W. side, which de Déchy never saw.

He only made a single expedition into the recesses of the group, during the last day of which he was not in a condition, on his own showing, to make any observations whatever. It is evident that with a less powerful and resolute man than Alexander Burgener as leading guide the party would probably have perished.

Such was the impression made upon Burgener by the experience that he refused to guide the party up any other Caucasian peak which involved any difficulty, and when confronted with Ushba peremptorily said 'The weather is bad; we go home.'

De Déchy camped in the Tsaya Valley, not far below the glacier snout, on July 22, 1884.

At the foot of the valley the dominating visible peak is the eastmost of the Tsaya Aiguilles, Tsaya Khokh. From Rekom and the upper pine forest the real highest peak Adai or Albat or Uilpata takes without question the sovereignty of the visible summits. Few others are in fact visible, owing to the enormous S.W. spur of Adai behind which they lie hidden.

As one proceeds up the three hours' walk to the lowest icefall of Tsaya, Adai entirely vanishes; the dominating mass which appears in its place is the great *double* summit (Adai is *not* a double summit) of Mamison or the 'Curtain.'

De Déchy took this for the highest peak. Looking from Tsaya upper village he describes the view (*Petermann's Mittheilungen*, 1889, p. 212): 'Albat Choch, den schöngeformten schneebedeckten Gipfel der aus der nördlichen Umrandung des Zeigletschers sich erhebt. Im Hintergrund jedoch . . . ragt die Pyramide des Adai Choch in die Lüfte . . . Felsgrat der in eisgepanzerten Wänden nach Nordwesten abstürzt und dann in eine scharfe Firnschneide übergehend sich südöstlich³ zum höchsten Gipfel fortsetzt.' (Albat Choch, the beautifully shaped snow-covered peak rising out of the northern boundary of the Zei glacier. In the background however rises in the air the pyramid of the Adai Choch . . . a rock arête which falls to the N.W. in ice-clad walls and then merging into a sharp snow arête continues S.E.³ to the highest point.)

This mass has been called many names, but it is the long ridge which, originating in the sharp peak of Wocley's rock on the E., runs for more than two miles towards Tshantshakhi and separates the great Tsaya glacier into two, of which the northern is considerably the larger. It has two widely separated summits, connected by a long arête, mainly of snow. The highest point is at its W. extremity, where it shows a steep buttress of rock at the head of the Tshantshakhi glacier, not the Mamison glacier. It is thus a near neighbour of Tshantshakhi. On the map there is only 1 verst, = $\frac{2}{3}$ of a mile, between the summits, but there is a very deep gap. The view of the Mingrelian valleys and lowlands to be got from it must be partly blocked by its higher neighbour Tshantshakhi. De Déchy describes his view of these low grounds as seen 'durch eine Lücke' in wildly 'zerrissen' rock ridges. This was undoubtedly Tshantshakhi's great S. ridge. This phrase of de Déchy's is a complete disproof of his Tshantshakhi ascent, as of course Tshantshakhi dominates the southern view directly, there is no 'Lücke' in question. It is also a strong argument against the Adai ascent, as from Adai, several miles due N. of this, no direct view of the Mingrelian lowlands can be got. (Dr. Ronchetti's Panorama from (Uilpata) Adai.)

De Déchy's party left camp July 23, at 7 A.M. (ht. 6552 ft.), passed first icefall by 'snowbed' on left and up glacier above. After a 'second icefall, easy,' merely the disturbance caused in the glacier by the inflow of the N. Tsaya séracs,

³ [Properly S.W.]

they attacked the difficult and dangerous N. Tsaya icefall. (The description does not fit the mild and reasonable icefalls of S. Tsaya.) Very great difficulty was experienced here, and I can well believe it. Defeated at first, Burgener tried the rock walls on the right, but failed to find a way. I have tried twice with no better success.

Returning again to the attack, Ruppen was pushed up some ice cliffs and the fall was at last conquered. The bivouac was placed a short distance above, at 10,935 ft. It took 10 hours to gain 3383 ft.

Unfortunately, de Déchy does not state on which side of the N. Tsaya glacier the bivouac was placed. From the further narrative, however, it is evident that they were too much *under* Adai to recognise it.

On July 24, at 5.30 A.M., the party again started. 'Climbed to the top of our spur and followed its snowy ridge. The ridge which fell towards us was now attacked.' Adai does not send down any definite ridges to the N. Tsaya glacier. It presents a snowy and rocky 'face.' The obvious line of attack which our 1913 party noted from the N.E. rock peak of the 'Curtain' is that followed by Dr. Ronchetti, and leads almost entirely up snow to the col between Adai and the 'Shoulder.'

The description accurately applies to the lower part of Mamison or the 'Curtain.' De Déchy continues: 'a steeply inclined snow ridge, broken here and there by rocks, and for the most part extremely narrow and corniced.' 'The top was reached at 1.30 P.M.:' 'the climb was very difficult.'

'Our ascent was made by the N.E. ridge.' Unless we assume that de Déchy's compass was absolutely unreliable, or that he utterly misread it, that positive statement is enough to disprove his ascent of Adai.

He, however, clinches it farther by the addition 'Our route of ascent did not look down upon the Karagom glacier.'

Now a glance at the 1-verst map will show that the N.E. arête of Adai does not really belong to the Tsaya glaciers at all, but to the Uilpata and Karagom glaciers. Anyone climbing it would have the great Karagom Névé spread before him all the time. The col of the N.E. arête is the Songuta.

To reach the N.E. arête of Adai from the N. Tsaya glacier it would be necessary to ascend the narrow and steep glacier which comes down between Adai and its great S.E. spur. Here the climber would find himself in the upper snow basin between Adai and Songuta. On the side of Adai and the col this is walled in and threatened by gigantic, overhanging ice cliffs and

cornices, and no guide or mountaineer would think of going there. Our party in 1914 gained the ridge, from the Uilpata glacier, by keeping well up on the Songuta side.

Assume de Déchy read the compass right, there is only one mountain which presents a N.E. arête to the N. Tsaya glacier : that is Mamison or the 'Curtain.'

Tshantshakhi, his first-claimed peak, presents a N.E. *face* and that of a severity greater than the N. faces of the Dent Blanche or Matterhorn, neither of which has been as yet climbed.

There is another point, perhaps a minor one, against de Déchy's ascent of either Adai or Tshantshakhi : that is, Burgener built a cairn on some rocks below the summit (snow). Holder, Cockin, and Almer found no cairn on Adai in 1890. Our party in 1913 found no cairn on the sharp rock spike of Tshantshakhi.

One final remark. De Déchy states there were 'no higher summits between him and the Ardon Valley to the E.' This is correct with the possible exception of Kaltber⁴ (S.E.). Owing to mist and his inferior height he was unable to see the ten, or more, higher peaks of the group, W. and N.W. of his point of view.

Nevertheless de Déchy's summit, Mamison or the 'Curtain,' is a fine peak, and our party of 1913 regretted that the enormous length of the ridge, the late hour, and the threatening weather prevented us getting further than its most eastern rock peak (13,800 aner.). The exact spot on which Burgener's cairn is probably placed can be seen on one of Mr. Young's photographs.

NOTE ON THE MAPS.

The photographic reproduction of a part of de Déchy's 1889 map and my map of 'The Adai Khokh Group,'⁵ which is founded on the new Russian 1-verst map, will exhibit the difference between the supposititious and true orography of this intricate group. The question of nomenclature is a difficult one ; there are very few names on the 1-verst map. I have tried to give the most orographically suitable names, or names got from natives on the spot.

H. R.

⁴ Ascended by Dr. Oskar Schuster's party in 1910 (*A.J.* xxv. 464).

⁵ The Alpine Club is indebted to the Royal Geographical Society for the map 'The Adai Khokh Group.'



M. DE DÉCHY'S MAP.

Swan Electric Engraving Co., Ltd.

MT. GRUETTA.

BY R. TODHUNTER.

IT seems desirable to state at the outset that the subject of this article is a mountain, and not a bridge or some kind of patent breakfast food. The necessity for this arises from the fact that Gruetta has consistently adopted somewhat questionable methods of concealing its real identity and nature. If we may suppose that it is the object of every self-respecting mountain to guard its secrets as long as possible from the profane herd of hobnailed climbers, Gruetta has certainly achieved a considerable measure of success. In the early 'sixties of last century, when every evening during the season the cannon of Chamonix announced some new victory, the peaks and passes on the S. side of the Mt. Blanc range must no doubt have felt the necessity of taking defensive measures against the invaders. The Col de Talèfre could do no better than 'make their lives a burden to them with schrunds'—obviously a futile measure against such exponents of the glacier theory as the late Mr. Whymper. Gruetta, more adroitly, took shelter under a bridge—the highest over the Doire in the Italian Val Ferret. The mountaineering classics of the time contain occasional references to the Gruetta bridge—by which, if he happened to find it, the mountaineer descending from the Triolet glacier might reach the Courmayeur road without wading through the river or crossing an interminable waste of stones—but none to the mountain to which the bridge gives direct access. The bridge idea, then, was undeniably good, but it was clearly nothing more than a temporary expedient. Sooner or later the unclimbed peak at the end of the Aiguille de Leschaud's eastern *contrefort*—from the Frébouzie glacier Gruetta appears to be little more than an outwork of its greater neighbour—and the gently inclined arête leading to it from the unnamed point 3631 were certain to attract the notice of some explorer whose restless wishes towered to new heights. Gruetta's great achievement was to recognise the inevitable, to invite conquest by its easy W. arête, and so to sacrifice its summit to what was more essential to its honour as a mountain—the preservation of its face. The inevitable happened in 1875, when M. Lionel Décle ascended Gruetta from the Frébouzie glacier. On that occasion, however, the mountain took refuge in clouds

—which lifted only just sufficiently to enable the party to discover the summit—and probably little or nothing was visible of the precipitous crags which defend it on every side except the west. At any rate M. Décle returned with the impression that the expedition was not of much account, except for the glacier difficulties which it shares with the Aiguille de Leschaud.

By such expedients as these Gruetta contrived to avoid publicity for more than thirty years after M. Décle's ascent. Its great S. and S.E. arêtes rising to a height of over 6000 feet above the valley, and so conspicuous in the view from the Col Ferret, its precipitous slopes descending 3000 feet to the Triolet glacier in full view of the Triolet hut, no less than its glacier deeply hidden between its arêtes and hardly visible except from the little frequented hillside on the S.E. side of the Val Ferret above Feraché, seem, strangely enough, to have remained almost entirely unnoticed. And they might perhaps have kept their privacy until the long-projected road over the Col Ferret has become an accomplished fact, and La Vachey a tourist resort, if Dr. Claude Wilson had not, in an ill day for Gruetta, undertaken a systematic exploration of the subsidiary Italian ridges of the Mt. Blanc chain. Dr. Wilson's graphic account in 'Minor Rock Climbs from Courmayeur' of his two days on Gruetta gave away all that the mountain had so long concealed—the sporting quality of its glacier, the magnificence of its rock scenery, in short the real Gruetta. The ascent of the subsidiary peak to which Dr. Wilson gave the appropriate name of Mt. Rouge de Gruetta opened up what is probably the soundest and most interesting route to the summit of Gruetta itself, and the latter probably owes its escape on that occasion solely to the limitations of the Alpine day and to the impression which it had managed to create that it was or ought to be a Minor Rock climb from Courmayeur. The fact is that Gruetta can only be included in that category in the same sense as the Aiguille Noire de Peuteret. Although not so high as the Aiguille Noire by some 300 feet, it is farther from Courmayeur and a more difficult climb—unless ascended by the Frébouzie glacier and the W. arête, a route which may be dismissed from consideration except as an 'easy way down.'

My own acquaintance with Gruetta began in 1911, when the late H. O. Jones—solicitous that none of that admirable season for new expeditions should be expended on vain repetitions of previous ascents—suggested to me that while he was assisting to make mountaineering history on the Grandes



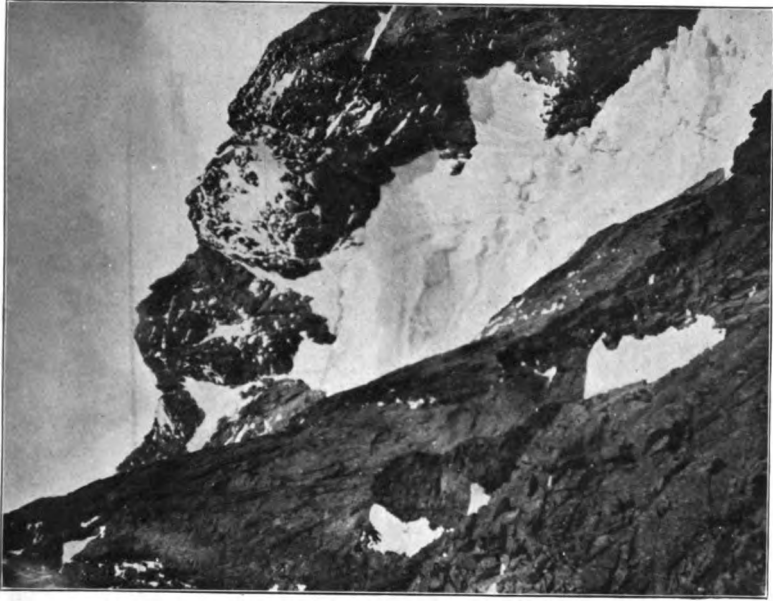
R. Todhunter, photo.

Swan Electric Engraving Co., Ltd.

MT. GRUETTA, FROM THE MONTS ROUGES DE TRIOLET.

Jorasses I should go and 'clear up Gruetta' with Henri Brocherel. My own knowledge of the mountain was restricted to what could be learned from a diligent study of Dr. Wilson's paper, and Brocherel's did not go much beyond the bridge. Although, therefore, conscience suggested a doubt whether it was quite decent to take advantage of the information on pp. 13 and 14 of Dr. Wilson's paper and to disregard altogether the sound doctrine on p. 4, common sense pointed out that the day that had not been long enough for his untiring party would probably be a great deal too short for me. Besides, it was a year in which almost any excuse for sleeping out seemed good enough. So we engaged a porter, escaped—by driving up the Val Ferret—part of the penalty that we ought to have paid for an afternoon start, and attacked the grass and rock slopes leading to the Gruetta glen. Like most of the lower slopes on this side of the Mt. Blanc range, the approach to the Gruetta glen is extremely steep, and if a start is made from La Vachey or Courmayeur in the early morning the preliminary scramble up to the glacier—in the absence of anything like a track—must be reckoned with as a serious item in the day's work. From subsequent experience it seems that the best line to take is well on the left—starting from near the foot of a dry gully. On this first expedition we kept to the right, and by the time we reached the glacier we appreciated fully the advantage of not having the 2000 feet from the bridge to the glacier before us in the morning. Having selected a suitable *gîte*—it seemed an ideal place at the time, but the glamour of 1911 must have been over it, for I failed to discover the spot in the following year—Brocherel and I went up to the moraine to survey the situation. From our view-point Dr. Wilson's two routes and the general conformation of the mountain—its two great arêtes and the couloir descending to the glacier from a small snow slope below the col between Gruetta itself and Mt. Rouge—were clearly seen. A long and apparently unbroken *vire*, traversing the wall of the S. arête at a height of about 800 feet above the glacier and leading into a gully which descends from the last notch in the arête, was more remarkable than attractive, and the arête itself, if accessible, was so studded with gendarmes that the chances of climbing or turning them all seemed at least doubtful. We decided without much hesitation in favour of Dr. Wilson's first route—by the glacier and the couloir. Starting at 5.15 on the morning of August 12, we found the glacier a good deal longer and—at any rate under 1911 conditions—more difficult than it looks.

One tremendous crevasse forced us right over to the left before we managed to cross on a leaf of ice, and it was nearly eight o'clock before we reached the bergschrund just opposite the foot of the Mt. Rouge rocks. Our route lay to the left, but was only reached by crossing the bergschrund on the right and traversing round glacier-worn rocks. At the head of the snow-slope above the bergschrund a new difficulty faced us. The couloir here narrows into a chimney, which was separated in 1911 by a wide gap from our position at the highest point of the snow-slope. The rocks for some 12 feet above the floor of the gap afforded few holds, and a strenuous effort on Brocherel's part, aided by such support as could be given with an axe from below, was necessary before a landing could be effected in the chimney. Twenty or thirty feet higher the angle eased off, and a short scramble up the rocks at the right of the small snowfield brought us at 10.15 to the col overlooking the Triolet glacier. On our right was the arête descending from Mt. Rouge, but we did not give it a thought, as we certainly ought to have done, as a possible line of retreat. Our whole attention was divided between the practicability of climbing the shattered and apparently dangerous arête leading to the summit of Gruetta, and the probability that a retreat by the couloir, if eventually necessary, might be cut off, or at any rate rendered undesirable, as the day advanced, by falling stones. Between the two and a third breakfast we made a prolonged halt. The arête itself was far from attractive, and the steep slope on the Triolet side was apparently impracticable. There remained only the great wall overhanging the Gruetta glacier. It was eleven o'clock before the valour of ignorance so far prevailed over professional discretion as to admit of our having a look at this possible route, and then all doubts as to the outcome of the climb suddenly vanished. From a little below the col a gently rising traverse, interrupted by only one serious obstacle, could be followed into a steep but obviously practicable gully leading to a point high up on the arête. It was possible to walk—if not with one's hands in one's pockets, at any rate without serious difficulty—along the face of the tremendous wall that supports Gruetta's S.E. arête. From the top of the gully the arête itself afforded good going for 40 or 50 feet, and then, at exactly the right moment, a second but shorter and more delicate traverse led into a second couloir by which we reached the summit of the mountain in $1\frac{1}{4}$ hours from the col. Over the descent I would draw a veil if it were not desirable to hold up to infamy the



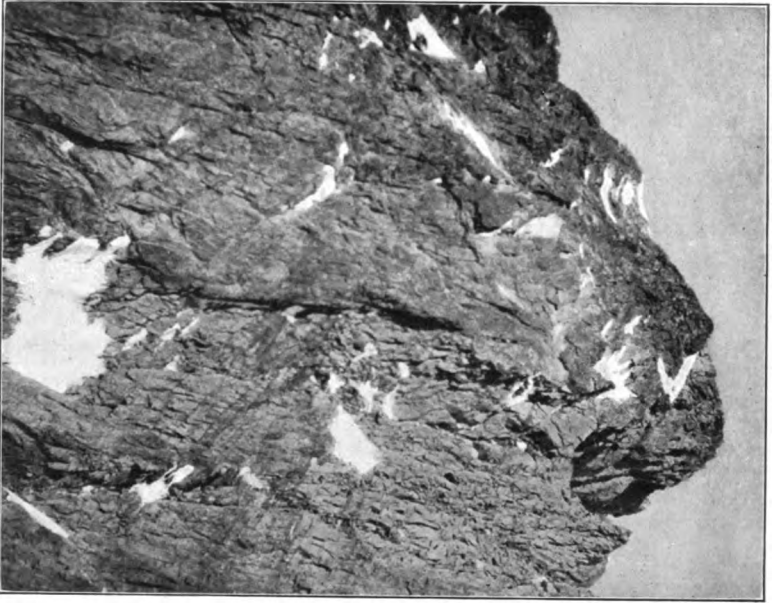
Swann Electric Engraving Co., Ltd.

THE S.E. FACE OF GRUETTA,
from Mt. Rouge.



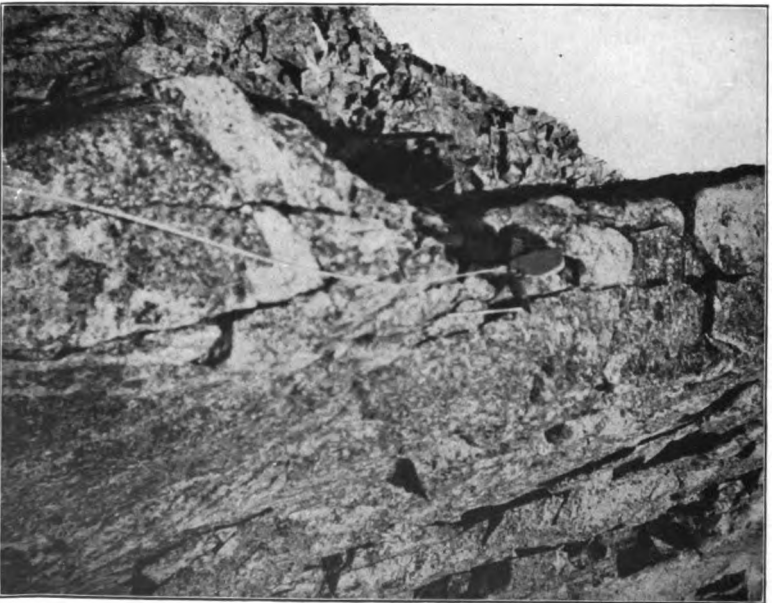
R. Todhunter, photo.

MT. GRUETTA, FROM THE SOUTH.



R. Todhunter, photo.

GRUETTA GLACIER AND MT. ROUGE,
from the S. arête of Mt. Gruetta.



Swan Electric Engraving Co., Ltd.

ON THE ARÊTE OF MT. ROUGE.

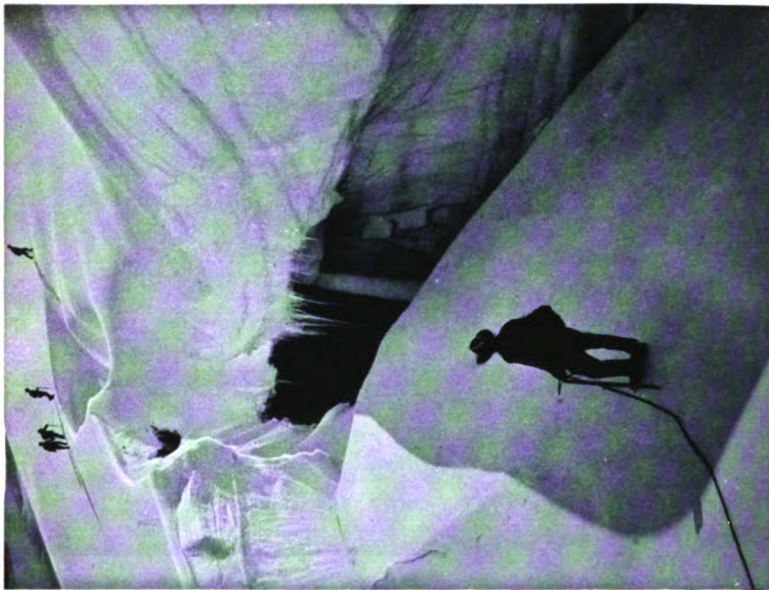
lower part of the rock rib that divides the Frébouzie glacier. Brocherel had not visited this part of the glacier, but was clear that there was a way off the rib. So we descended on the extreme left of the glacier, turned the bergschrund with some trouble by Gruetta's rocks, crossed the glacier to the rock rib, and descended to its lowest point—only to find ourselves cut off by a vertical wall of perhaps 200 feet from the Col des Hirondelles route. In vain we hunted for a way off low and high—but not quite high enough, for the one route off is far above the point where we had traversed on to the rib. There was nothing for it but to return to the E. branch of the glacier, and the most vigorous cutting of the irreducible minimum of steps by Brocherel's powerful arm only just took us clear of the ice as light failed. We reached La Vachey at 9 and Courmayeur at 11. It had cost us eight hours to descend to La Vachey from Gruetta by the easy way!

This expedition, although interesting and successful in its way, left room for a good many afterthoughts. There was the unclimbed S. arête, which might after all be the best route, and there was the attractive possibility, suggested to me by Dr. Wilson, of linking up his route up Mt. Rouge with my own up Gruetta. As the latter included a couloir which might not be available in a less eligible season than 1911, a combination of the two routes would almost certainly be an improvement. And finally there was our very unsatisfactory experience of the easy way down. So in 1912 I went up to La Vachey with H. M. F. Dodd. But in that melancholy season avalanches fell continually down the couloirs at the head of the glacier, and we did nothing on Gruetta beyond ascertaining practically the difficulty of getting on to the S. arête from the small W. branch of the Gruetta glacier.

Once again, in 1913, I returned to La Vachey, and this time with the invaluable asset of Josef Knubel's company. It was characteristic of Gruetta that it began by outwitting Knubel. Could we climb the S. arête? I suggested, as we looked at Gruetta from the road below La Vachey. Knubel's scornful rejection of the idea that there could be any question about our climbing any arête of a second-class peak nobody had ever heard of made me feel that after all I had been magnifying a mole-hill into a mountain. Uncertain weather prevented us from starting in the morning until nearly 6, but clearly that was immaterial for a minor expedition of this kind. So from the end of the moraine below the Frébouzie glacier we scrambled up to a snow-patch between the two

branches of the S. arête. From here we climbed more or less difficult rocks to the point 3225, just beyond the junction of the two branches. Before us the arête rose for perhaps 800 feet in a broad and excessively steep buttress, seamed by a long snow-couloir, and beyond this (as we knew from our previous inspection) was the ridge studded with gendarmes constituting the arête proper. But it was already 10.45, and at the point where we stood further direct progress was completely barred by a deep gap from which couloirs descended steeply to the Frébouzie and Gruetta glaciers. We recognised sorrowfully that the only way to climb the S. arête would be to start early by the Frébouzie couloir and to have the day in hand for contingencies. In the interests of exploration we returned by the E. branch of the arête, and Knubel made things even with the mountain to a certain extent by hitting off the only place—as it seemed as one looked back—where it was possible to descend from the arête to the Gruetta glen.

We ought, perhaps, to have returned to the S. arête, but our only available day in a stay of mixed weather was hypothecated to the interesting problem suggested by Dr. Wilson. Starting from La Vachey at 3 A.M., and rejecting by a casting-vote a proposal that we should wait for daylight before attacking the steep rock and grass slopes leading to the Gruetta glen, we reached the foot of the glacier at 5.30. The glacier was in much better condition than in 1911, and, following Dr. Wilson's second route without any special difficulty, we were at the head of the right-hand couloir and the foot of Mt. Rouge de Gruetta's eastern buttress by 8.15. This buttress is one of the most entertaining things on the whole mountain. At the very start it offers for solution an awkward problem in a formidable little overhanging chimney, which, however, can probably be turned on the right; and then, higher up, there is the remarkable situation described by Dr. Wilson in his account of the climb. An hour, including time expended on photographic attempts which were not very successful, owing to the steepness of the rocks, took us to the top of Mt. Rouge and to the short link which was the main object of our expedition. This went well enough—a short overhanging section of the arête being turned on the left face—and at 9.45 we joined my 1911 route on the col between Mt. Rouge and Gruetta. It was satisfactory to find that my recollection had not overrated the merits of the climb from the col to the summit. The lower part of the gully leading back to the arête required care, and took longer than in 1911, on account of ice, but the whole



Juan Electric Engineering Co Ltd.

A Crevasse on the Plateau Glacier.



E. B. Mills, photo.

On the N. W. Summit of Les Plaines.

route was thoroughly sound, and the delicacy of the traverses won Knubel's warm approval. There remained the descent by the easy way, but this time—thanks to my previous misfortunes and to careful inspection from La Vachey—we made no mistake. Following the W. arête a good deal further than in 1911, we avoided the bergschrund and took to the rock rib at its highest point, descended the rib for some little distance, and then reached the middle portion of the Frébouzie glacier by easy rocks on the right. A couple of sitting glissades took us off the glacier in two hours from the summit.

By this route the traverse of Gruetta makes a delightful day and provides agreeably varied entertainment—a two hours' test of temper and lungs on the steep scramble up to Gruetta glacier, three hours on the glacier and couloir, three of excellent climbing on good rocks, and finally an easy way down. The rocks, owing to the steepness of Gruetta's walls, give the snow very little chance to lie, so that the climb is one that could probably be taken when other things are impracticable.

THE N.W. PEAK OF LES BANS BY THE N.W. ARÊTE AND THE
GRANDE CASSE.

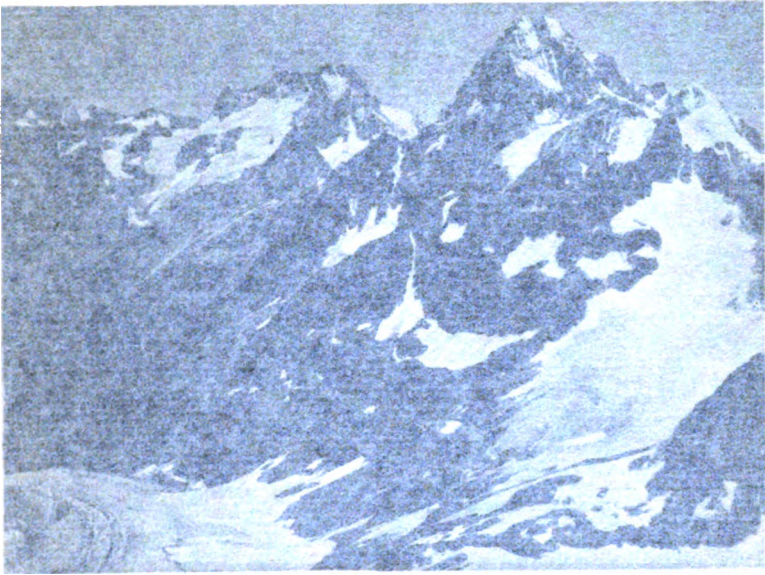
BY E. G. WELLS.

WE—our party consisted of Messrs. E. V. Slater, P. Scoones, myself, and Daniel Zurbrigen of Saas Grund—had settled down at La Béarde with the fixed intention of attacking the Meije and the Écrins. But preconceived plans in the mountains are almost as uncertain of fulfilment as they are on the battlefield, and after several days of storm and rain the two great peaks seemed as distant as Paris and London are to the Germans to-day. We filled up two days by crossing the Brèche de la Maye and returning by the Col des Cavales, but from the condition of the latter it was evident that the rocks of the Meije would not be ready for some days, and, the writer having no more time, it was decided that the party should try their luck on a rather less lofty summit. The southern group of Dauphiné peaks had looked very inviting from the Cavales pass, all sparkling with a fresh coat of snow, and on reaching the hotel we found another party also tired of inaction, and so it was agreed that all should start on the morrow—August 16, 1913—for Les Bans. It is a long and rather dreary

walk up the Pilatte valley from La Bélarde, and necessitates an early start, but the morning was beautifully fine, and when we reached the breakfast-place at the foot of the broad La Pilatte glacier, with its beautiful ice waves, and turned round to look at the Écrins towering up behind us in the morning sun, we felt that we were in for a good day's climbing at last. The new snow was not sufficient to make progress difficult on the glacier, and we reached the Col de la Pilatte about 8 A.M. in excellent spirits. Here we found the new snow had drifted heavily, and after fighting our way through it on to the ridge we came up with the other party, which had had half an hour's start. They told us, to our dismay, that the short ridge leading to the rocks was corniced and dangerous and might be impossible in the afternoon, and that the rocks on Les Bans were clearly in such bad condition that even if we could reach them we could not climb them. As they had two good local guides and we had only one stranger from the Valais, we felt obliged to follow their advice. But to go home on such a day was impossible. We must have some climbing, no matter how little chance of success. Accordingly we descended hastily about 1000 ft. by the way we had come, and then struck off to the left to the foot of a ridge that runs from the N.W. peak of Les Bans, almost due N. to the Pilatte glacier. This ridge is clearly seen in one of the pictures, leading to the right hand and lower summit. Hastening across the foot of a broad snow couloir, sometimes swept by avalanches, we easily crossed the bergschrund and in a few minutes found ourselves on the rocky rib between two ice-slopes. The climbing at once became interesting, and though we encountered no great difficulty, yet it always needed care. The rock was fairly firm, but the arête very narrow, steep ice-slopes coated with new snow reaching almost to the top of it on either side.

After 2½ hours of rather slow progress we halted for lunch in a most inconvenient spot, sitting astride the ridge one above the other. Such a posture is no doubt safe for the individuals, but most perilous for the tea and the sardines when they have to be passed down the line. However, after several anxious moments, we managed to convey more into ourselves than we consigned to the bergschrund at the bottom of the mountain, and continued our ascent.

After another hour on the ridge it began to lose itself in the N.W. face of the mountain, and we realised that we were only a short distance from the W. ridge, connecting our mountain with the Mt. Gioberney. We then struck off to our



*Telegrafide and Les Correns
from the summit of the Correns*



8. 8. 1906

1906

*Glacier de la Petite Les Bains on "A"
Foot of snow at mountain with cirque and
view from the summit*

with the Pilatte valley from La Bernole, and necessitates an early start, but the morning was beautifully fine, and when we reached the break in place at the foot of the broad La Pilatte glacier, the ice was still in waves, and turned round to look at ourselves as being up behind us in the morning sun, we felt that we were in for a good day's climbing at last. The new snow was not sufficient to make progress difficult on the glacier, and we reached the Col de la Pilatte about 8 A.M. in excellent spirits. Here we found the new snow had drifted heavily, and after fighting our way through it on to the ridge we came up with the other party, which had had half an hour's start. They told us, to our dismay, that the short ridge leading to the rocks was combed and dangerous and might be impossible in the afternoon, and that the rocks on Les Baes were clearly in such bad condition that even if we could reach them we could not climb them. As they had two good local guides and we had only one stranger from the Valais, we felt obliged to follow their advice. But to go home on such a day was impossible. We must have some climbing, no matter how little chance of success. Accordingly we descended hastily about 1000 ft. by the way we had come, and then struck off to the left to the foot of a ridge that runs from the N.W. peak of Les Baes, almost due N., to the Pilatte glacier. This ridge is clearly seen in one of the pictures, leading to the right hand and lower summit. Hastening across the foot of a broad snow couloir, sometimes swept by avalanches, we easily crossed the bergschrund and in a few minutes found ourselves on the rocky rib between two ice-slopes. The climbing at once became interesting, and though we encountered no great difficulty, yet it always needed care. The rock was fairly firm, but the arête very narrow, steep ice-slopes coated with new snow reaching almost to the top of it on either side.

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*Ailefroide and Les Corins,
from the Glacier de la Platte.*



E. J. Wells photo

J. C. C. Co. Ltd

*Glacier de la Platte: Les Bans en R.^t
Route of ascent marked with dotted lines
(Taken from Tête de Chéret.)*

right towards it across one of those faces that always appear to me the most jumpy of all places in mountaineering, a mixture in equal proportions of ice, soft snow, and disintegrated rocks, the whole clinging to nothing and pitched at a steep angle. It was quite sufficiently thrilling for my taste, and much the hardest part of the climb. Our guide Zurbriggen cut excellent steps wherever there was anything firm enough to cut them in, and in about half an hour we began to ascend the broad couloir close to the W. ridge. Our view now changed, and we lost temporarily the enormous rocky mass of the Ailefroide, looking down instead into the less wild and greener slopes of the Valgaudemar. Turning straight up to our left, we found that the midday sun had almost cleared the rocks here of snow, which were facing W.S.W. Consequently the climbing was of a more straightforward nature, and one or two slabs and a long crack were quite enjoyable. The whole of the Cottian Alps were now clearly visible, with Monte Viso towering above the rest on the left, and seldom have I seen such a forest of little peaks as this part of France presents. Behind us, to the W., the Pic d'Olan rose from a thick bank of cloud looking almost as tall and solitary as the Matterhorn. In about half an hour we reached the summit ridge, and traversing to the S.E. we were soon at the N.W. summit seen in the photograph, which, to our sorrow, was evidently not less than two hours from the highest peak, was almost due E. of us and separated by a considerable gap. The time was now nearly 3 o'clock, and high time to be getting back, so in a very few minutes we were going down again by the route we had come. The first section of the descent needed a little caution to avoid falling stones; on the awkward traverse we were able to move more quickly, though scarcely more certainly, than on the ascent; and when once on the long rib of rock, progress began to be quite rapid, as an occasional plunge into soft snow helped first one, then another along. The Écrins and more distant Meije looked very attractive with the afternoon sun on their fresh powder of snow, but we had not much time to enjoy them, and hurried on to a good supper at the very primitive inn at La Béarde after a delightful 16 hours of mountaineering.

On Monday, August 26, after a week of travelling, I found myself with a family party at Moutiers. We decided to spend the three days we had left in a short excursion to the Tarentaise. Not having secured places on the motor diligence, we hired a

carriage and spent a very hot day in crawling up the valley of the Doron to Pralognan. The scenery is in striking contrast to the bleak wild valleys of the Dauphiné. The first half of the journey we were among rich vineyards and big forest trees. Just beyond Bozel, at the junction with the Prémou, the beauties of nature have been lately obscured by the building of a large factory, but where the valley turns south we left the carriage and walked through the picturesque gorge of the Doron, coming out at the top into a beautifully wooded rich Alpine glen, with rich pastures that would rival the best in the Oberland.

The hotel at Pralognan is large and comfortable, but placed in such a situation that it just loses all the view. From a few yards away the Grande Casse presents a really magnificent spectacle. The Bec de Pralognan and two other sharply defined rock pyramids in the foreground form an excellent framing to the picture. Arriving at 5 P.M., in very promising weather, I at once looked for a local guide as companion and started out for the Cabane Félix Faure on the Col de la Vanoise, about two hours' walk, and a very comfortable mountain Inn. We started next morning, at about 3.30, for the Grande Casse, traversing round the base of the mountain on the west side to the Col de la Grande Casse, whence we had a most charming view of the Graians, silhouetted against the pink clouds just before sunrise. We had started early, as the guide said there might be considerable difficulty on the steep ice-slopes of the N.W. face; but we found that after the first twenty minutes of rock and ice there was no more ice, but excellent hard snow, and all the way we had the use of steps cut by another party the day before and still as good as new. I have never travelled so easily and rapidly up a snow-slope of such steepness as we did that morning, spurred on by a sharp north wind, and in three hours, including halts, we found ourselves at the summit. The mountain does not seem to be a favourite among English climbers, but it is well worth a visit if only for the view. Standing midway between Mont Blanc and the Pelvoux group, it commands an excellent panorama of the Graians to the E., and it is high enough to permit of seeing over and beyond all the other summits of the Tarentaise and Val d'Isère, and affords a splendid opportunity of studying the geography of the Alps of France. For those who like snow and ice work it is quite a good climb, and might at times be difficult by the route we took, but the descent by the ordinary route over the glacier on the S.W. face is very easy and dull, and one soon

gets tired of looking at the dreary snow waste of the Dôme de Chasseforêt, more dreary than the Plaine Morte glacier or the Diablerets. We traversed it, however, next day, and, dull as it was in itself, we enjoyed the advantage of leisure to take in the view practically all day long, which one so seldom has on a real climb. When the war is over, France will no doubt be more attractive to English climbers than before, and many might do worse than turn their attention to this district, which is reminiscent of the best Swiss scenery, though at present not marred by barrack-like hotels or mountain railways.

LES CHASSEURS ALPINS.

FEW of us can have remained unimpressed by the magnificent fighting qualities of the French Alpine regiments, upon whom the brunt of the desperate fighting in the Vosges has fallen.

It is very interesting to note that among the officers of the 28th Battalion, stationed at Grenoble, is the splendid veteran Captain H. Duhamel, so well known in connexion with Dauphiné and the Meije; indeed it is nearly forty years ago that he commenced his explorations in that district, and gave his name to the 'Pyramide Duhamel' commemorating one of the early attempts on the Meije.

His two sons and his son-in-law are also officers in the same corps and are with their regiments in the Vosges, where very severe fighting is continually going on.

The following is an extract from the *Gazette de Lausanne*, reprinted by kind permission of the *Daily Mail* :

' March 3, 1915.

' Serious engagements took place last week, principally on Sunday and Monday, in the Münster Valley, in the neighbourhood of Stossweiler and Sulzeren. The Germans are making great efforts in this neighbourhood, so as to be able when the spring comes to direct their principal attack towards the Stossweiler road and the Col Schlucht.

' Since the war began the Germans have had to face those admirable troops known as the "Blue Devils," otherwise the Alpine Chasseurs. For seven months the Chasseurs have regularly beaten the foe back and have broken down his attacks. By their stubbornness and methodical work they have transformed the Vosges into a country bristling with dangers. They wage a guerrilla warfare rather than war on modern lines. Their chiefs allow the men great latitude, but all important operations are carried out in a death-like silence.

' Like phantom shadows the "Blue Devils" glide through the forest undergrowth and fall upon their enemies in their hiding-places. Trained to the hour and in splendid physical condition,

these Alpine Chasseurs fear no fatigue. They are untiring marchers, and can climb like cats and hide in the tall branches of the fir trees while avoiding or waiting for their enemy.

' If the Germans attempt an attack they find them first-class shots, and while the Germans show great resisting powers, such is the prowess of these Alpine Chasseurs that they have come to dread them and look upon them with horror as their comrades in the north do the Turcos.

' A letter found upon a German officer prisoner says of them: " These Alpine Chasseurs are terrible. We never know where they come from until they are upon us and kill our men."

' Recently in the neighbourhood of Mühlbach four companies of Chasseurs were attacked by twelve companies of Prussian infantry, but, sheltered by solid trenches and supported by machine guns, they fought with desperation and did not give an inch of ground.

' When the Germans got too near to the trenches the " Blue Devils " slaughtered them with the butt-ends of their rifles. Thus they held their position for two days and a night until French reinforcements arrived, who put the Germans to flight, inflicting great losses upon them.'

A graphic story of how the French gained Hartmannsweilerkopf is told by the French Eye-Witness. The account begins by recalling the dramatic incident which occurred on the summit in January. A French advance guard, posted in a little redoubt on the top, was surrounded by Germans, but held out for several days. It surrendered only to hunger, but while it held out it inspired the troops who were seeking to bring it relief to a supreme effort. They attacked on the flanks of the hill to relieve their comrades, but hasty and improvised attacks, prompted by a desire to reach the goal quickly, had, in view of the nature of the ground, little chance of success. After four days of struggle a halt was called. Some of the companies concerned only mustered 120 rifles, and it was learned from German prisoners that the advance guard had capitulated.

' It was necessary, therefore,' continues the narrative, ' to start the business again, to make methodical preparation to demolish, stone by stone, the invisible fortress from which the Germans, dominating the valleys, directed their artillery fire with absolute accuracy. To attempt to carry the place by storm over such ground would have been useless, and we had to lay regular siege to it. The fog, which is common in the Vosges hills in winter, added a further difficulty to those which the ground itself and the woods presented. To make ready for the attack it behoved us in the first place to establish our troops strongly by digging trenches and shelters and providing artillery positions. This took a month, to February 26, but when the attack was launched the invisible Germans, burrowed in the woods, only gave ground to the extent of a hundred yards. Our artillery had not been able to destroy with sufficient thoroughness the concealed accessory defences. Many trenches were intact.

'A more complete and at the same time more deliberate preparation was rendered necessary. On March 5 the signal was given. For the space of two hours the enemy's trenches were swept by intense artillery fire. Then our Chasseurs leapt into them and carried the strongest of the German blockhouses. Fifty prisoners and two machine-guns fell into their hands. The greater part of the enemy's first line was ours. The Germans were driven to exasperation. The two regiments which they had there made four daring counter-attacks during the course of the day of the 5th and two in the morning of the 6th. On the 7th they attempted to make a sortie from their trenches in close order. Our fire mowed them down a yard away from their own fortifications. They tried again, but with the same result. This time the psychological relations of the combatants were inverted. It was we who had the upper hand, it was we who imposed our will, it was we who kept what we had won, it was we who were sure of winning what remained to be taken. Our troops were weary but confident. Complete success was certain, and we were going to win it by sheer hard fighting. The battalions of Chasseurs which had been fighting on the slopes for two months were reinforced in the last week of March by a regiment of infantry. After a minor action on March 17 we made a great attempt on March 23. The gunners who, by dint of daring and patience, had succeeded in learning their way about these woods, and had honeycombed the hill with more than thirty miles of telephone wire, opened a fire which lasted for more than four hours. One must have actually followed the preparations and the results obtained to be able to appreciate the astounding degree of skill reached by our "Black Butchers." Heavy guns and light guns with extraordinary precision poured hundreds of tons of shot on the objective.

'Observation officers were in the first line directing the fire. All the while could be seen hurtling among the trees fragments of dead Germans, arms, and sandbags from their defence works. When the infantry leapt forward from the trenches, preceded at a short distance by this wall of fire, the enemy was thrown into complete consternation. He fought, however, with courage. But our men pressed furiously forward. The infantry carried two lines of trenches and a redoubt and captured over 200 prisoners. The Chasseurs debouched on their flank with equal dash. We were getting near the summit, but new lines appeared to view, and these had to be carried also. We repelled two counter-attacks and organised the ground we had won. On the following day at dawn our look-outs saw dark points stirring in the trenches which the enemy still held. Helmets and bayonets next appeared, and it was obvious that a big counter-attack was being prepared. Our artillery with appalling rapidity found the trenches with its fire, and, as on the day before, we saw hurtling in the air men and their equipments. The German losses must have been enormous, for there were no more counter-attacks and his artillery remained silent.

' The night of the 25th passed without incident, and when the day of the 26th broke it was noted with joy that the fog, which so often during the last two months had come to the help of the Germans, had fallen to the first rays of the sun. All was ready, and from this point onwards the drama was to proceed with an automatic regularity, which was the fruit of long weeks of work. It was a supreme effort which should make us masters of the summit. Between us and our objective there were at least three lines of trenches, strengthened by blockhouses, containing machine-guns, and the trees still masked the defences of the enemy. Our artillery had yet a great deal to do. At 10.30 it came into action, and until half-past two without intermission it deluged the enemy's lines with its fire. Artillery of every description was employed. Huge pines fell with a crash, having been severed about the height of a man from the ground and toppled over into the craters formed by the explosion of the shells. The whole ground was a chaos of holes, branches, and trenches. Cries of agony were heard from the shelters of the Germans, whose resistance had now been broken. Ammunition stores exploded, and the work of destruction continued remorselessly until a quarter to three. The bombardment had lasted four hours and a quarter.

' At this moment our infantry in a magnificent rush dashed forward and ten minutes later was on the summit, and on the crest, now cleared of trees, one of our men, scorning the German bullets, waved a large flag to our artillerymen, who were now sweeping the eastern slopes with their fire. At three o'clock an infantry regiment organised its position on the summit of the Hartmannsweilerkopf. Companies belonging to the second battalion of the Chasseurs carried by means of hand grenades the trenches on the right, while two companies of another battalion made progress on the left. The whole body, joining forces, swept down the eastern slope in pursuit of the Germans, who were now completely demoralised. More than four hundred prisoners in our hands and the whole of the Hartmannsweilerkopf conquered—such is the statement of account for the two attacks of March 24 and 26. Many brave men fell in those attacks, leaving to their comrades a splendid example. Among the survivors, whether wounded or not, how many might be mentioned! One case may be cited. A Chasseur named Dumoulin alone in a German trench, from which a machine-gun was sweeping down our attack, felled the gunner to the ground and stopped the fire.

' The attack of March 26 had the capture of the summit as its only object. But our men, carried away by their dash, descended the other slope and then established themselves in a formidable position 300 mètres above the Germans, who were clinging lower down on the slope. That evening snow fell, covering with a white winding-sheet those who had fallen on the 23rd and 26th. The Germans were still firing, but the fire slackened and the day after it had ceased almost altogether. Such was the Hartmannsweilerkopf affair. It deprived the enemy of an admirable observation station,

of which we shall now have the benefit and henceforth the whole plain to the east is under our fire. On March 31 notwithstanding the snow we were able to count upon the ground seven hundred German dead, while a large quantity of material had been abandoned by the enemy.

'This complete success was fine revenge for those who fell on January 19, the victims of surprise and hunger. Our last attacks had been conducted with a minute perfection and a complete co-ordination of all the arms employed, and had been crowned by a success which there was nothing to mar. The capture of Hartmannsweilerkopf will be reckoned among the finest pages of the mountain war.'—*By kind permission of Reuter's Telegram Co. Ltd.*

The Club Alpin Français has, of course, large numbers of its members in the fighting line. The *Section de l'Isère*, which has its headquarters at Grenoble, had 230 of its members mobilised, and by March 7 last had lost, killed in action, fourteen, including its treasurer and two members of committee, and seventeen wounded, while twelve had been mentioned in despatches and seven decorated for feats of arms. Its president M. P. Lory is among those serving.

We offer to our colleagues of France the assurance of our respectful homage and admiration.

BEDDGELERT IN SEPTEMBER.

BY THE EDITOR.

OUR journey from York to Beddgelert on September 9, 1914, was quite as eventful as an ordinary trip to Turin. At Manchester German prisoners with a formidable escort attracted the attention of the crowd, and the train that we had reckoned upon to take us through to the Snowdon Range was not running. Outside Chester there was a stoppage at Queensferry, where many Germans were encamped, and in the end we spent the night at Bangor. The next day saw us—myself and my youngest son—installed in Mr. Pullan's excellent hotel, 'The Royal Goat,' at Beddgelert.

Moel Hebog, Yr Aran, Lliwedd, and Craig-y-Llan gave us a pleasant greeting with heads uncovered, a courtesy which they bestowed upon us by no means every day. We strolled to Llyn Dinas, and I began to hope for that 'cumulance of comfort' which Mr. G. W. Young assures us is to be found on 'high hills.'

On September 10 we went to Llyn Dinas and thence struck the slopes to Craig-y-Llan. A more beautiful walk it would be difficult to find. The sun was bright, the air sharp, and the sights given to us rarely diversified in variety and colour. The wondrous shades

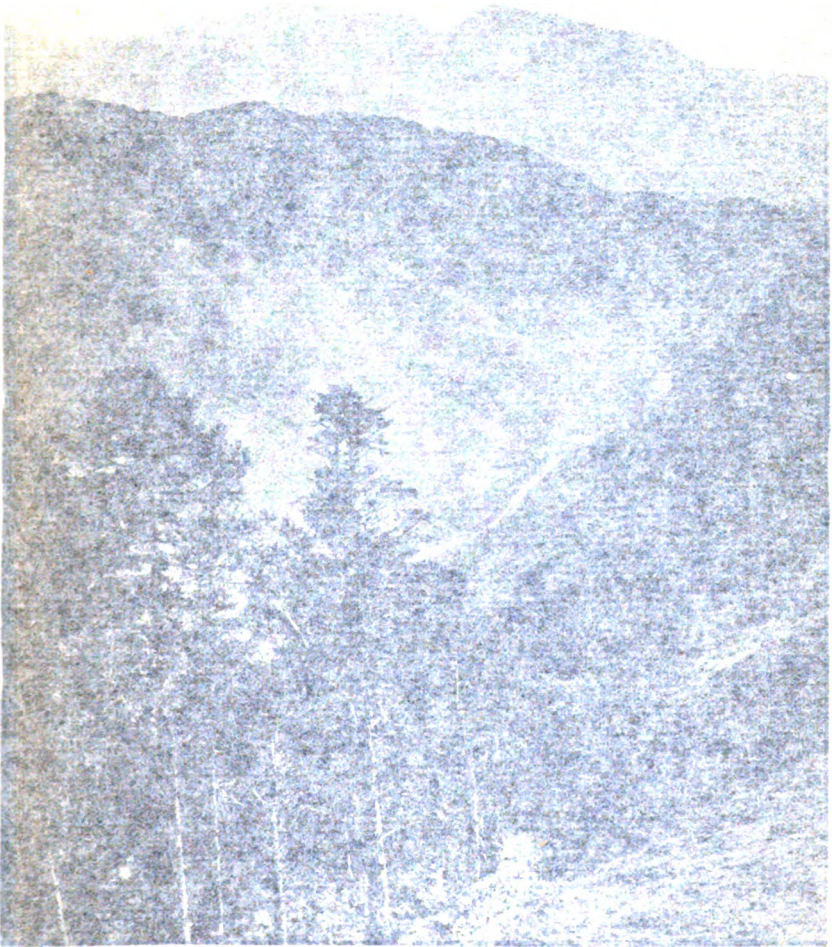
of green and the general richness of the colouring surprised me. The heather was past its best, but still bright. We went along the broken ridge of Craig-y-Llan to Pont Aberglaslyn. The slopes on the side away from Beddgelert were fairly gentle, but the gullies above the Glasslyn were steep and broken, and the views into the pine-clad gorge below very welcome to dwellers in a plain where York Minster is the only hill to be seen. The last portion of the descent through the pines might have passed for a bit of Cogne forest. The same evening we walked up the valley of the Colwyn, and I cast a purposeful gaze on Moel Hebog.

The morning of the 11th was rainy, and we merely revisited Pont Aberglaslyn, but in the afternoon I ventured to brave the weather and try my luck on Moel Hebog. I read the descriptions of the ascent in two guide-books, but I thought that I would pick my own path—as it is generally very easy for an old climber to do amongst hills. So I went along the Llyn Cwellyn road a short distance, and then, crossing the Colwyn, took my own way to Moel Hebog. One heavy storm did its best to drench me, but by help of a big rock and—an unusual accompaniment on climbs—an umbrella I succeeded in escaping the worst. I used my hands a little, for I was not very careful to choose the easiest way, and, so gaining the big shoulder, in a few minutes reached the summit. I passed sheep in various places—some of them expiating boundary-breaking escapades by having one foreleg tied up under them. I sympathized with them, but the punishment seemed to fit the crime.

Snowdon was clear of cloud, but very dark. There were ever-moving patches of sunshine on the flats between Moelwyn and the sea, and by-and-by a glorious rainbow spanned the world. Beyond hills to the west was a golden sea, and between me and the golden sea dark clouds and a coming storm.

A hawk soared over the top of Moel Hebog and proved the mountain's right to its name 'the hill of the hawk.' The storm grew darker and drew nearer. The lakes which I could see gave a white light almost like broad lamps, but it was time to move on, so I went down the side of the mountain away from Beddgelert. Then the wind began to howl, the storm was upon me, and I took shelter under a wall. I have seldom been more impressed by a tempest amid high hills. Here was a fine setting for a scene of violence and murder: one almost expected to hear a tucket sound and Macbeth appear. When the worst of the storm was over, I turned down to the right to the valley of the Colwyn, through thick wet grass and brackens varied with patches of bright green, pleasing to the eye but treacherous to the foot. From a spot above the first farm with trees I enjoyed a view of Moelwyn, like a volcano in shape, and almost challenging its neighbour Cynicht's superior mountain splendour.

The morning of the 12th was unfavourable, but there was just a possibility that the weather might grow better, and my son was anxious to ascend Snowdon, so we drove in the hotel motor some three miles, past Llyn Dinas, to the starting-point for Sir Edward



Gynnecht and Aberglastyn.
from "The Mountains of Wales"

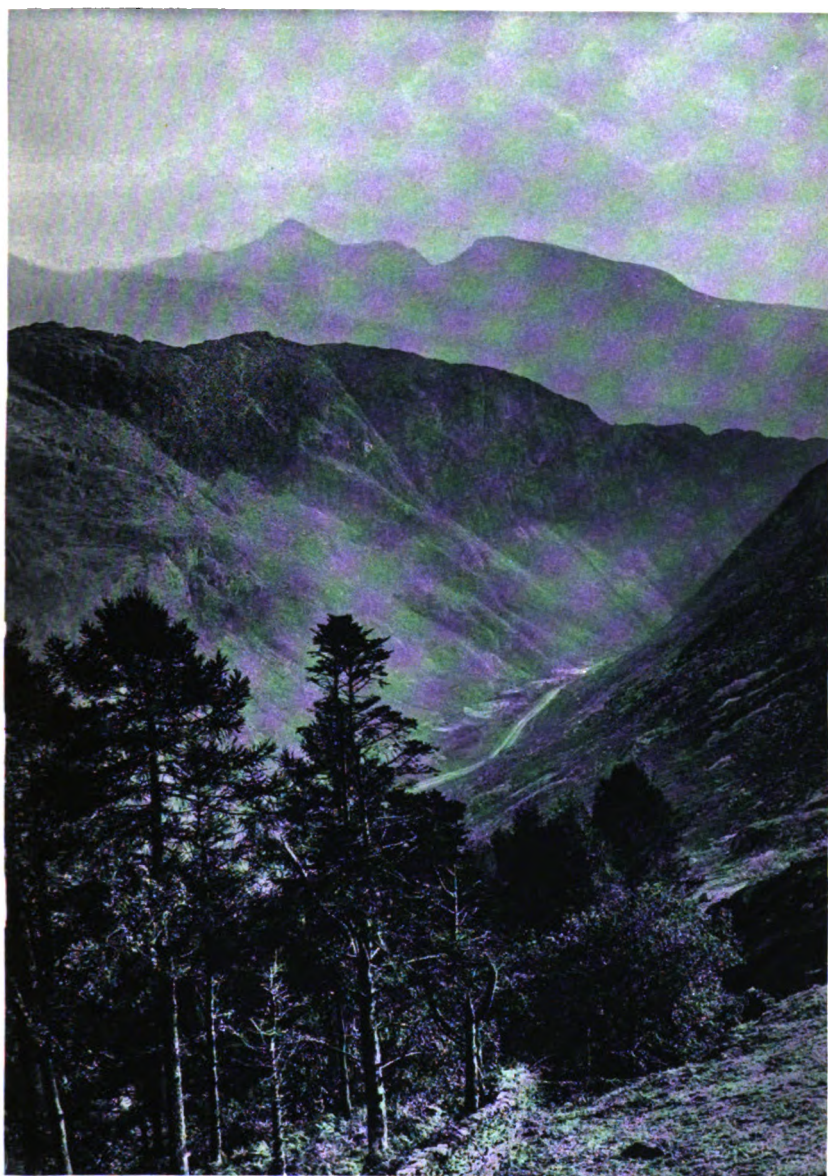
a green and the general richness of the colouring surprised me. The weather was past its best, but still bright. We went along the high ridge of Craig y Llân to Pont Aberglaslyn. The slopes on the side away from Beddgelert were fairly gentle, but the gullies above the Glaslyn were steep and broken, and the views into the pinched gorge below very welcome to dwellers in a plain where York Minster is the only hill to be seen. The last portion of the descent through the pines might have passed for a bit of Cogne forest. The same evening we walked up the valley of the Colwyn, and I cast a purposeful gaze on Moel Hebog.

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G. P. Abraham, photo.

J. van der Stoep, Engraving Co. Ltd.

*Cynicht and Aberglaslyn.
(North Wales)*

Watkin's path. No sooner had we left the motor than the rain began. We decided, however, to go on, and passing Sir Edward Watkin's house embosomed in roses and flourishing shrubs, followed an easy road which gradually wound upwards. On our right we passed a pretty little house where it was sad to see how neglect was rapidly culminating in desolation. The cliffs on our right above the torrent were fine, and would, I fancy, give a skilled rock-climber some pleasing sport. Woods clothed the slopes above the Gwynant Valley. Soon after we reached some deserted slate quarries where we stayed a few minutes to gaze upon a scene of blank dreariness. The savage grandeur of the ridge between Yr Aran and Snowdon was buried in mist whose broken fringes occasionally lifted for a moment.

Should we persevere Snowdonwards? My companion settled the question by remarking that

'Returning were as tedious as go o'er.'

So we continued on our way

'And made boon comrades of the clouds and rain.'

We had no difficulty after turning to the right in following the path, always in rain, till we deserted it for a short time to look down on Llyn Llydaw. Here fortune favoured us, for when we reached the ridge there was a brief clearing of the clouds and we saw the dark lake in savage splendour at our feet—it was the one solace of our day. After that we went on—always in mist—to the top of Y Wyddfa. There hot refreshments were not unwelcome. I was sorry that my companion should not have had a greater reward for his wet day's tramp, though personally satisfied, as this made my fifth route up the mountain.

As we descended in the mist by the same route by which we had gone up, I recalled to mind that on April 19, 1879, after ascending Carnedd Dafydd from Bethesda by the cliffs of the ridge that connects the two Carneddss, where much snow and ice gave us an Alpine climb, a very pleasant meeting of members of this Club was held at Capel Curig. The late C. E. Mathews took the chair at dinner and delighted us with one of those witty and humorous speeches which some of us remember so well. On the next day we went up Snowdon by Crib Goch in heavy snow, but with light hearts that made the wintry scene a real delight. We to-day met with no snow to invigorate us, but even in the heavy rain it was a satisfaction to have carried our expedition through. So we returned to Beddgelert drenched, but not ill content.

On the 14th we went up Yr Aran, one of the most prominent of Snowdon's secondary peaks. We followed our Snowdon route till some distance below the deserted slate quarries, and, then turning to the left, reached the ridge of the mountain and followed it to the summit. A stout wire fence (on our left) would here save even the inexperienced if sudden mist came down. I can imagine that Yr Aran, when deep in snow on a sharp frosty day, would make a very fair imitation of an Alpine peak. Mr. Willink's illustration of 'Castell Gwynant, The Glyders,' in his article on 'Snowdon at Christmas,

1878,' will show unbelievers what the Welsh mountains can be like at their wintriest.¹ We had a fine view of the great hollow between us and Lliwedd. We also enjoyed glimpses of mountains in other directions. We returned to Beddgelert by going down as directly as possible to the Colwyn valley road.

On the 15th Mr. Pullan drove us in his pony trap to the tram line that runs down to the road from the slate quarries at Croesor. We then went up the tramway, beguiling our way with feasts of blackberries. I have seen blackberries in plenty in Auvergne and in overflowing abundance in the Eastern Caucasus, but I never found them sweeter—they were abundant too—than in these out-of-the-way corners of North Wales. When we reached Croesor we turned slightly to our left, got on a great ridge of Cynicht, and so reached the top. This mountain had shown itself to great perfection as we were driving along the road between Aberglaslyn and the Croesor tramway, but I fear that when it is styled, as it sometimes is, the Welsh Matterhorn, 'the comparison will chiefly commend itself to travellers who have never been at Zermatt.' Yet I think all who look at the illustration which faces this page will agree that what Emile Rey said of Ben Nevis² is true also of Cynicht—'C'est une véritable montagne celle-là.'

A storm buffeted us on the top, but not for long. We went down towards the Nanmor Valley by Cwm Celli Iago, a route in places as 'honest' as its Shakespearean namesake, for where the turf looked safest it let you in deepest. On our way we saw the finest mountain ash it has ever been my good fortune to meet with. There were upon it countless bunches of orange-scarlet berries, and the leaves were still green; moreover, the tree grew over the torrent in such a way as to show its pendulous treasures to perfection. The last bit of the descent to the Nanmor quarries was steep enough to remind one of higher mountain districts, and had something too of their loneliness. A solitary peasant, two or three cows, a cottage with a tumbling stream at its side appealed to one's recollections of loftier hills.

We followed the Nanmor road to the Croesor road, by which we had driven in the morning. It led us through pleasant scenery: small green meadows, an occasional cottage with a few fruit trees, and then oakwoods. Everywhere blackberries were as plentiful as reasons for not hurrying, so we only reached Beddgelert just in time for tea.

An air of seclusion, a feeling of remoteness from the everyday world, in places the deep shady stillness, in others the tinkling of water, the occasional fragrance of flowers or of lately broken branches with slowly withering leaves combined to produce a strong illusion, and by shutting my eyes I could fancy myself in some little side glen of Val Soana or Val d'Orco, though, of course, the Nanmor vale lacked the luxuriance of those Italian sanctuaries of solitude.

And so we found a substitute for the Alps. There is, of course, plenty of hard work for well-skilled rock climbers to be found in these

¹ See *A.J.* xvi. 33-42.

² *Ibid.* xii. 505.

mountains—in fact their fame is amongst the Clubs ; but we found our lighter fare by no means unsatisfactory. We were, perhaps, fortunate in visiting Beddgelert when the usual crowd of September tourists had so greatly diminished in number, but no one could have been more kind and considerate than our host and hostess at the 'Royal Goat.' All was quiet and restful. The one excitement of the day was the arrival of the *Daily Mail* at the village post-office in the early morning.

DISCOVERIES IN CENTRAL ASIA.

(By kind permission of the Royal Geographical Society.)

A COMMUNICATION has been received at the Royal Geographical Society from Sir Aurel Stein, giving some account of the further work of his official expedition to Central Asia from April to November 1914. The letter is dated November 22 from Turfan, at the E. foot of the Celestial or Tian Shan Mountains, some 200 or 300 miles W. of the province of Mongolia. Sir Aurel Stein's main object was to continue the work of investigating the remains of the old wall which he discovered, and traced for a very considerable distance, and among the ruins of the forts of which he found so many interesting relics.

The expedition started in April from Tunhuang, where the expedition had halted for a short time to recover from its trying winter campaign in the Lop-nor desert, between Turfan and the northern boundary of Tibet. Sir Aurel Stein paid another visit to the cave temples of the Thousand Buddhas near Tunhuang and was richly rewarded. He followed the wall for close on 250 miles eastwards. Along almost the whole of this distance the wall, with its watch-towers and small military stations, had been built across what already in ancient times was absolutely sterile desert. The wall itself was a very remarkable construction, built of carefully secured fascines of reeds or brushwood, with layers of clay or gravel between them. It was specially adapted to withstand that most destructive of natural forces in this region, slow-grinding but relentless wind erosion. This, with the absence of human interference during all these centuries, has left a rich store of remains for the explorer. In many places there remained on the wind-worn surface clear evidence in the shape of pottery, coins, metal fragments, and other hard *débris* which indicated with accuracy the position of the posts once guarding the Chinese border.

As the expedition proceeded beyond the sharp bend made

by the Su-lo Hu valley the physical difficulties greatly increased, largely from want of water, but there was reward in the ample finds of ancient records on wood, of furniture, and implements of all sorts which were brought to light at the ruined watch stations. Conclusive evidence shows that all these had been left behind by the Chinese soldiers who, during the first century before and after Christ, had kept guard over this most dismal of frontiers.

Sir Aurel Stein was very much impressed by the engineering skill which was required to adapt the defensive line of the wall to different local conditions. In May he started on a fresh line of investigation, the object of which was to follow the united course of the rivers of Suchou and Kanchou down into Southern Mongolia, and to explore what ancient remains might be found along it and in its terminal delta. The early history of this region attracted him greatly, as he has no doubt it formed part of the wide dominions held by those earliest nomadic masters of Kansu, the 'Great Yuehchi,' or Indo-Scythians, and the Huns, whose successive migrations westwards so deeply affected the destinies of Central Asia as well as of India and the West.

While Sir Aurel Stein carried out his explorations to the northwards, his surveyor, Lal Singh, proceeded in another direction to carry out surveys of practically unexplored regions. He still found remains of the wall to the northwards, and the observations which he made upon the hydrography of this now practically desert region are full of interest. He found traces of extensive irrigation which for some reason had been abandoned long ago. He examined the ruined town of Khara-Khoto, and the position and remains proved to his satisfaction that this could be no other than Marco Polo's 'City of Etzina,' where in ancient times travellers bound for Karakoram, the old Mongol capital, had to lay in victuals for 40 days in order to cross the great desert, where there was no habitation or baiting-place.

Here Sir Aurel Stein collected many valuable relics—Buddhist manuscripts and prints, many fine stucco reliefs and frescoes, miscellaneous records on paper, and household utensils. Finds of coins, ornaments in metal and stone, &c., were abundant. Everything pointed to the conclusion that the abandonment of the settlement must have been caused by difficulties about maintaining irrigation. In the course of these journeys Sir Aurel Stein met with an unfortunate accident which hampered him very considerably, though after a short rest he continued the work of the expedition.

Altogether, before the expedition arrived at Turfan, many valuable additions were made to the previous work of the leader, both archaeological and geographical. Around Turfan there are many ruined sites of Buddhist times to which Sir Aurel Stein proposed to devote a few months, while his surveyor would find ample work in mapping the extensive and little-known desert ranges of the Kuruk-tagh between Turfan and Lop-nor depressions.

IN MEMORIAM.

PÈRE GASPARD.

PIERRE GASPARD, commonly known as Père Gaspard, the famous vanquisher of the Grand Pic de la Meije, has gone to his rest.

What Jean Antoine Carrel was to the Cervin, that was Père Gaspard to the Meije. The one dallied overlong with his mountain to see it conquered by strangers, but instantly repaired his error by storming it from a far more difficult side, an expedition that remains almost without rival in Alpine history. The other, more fortunate, saw his several attempts finally crowned with success fully merited by his own skill and endurance as well as by the persistence of his young employer, thus securing for France the honour of vanquishing one of her most difficult peaks.

Gaspard was born at St. Christophe on March 29, 1834, and died there on January 15, 1915. For the last eighteen months of his life he was paralysed and bedridden. His father was a certain Gaspard Hugues, from a village—St. Georges-d'Entraunes—in the Alpes Maritimes,¹ who migrated as a young man to St. Christophe, where he married in 1832 and died in 1883, aged eighty-three.

He was probably one of those travelling 'bergers de moutons' who annually lead their flocks from the parched plains of Provence to the mountain pastures and who are a feature of interest to the traveller in the Franco-Italian borderland.

The son, who took Gaspard for his surname, followed in his father's footsteps, but also became a *chasseur enragé de chamois*, the acknowledged leader of every hunting party. He appears to have commenced to act as guide or porter in 1873, when he accompanied Lord Wentworth's party on an ascent of the Écrins. In 1876, as the local chamois hunter, he was taken by Dr. Coolidge on an ascent of the Aiguille du Plat ('A.J.' viii. 98). Later in the same year he was engaged by M. Boileau de Castelnau, and with that enthusiastic young climber made two magnificent seasons, 1876 and 1877, including the first ascents of the Tête de l'Étret, the Tête des

¹ Père Gaspard's second son, Maximin, showed, as a man of thirty, every sign of his Southern descent.

Fétoules, the Aiguille d'Olan, the Grand Pic de la Meije,² the Petit Pelvoux, the Tête du Rouget, and the W. summit of the Écrins. On all these expeditions Gaspard was accompanied by his son Pierre, who unfortunately soon afterwards cut his leg so badly that he was compelled to give up climbing, and subsequently died at Les Étages.

The sensation caused by the successful ascent of the Meije was very great, as it had been examined or tried by some of the best of the Swiss, Chamonix, and Courmayeur guides. The success was the reward of several attempts on the S. face in which Gaspard took part, notably three attempts in September 1876 by M. H. Duhamel³ with the guides Ed. Cupelin and François Simond, then among the best of the Chamonix men, and a very determined attack⁴ by M. de Castelnau, led by Gaspard and his son Pierre, only a few days before success crowned their efforts.

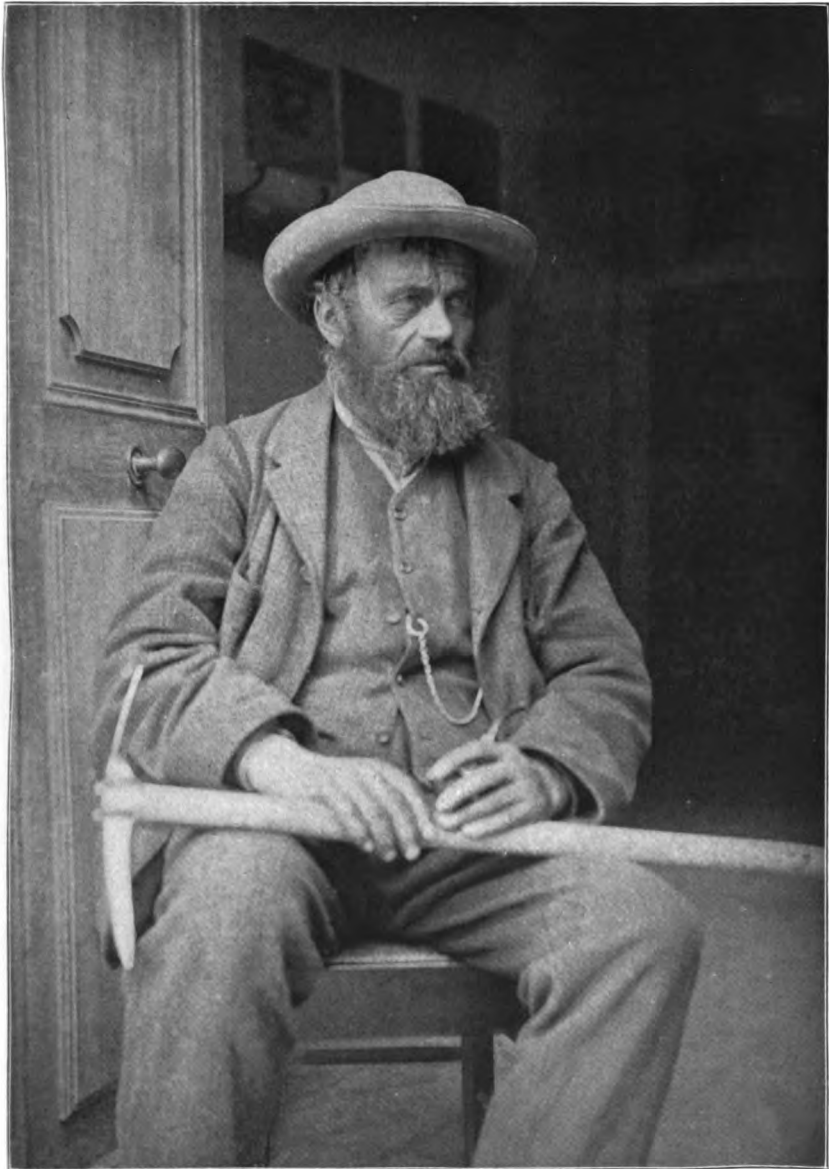
Gaspard's success naturally brought him instant recognition. His name was in all men's mouths, and he remained to the end of his career probably the greatest of purely local guides that the Alps have seen. His position certainly equalled that of Michel Innerkofler, of Hans Grass, or of Martin Schocher, to mention men who were pre-eminently famous as local guides, yet known by repute to every Alpine traveller.

Doubtless it was in consequence of his great local success that he seldom left his district, finding ample employment there. He

² M. de Castelnau and M. Duhamel in 1875 ascended the Pic Central and made an attempt on the arêtes from the Glacier de Tabuchet. The S. side of the Grand Pic had previously been 'examined' in 1873 by a strong English party with first-rate Valais guides, and in 1875 by Mr. R. Pendlebury with the Spechtenhausers, who were averse to any attempt. See *A.J.* viii. 196-8, and for subsequent attempts *Alpine Studies* (Coolidge), pp. 96-7. M. de Castelnau's account of his expedition is to be found in *Ann. C.A.F.* iv. 287-94.

³ *Ann. C.A.F.* 1876, iii. 333-8.

⁴ M. Henri Ferrand writes: 'Castelnau, suffering from toothache, went down to Grenoble between the 4th and 14th of August [1877], but it was well understood with Gaspard that he would be back, as soon as well, to do the big climb. Meantime nothing was to be said. But both of them were too elated to keep the secret. At Grenoble on August 10 or 12 (I did not keep a note of the day) Castelnau had told me that they had overcome the difficult bit and could ascend the Meidje when they liked, and soon afterwards one of my friends told me that when crossing the Col de la Lauze on August 10, with Gaspard as guide, the latter, as soon as he came in sight of the Meidje, pointed to it with his axe, exclaiming "Ah, my lady, this time I have got you!" My friend only saw the force of the remark on hearing, the following week, of the successful ascent.'



Swan Electric Engraving Co., Ltd.

PIERRE GASPARD (*père*).
(Taken in 1888.)

From the collection of Dr. Coolidge.)

was much sought after by his countrymen, who were naturally intensely proud of their great guide who had by his skill and persistence kept the blue riband of Dauphiné from the insidious attacks of the crack foreigners of the day. However, he accompanied M. Duhamel to the Mont Blanc group in 1882, and also made the second ascent of the Petit Dru. He ascended the Cervin and the Dent Blanche, but it is chiefly upon his ascents in his own neighbourhood that his fame rests. Thus, with his constant patron, M. Henry Duhamel, a name held in as high honour among Englishmen as by his own countrymen, Gaspard made in 1878 the first ascent of Pic Gaspard, in 1880 the first ascent of the Écrins by the S. face, now a much used route; in 1881 the Aiguille du Plat from Les Étages; with M. Verne in 1885, the ascent of the Grand Pic by the W. arête from the Brèche de la Meije,⁵ forming an independent route to the Glacier carré; with M. Auguste Reynier in 1891, the first ascent of the Pic Central de l'Ailefroide. He appears to have been well known to few Englishmen, but his greatest ice-climb—the ascent of the Pelvoux from the N.W. in 1891, an arduous piece of work seldom if ever repeated—was carried out with his son Maximin, acting as guides to Mr. F. E. L. Swan, of this Club.

It is, however, to the pen of the late Arthur Cust, a brilliant writer, draughtsman, and topographer, as well as a keen mountaineer, one of those names that will not soon be forgotten among us, that we owe the best picture of the masterful personality of the great guide. Mr. Cust made with Gaspard the first ascent of the Pic d'Olan from the North, and his paper 'The Story of the Pic d'Olan' ('A.J.' xiii. 57 *seq.*) is one of those gems that one can find so often in turning over the leaves of our old Journals.

'Gaspard had seldom been with Englishmen, and he was very much on his good behaviour, which when it occurs is of a superior kind. The company of a clever, independent chasseur, the cock of the walk of the country-side, is not to be despised. He carved the chicken at our first meal and handed me the choicest part with the air of one who knew that he was doing the thing well.

'Emerging from the lower slopes of the Vallon de la Mariande, we got on to a patch of snow at an angle of 15°, and here fraternity and equality were over and business was to begin: the business was the trial of the paces and temper of a new-comer. Crossing this patch I made one of those slips with one foot which on safe ground one is apt to make for the sake apparently of rectifying it with the other. Gaspard junior from behind gave a cry, and, while Gaspard senior turned round with a startled and wrathful exclaima-

⁵ Attempts made in July 1877, by Dr. Coolidge and by M. Guillemin, by the arête running up from the Brèche, very nearly led to their gaining the Glacier carré, when the remainder of the ascent of the Grand Pic would have offered no serious difficulty to such parties (cf. *Alpine Studies*, p. 94).

tion, seized me by the seat of the trousers. From that moment a profound melancholy possessed me. Some initial awkwardness on my part on the rocks probably increased their suspicion that they had to do with an unmitigated duffer, and I found their sole idea of my advance to be a straight haul by the herculean arms of Gaspard senior, with tight pressure of the stomach against the rocks to prevent any evil effects that might occur from the free use of my limbs, while Gaspard junior lifted and steered as before by the latest patch in my nether garments. In endeavouring to account for this mode of progress the thoughts must be carried back to our climbing ancestors, who not improbably in their processions used the tail where we use the rope. The curious may find another instance of the survival of the custom in the case of hotel cooks seeking in autumn a warmer clime, and let down by their coat tails by laughing guides on the steeps of some snow-covered Monte Moro. My too impatient stomach (an old offender) gave the finishing touch to melancholy and demerits. Over a second meal of which it was the unlucky cause I heard them discuss in their patois the results of the trial. It would be better not to do the Olan; I should be taken ill on the mountain, and then —— would come, mentioning the name of one of their accustomed patrons, whom I concluded they intended "running." It is fair to say that on the Olan the wheelbarrow style of mountaineering was not adopted.'

' Before the ridge could be reached, the ice-masses that obstructed the entrance to a gully had to fall before Gaspard's stalwart arm. The rocks "went," and with one exception we adhered to the arête, where Gaspard, with his only fault of judgment, to avoid an apparent tower essayed, against my wishes, to circumvent it by traversing the dangerous slide of the mountain-face. I confess to having as little liking for these hard, even surfaces, where the agile chamois hunter can save his own body but not those of his companions should they unluckily require from Nature what she has not bestowed on the spot—foot- or hand-hold—as Professor Tyndall for that of the Matterhorn, and am glad to leave them for my betters.

' We turned back, to my relief; the "gendarme" had been firing with blank cartridges, and passing him with much satisfaction we found ourselves with only a "staircase" to the top. "It is ours," said Gaspard, and began for the first time to forget his science and pull the rope, meaning "Duffer astern." In a few minutes we were on the summit. "Well, are you satisfied now?" said the sturdy peasant, grasping me by the hand.'

' "What is that?" said Gaspard on arriving at the top, forgetful of the laborious description I had given him in bad French. "The other summit," said I. "Which is the higher?" Gaspard laid himself down and eyed it. "Ours beyond doubt," said he. . . .

'Gaspard, hitherto, I believe, undescribed in English, is one of those characters that calls for more than the ordinary passing notice of a guide. Of his rock climbing it is enough to point to the Meije; and I need only say that besides being a rock expert he was possessed (I speak of the day after the trial trip) of the qualities of a first-rate guide in handling the rope and giving his traveller his mouth. On snow I had only trial of him on easy ground, and his experience has, I believe, been too limited to acquire the necessary practice; but I agree with the remark of M. Nérot (from whom most of this information is derived), that had he, when younger, been "taken up" by an experienced mountaineer, and shown the round of other Alpine districts than his own, he would have made a guide only to be mentioned on a par with the pick of the profession. I mean that he had not the education usually gained by promising men as porters or second guides to good guides. He was, however, more than a professional; I deemed him one of those strong characters, mentally and physically, which Nature seems, as appears in Mr. Baillie Grohman's "Tyrol," so easily to build up by selection from the materials furnished by a hardy and independent mountain peasantry, whose rude virtues and rough vices foster the growth of individuality. As to the effect of sport, "the chamois hunter in the course of years, having to face continued perils, to bear hunger and thirst, to encounter snow, ice, and storms, and wait with immovable calm the moment of striking his prey, becomes reserved and taciturn, but full of alacrity in the undertakings to which he may turn himself; a model of frugality, neither bewailing nor fearing the misfortunes of life." (Lavizzari, *Escursioni nel Cantone Ticino*, p. 390.) The head chamois hunter of a whole district is in a position with which we have no comparison in modern England; it is an innocent, popular reproduction of the pre-eminence and freedom of baronial times. The glaciers and rocks of half a canton are his; his valley, if it narrows, shelters his development by independence of the levelling opinion and rivalry of lowland civilisation.

'I was told that he had been spoilt by some of his employers, who treated him on terms of equality at hotels, &c., which may help to account for the story that at a mountain lunch with an English climber, who took him to task for familiarity, he was within an ace of pitching the latter over the rocks; "and I was near doing it" he said afterwards in describing his fortunate resistance to temptation. I saw no trace of undue familiarity, but he was prepossessed by the discovery that I "had been with Pendlebury"—a name which M. Nérot spent his wet days in Dauphiné in teaching him to pronounce. His pride in his great strength took the form of saying that he would give any other man the advantage of laying him flat on the floor. A less amiable quality is a phenomenal, and, as I have lately heard, in one instance unworthy, jealousy of rival mountaineers, whether professional or amateur. Some pride, however, may be allowed to a native who, as he said, step by step and one

piece one day, another another, won his way up the Meije ; and to my ears there was a certain dignity—not, perhaps, without a savour of the “magnanimous man”—in the following estimate of his own powers : “Almer is a good guide, a very good guide ; but all that Almer can do I will engage to do myself—I will not say more.”

The gallant old gentleman made his last ascent of the Meije when he was seventy-seven years of age, thus beating Vater Almer's famous Jubilee ascent of the Wetterhorn.

M. Henri Ferrand writes : ‘He could never tell me the exact number of his ascents of the Meidje. From the Alpine chronicles I counted twenty-nine, but there must be some that are not mentioned.’

In 1892 he received ‘la grande médaille du Club Alpin Français,’ and in 1910 the medal of the Société des Touristes du Dauphiné, presented in person by M. Bendant, Secrétaire général, while in 1912, before an important assembly at Chamonix, the Inspector of the Académie, delegate of the Minister, nominated the famous veteran ‘Officier d’Académie.’

He had a family of fifteen children, of whom the late Pierre, Maximin, Casimir, Joseph, Devouassoud, and Alexandre were and are well-known guides, while one of his daughters married the late Jean-Baptiste Rodier, well known to many visitors to Dauphiné as a good guide and very agreeable and reliable companion.

We are much indebted to the courtesy of Dr. Coolidge for the photograph of Gaspard taken in 1888 inside the Inn at La Béarde, as well as for other details concerning him. It is said to be very like him as he was at the time of his conquest of the Meije.

The photograph, taken in 1912 by M. Paul Senequier-Crozet of Grenoble, appeared in ‘La Montagne,’ and we are much indebted for the presentation of two different positions and for permission to reproduce one here.

M. Henri Ferrand has again been very kind in offering photographs of the great guide and in supplying various details.

JOSEPH CROUX.

THIS well-known Courmayeur guide died very suddenly at his home on November 29. Born in 1859, he became porter in 1886 and guide in 1891.

Although not a great traveller or widely known, he was much esteemed by his employers as a thoroughly sound mountaineer and an excellent companion. Of late years he was constantly employed by Dr. Julius Kugy.

Among his great expeditions were the traverse from Courmayeur to the Montanvert of the Aiguille de Talèfre, of the Col des Grandes Jorasses, of the Aiguille de Rochefort and the Mont Mallet ; the second passage of the Colle Gnifetti, the traverse of the Nordend from Macugnaga, of the Parrot-Spitze from Alagna ; the first



P. Senequier-Crozet. photo.

Swan Electric Engraving Co., Ltd.

PIERRE GASPARD (père)
(in 1912).

ascent of Mont Dolent, (1) from the Glacier de la Neuvaz and (2) from the Glacier d'Argentière, on which occasions the Brèche de l'Amône was gained for the first time from each side; the Col Dolent, the Grivola by the N. arête, the Combin by the S.E. arête (second ascent), the Aiguille de Bionnassay by the E. arête, and of course most of the regulation ascents. He formerly climbed a good deal with Cav. F. Gonella, with Mr. Schinz, and with Mr. and Miss Mazzuchi (now the Countess Claretta). With Mr. Mazzuchi he also did a good deal of chamois shooting, being a great hunter.

Like his brother Laurent, he was always willing to place his great local knowledge at the disposal of English climbers, and those of us who met him will not soon forget the good-tempered open face with its red moustache and side whiskers, nor the keen yet kind eyes of the good and valiant mountaineer, Joseph Croux.

THE ALPINE CLUB LIBRARY:

The following Works have been added to the Library since January:

Club Publications.

American Alpine Club. By-Laws and Register. 1914

6½ × 4½ : pp. 45.

Bulletin Pyrénéen, organe de la fédération des sociétés pyrénéistes. xviii^e et xix^e années, Nos. 115-126. Pau, Garet & Haristoy, 1914

9½ × 6½ : pp. 384 : maps, ill.

Among the articles are the following:—

L. le Bondidier, Les ponts-et-chaussées français dans les Pyrénées espagnoles. L'Ingénieur Colomes.

H. Beraldi, Les tours d'horizon pyrénéens de Schrader.

M. Gourdon, Première ascension du Pic de Thénaout.

A. Meillon, Légende de la Blotière et Roussel.

P. Buhan, Perdiguero, Crabioules et Luchon.

M. H., Itinéraires au sud de Gavarnie.

R. Gombault, La pointe des Trois-Rois.

C. Ledormeur, Autour du Néthou.

L. Rouch, Dans la Haute-Ariège.

M. B., Le Pic Mayouret.

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C.A.F. La Montagne. Revue mensuelle. Maurice Pailion Rédacteur en Chef. 1914

vol. x. 8½ × 6 : pp. xxvi, 472 : plates. 8 parts only in this volume.

This contains, among other articles:—

H. Beraldi; Ramond, sa jeunesse, le voyage en Suisse.

This contains a brilliant résumé of the history of early visits to Chamonix in the latter half of the 18th century.

R. Le Chatelier, A Chamonix. Quelques promenades peu connues.

R. Delzenne, Ascension d'hiver à la Jungfrau.

J. de Lépiney, Petites escalades autour de Chamonix. Clocher du Brévent, Clocher de Planpraz, Clochetons de Planpraz, Aiguillette d'Argentière, Chemin des Gaillands.

R. Perret, Le Cirque du Fer-à-Cheval, historique.

V. Puisseux, Zig-zags. Portiengrat, Tour Noir, Grand Combin.

H. Joulie, L'architecture montagnarde.

- J. Delebecque, Au pays des Maurisques. Alpujarra, Sierra Nevada.
G. Cohen, Traversée des Dents Blanches à la Dent de Barmaz.
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G. Dainelli, Quattro giorni all'Abetone.
G. B. De Gaspari, La prima salita al M. Olivia nella Terra del Fuoco.
J. A. Spranger, Attraverso l'Oberland bernese.
Margherita Nugent, Gite alpine nei dintorni di Engelberg : Graustock, Nünalphorn, Gr. Spannort.
G. Dainelli, Ricordi di mancato alpinismo : attorno al Mte Bianco.
F. Giuliani, In sky da Champéry a Salvan Gennaio 1911.
G. De'Pazzi, Prima ascensione al Pizzo Cassandra per cresta nord.
- — — — — Indice delle prime cinque annate 1910-1914 : at end of volume 5 for 1914.
- The Ladies' Alpine Club.** List of members, Climbs, etc. 1915
4½ × 4 : pp. 20.
— — — — — Calendar 1915.
5 × 4 : 3 photographs.
- Ladies' Scottish Climbing Club.** Seventh annual record. 1915
5½ × 4 : pp. 44.
- Mountain Club.** The Annual of the Mountain Club of South Africa. No. 18.
9½ × 6 : pp. 140 : plates, one col. Capetown, 1915
- The articles in this are as follows :—
W. C. West, An ascent of Mount Kibo.
The first British ascent was made on June 10, 1914. The summit was reached at 7.30 A.M. and the difficulty of soft snow thus avoided.
W. T. Cobern, Erica Buttress, Table Mountain.
Mrs. F. Humphries, First ascent of Africa Face route, Table Mountain.
K. Cameron, Some more new climbs on Table Mountain ; Eagle Crag, the Footstool, Victoria Buttress.
J. W. F., Pillar Face, Table Mountain.
— — — — — Cairn Buttress.
"Percy," Fountain Peak Buttress, Table Mountain.
A. Stanford, Frontal route on Corridor Buttress.
G. Londt, Final portion of Fountain Ravine.
These eight articles show that the possible routes on Table Mountain are still limitless and that there is a great deal of excellent rock climbing to be had on the mountain.
A. D. Kelly, First ascent of the Outer Tower of Mont aux Sources.
C. Ross, The Lagdales, Lake District.
Miss B. P. Hazell, Ascent of 'Neethlingsberg Junior.'
K. Cameron, Two attempts on Waaihoek Peak.
A. H. H., Oudtshoorn Ranges.
The plates in the volume are as numerous and excellent as usual.
- Norsk Tindeklub.** Norsk fjeldsport. Kristiania, Steen'ske Bogtryk (1914)
10 × 6½ : pp. v, 218 : plates.
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C. W. Rubenson, Vor sport.
— — — — — Kabru, 1907.
Wm. C. Slingsby, History and development of Norsk mountaineering.
K. Tandberg, Store Skagastøstind fra Skagastølsbræen.
N. B. Grøndahl, Kristian Tandberg.
A. B. Bryn, Paa Corsica paasken 1909.
H. Helliesen, To turer i Schweiz.
F. Schjelderup, Med norsk flag i Nordland.
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— — — — — Norsk tidesport—dens utvikling.
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- S.A.C. L'écho des Alpes.** 50e année. 1914
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 Two portraits, the second by Burdallet in 1816.
 M. Kurz, Contribution à l'histoire des Alpes Lépointines.
 Jacot-Guillarmod, Au Kangchinjunga.
 W. Lador, Première ascension du Col des Trois.
 F. Montandon, Accidents mortels dans les Alpes en 1913.
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 C. Egger, Eine Skitour auf den Elbrus.
 M. Kurz, Bieshorn.
 O. Roegner, Einsame Ostern im Medels.
 E. Henzi, Neujahrsferien eines Skianfängers auf Spitzmeilen.
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 areligiosa—la quale ha per iscopo:
 (a) Diffusione nel popolo della conoscenza della montagna per farne
 ad esso comprendere mediante escursioni tutta la bellezza e l'utilità
 fisica e morale.
 (b) Lotta contro il giuoco e l'alcoolismo diffondenda nel popolo il
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 la conoscenza delle bellezze naturali ed artistiche del proprio Paese.
 (c) Propaganda a favore della vacanza operaia.

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 S.I.P.S.) Soc. ital. per il progresso d. Scienze. Num. 1.
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- Easton [C. F.].** Mt. Baker Cartogram. A Pictorial Brochure of the great
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- Views.** Old Engravings and Drawings, including a large collection of Swiss coloured views. London, Parsons, 1914
8½ × 5½: pp. 57: plates.
- Winthrop, Theodore.** The canoe and the saddle or Klalam and Klickatam By Theodore Winthrop. To which are now for the first time added his western letters and journals. Edited, with an Introduction and Notes by John H. Williams. Tacoma, Williams, 1913. £1
9½ × 6½: pp. xxvi, 332: plates, some col.

Older Works.

- Angerer, C.** Il versante italiano della catena del Monte Bianco dal Monte Nix. 42 × 12: panorama.
- Ballantyne, R. M.** Freaks on the fells. London, etc. Nelson, n.d.
7½ × 5: pp. 346.
- The world of ice. London, etc. Nelson, n.d.
7 × 4½: pp. 232: col. plates.

- Bithray, Ebenezer.** Switzerland and Italy. Being personal notes of a tour.
 $9\frac{1}{2} \times 7$: pp. 49. London, Roberts (1883)
- [**Blundell, Miss.**] Gamle Norge; (Old Norway); or, Our Holiday in Scandinavia.
 $6\frac{1}{2} \times 4\frac{1}{4}$: pp. xi, 312, vii: map. London, Hamilton, Adams, 1862
- Chelsum, Dr.** Memorials of things seen in a tour in France and Switzerland.
 MS. 1779

The only part of this MS. of alpine interest is the following:—

Friday, Aug. 6th.—Quit Geneva—at a few miles distance enter Savoy in passing through a town which is half in the territory of Geneva and half in Savoy—pass near the mountain of Saleve to our right. Between Bonneville and Cluse pass by the cascade of Magland described in Bourrit and Bordier's *Voyage pittoresque*. Road often lying by the side of the Arve, a river here often in a manner filled up with beds of pebbles etc.—singular situation of Cluse described in the above works etc. View of Salenche situated at the foot of a chain of mountains on the opposite side of the river, striking. In the valley of Gervé between Salenche and Chamouni to the right the ruins of a castle on the top of a high mountain in a singular situation—its history seems lost—but the inhabitants of these parts have a tradition that there was formerly a lake in this spot.

August 7th and 8th. At Chamouni—Glaciers of Bossons and Mont Anvert—Source of the Arveron. See the several writers on these scenes—Cox, More, etc. Scene of the embouchure of the Arveron, which soon after falls into the Arve from a high deep cavern of ice at the foot of the Glacier of Montanvert (probably really meaning Montagne Verte, which answers well to the real character of the mountain, whose sides are covered with firs etc.), singularly striking and magnificent. The blue transparent tint of the ice here as well as in all the several Glaciers, uncommonly pleasing. All the five Glaciers of the Bossons, Mont Anvert, Argentière and . . . are but so many *streams* diverging from their great reservoir, Mont Blanc, situated in this valley, sufficiently proved to be the highest mountain in Europe (see Cox).

August 9th.—Quit the valley of Chamouni at the opposite end to that by which we entered (see description of the passage in the several writers. More, Bordier, etc.)—lost at noon, tho' attended by a very experienced guide, in one of those sudden and violent fogs not uncommon to these regions,—on the top of the Col de Baume, with difficulty find our way (entirely out of the road which we intended to pursue) to a few miserable summer-huts on the side of the mountain, from thence descend by a long difficult passage to Val-Orsine. (See a description of this place, and a very exact one of its wooden houses, in one of which we were obliged to stop for the night, in Bordier's *Voyage pittoresque*.)

August 10th.—Pass the Tête-Noire, an exceeding high mountain so called—a very singular and difficult passage, but the description of it in Bordier greatly exaggerated—in our way near a bridge a fine cascade to the right—arrive at Trient (see More, Cox, etc.) long descent to the country of the Valais—striking view of it as high up as Sion several hours before you descend into it—reach Martigny—Castle on a rock to the left very striking and picturesque (see Bordier, etc.)—forms one of the prints in the Suite of the Views of Switzerland—proceed to St. Maurice—through a very singular and striking country—between high mountains on each side leaving as it were a mere slip between them—pass by the cascade Pisse-Vache—a beautiful sheet of water, but falls from an inconsiderable height—description of it ridiculously exaggerated in Bordier—at a bridge a little way before, a very striking spot (mentioned by Bordier)—high dark rocks which almost meet together, leaving barely room for a small stream to issue out—this narrow passage may be traced for some distance back in a very striking manner—arrive at St. Maurice, very singularly situated, as described by the several writers.

- Dauzat, Albert.** La Suisse moderne. Pays et aspects, l'âme suisse, religion et langues, l'auberge de l'Europe. Paris, Fasquelle, 1910
 $7\frac{1}{2} \times 4\frac{1}{2}$: pp. xi, 360.
- Everest, Robert.** A journey through Norway, Lapland, and part of Sweden; with remarks on the geology of the country; . . . London, Underwood, 1829
 $9 \times 5\frac{1}{2}$: pp. xi, 382: maps, frontispiece.
- Hooker, William Jackson.** Journal of a tour in Iceland in the summer of 1809. Second edition, with additions. London, Longmans, Murray, 1813
 $8\frac{1}{2} \times 5\frac{1}{2}$: 2 vols, pp. cvi, 369: 405: plates, map, col. frontispiece.
- Howells, W. D.** A little Swiss sojourn. New York and London, Harper (p. 1892)
 $5\frac{1}{2} \times 3\frac{3}{4}$: pp. (iv) 119: plates.
- Kuhns, Oscar.** Switzerland. Its Scenery, History, and Literary Associations. (Second edition.) New York, Crowell (1910)
 $8 \times 5\frac{1}{2}$: pp. xii, 294: map, plates.
- Lutz, Markus.** Vollständige Beschreibung des Schweizerlandes. Oder geographisch-statistisches Hand-Lexikon . . . 2. Ausg. Aarau, Sauerländer, 1827-8
 $7\frac{1}{2} \times 4\frac{1}{2}$: 4 vols, pp. xii, 480, 503, 536, 304. Supplement-Band. 1835
 $7\frac{1}{2} \times 4\frac{1}{2}$: pp. 475.
- Dictionnaire géographique-statistique de la Suisse. Traduit de l'allemand et revu par J. L. B. Leresche. Lausanne, Delisle, 1836
 $8\frac{1}{2} \times 5\frac{1}{2}$: pp. ii, 841: 874.
- Mackenzie, George Stuart.** Travels in the island of Iceland, during the summer of the year MDCCCX. Second edition. Edinburgh, Constable: London, Longmans, etc. 1812
 $11\frac{1}{2} \times 9$: pp. xvii, 492: plates.
- Murray.** Handbook for travellers in Norway. Seventh edition, revised. London, Murray: Paris etc., 1880
 $7 \times 4\frac{1}{2}$: pp. xvi, 100, 188: maps, etc.
- Norway.** A trip to Norway in 1873. By "Sixty-one." London, Bickers, 1874
 $7\frac{1}{2} \times 5$: pp. xii, 111: plates.
- Official publication for the Paris Exhibition 1900. Kristiania, Aktie Bogtryk, 1900
 $10\frac{1}{2} \times 7$: pp. vi, 626, xxxiv: map, plates.
- Oberland.** Souvenir de l'Oberland bernois. Vuos et costumes d'après nature. Dessiné et lithé par M. Fischer. Berne, Dalp, n.d.
 6×8 : 23 col. lithographs.
- Osenbrüggen.** Das Hochgebirge der Schweiz. 2. völlig umgearbeitete Aufl. Basel, Krüsi: London, etc. n.d.
 $12 \times 8\frac{1}{2}$: pp. viii, 376: steel-plates.
- Sketch of a tour in the highlands of Scotland; through Perthshire, Argyleshire, and Inverness-shire, in September and October, 1818: . . .** London, Baldwin & Cradock, 1819
 $9 \times 5\frac{1}{2}$: pp. vii, 352.
- Vaughan, Owen.** Vronina. A tale of the Welsh mountains. Re-issue. London, Duckworth (1912). 2/-
 $7\frac{1}{2} \times 4\frac{1}{2}$: pp. viii, 309.
 A novel with good description of mountain scenery and the enjoyment of it and of minor mountaineering.
- Walter, James Conway.** Stray leaves on travel, sports, animals, and kindred subjects. London, Kegan Paul, 1910
 $8\frac{1}{2} \times 5\frac{1}{2}$: pp. xii, 295.
- Weber, E.** Reise- und Handlexikon der Schweiz. Zürich, Mahler, 1854
 $5\frac{1}{2} \times 4$: pp. 1054.
- Weddick, B. T. Lublink.** Tafereelen, gedachten en beelden. Impressions de voyage. Verzameld langs den Rijn en in Zwitserland. . . . Van Arnheim naar Interlaken; van Heidelberg naar den Mont-Blanc. Arnheim, Thieme, 1854
 $9 \times 5\frac{1}{2}$: pp. (x): 259: frontispiece.
- Wilkinson, Bishop.** Twenty years of continental work and travel. London, etc. Longmans, 1906
 pp. xxiii, 438: portrait.
- The following works have very kindly been presented to the Library by Alexander McGrigor, Esq:—
- | | |
|---------------------------------------|------|
| A. Smith, Boy's ascent of Mont Blanc. | 1870 |
| Trench, Walk round Mont Blanc. | 1847 |
| Lady's tour round Monte Rosa. | 1859 |
| Tyndall, Professor Forbes. | 1873 |

J. Murray, Beauties of Switzerland.	1829
Le Mesurier, Impromptu ascent of Mont Blanc.	1882
Hawes and Fellows, Mont Blanc.	1828
Morell, Scientific guide to Switzerland.	1867
L. Agassiz, Journey to Switzerland.	1833
Bonney, High Alps of Dauphiné.	1865
J. Macgregor, Ascent of Mont Blanc : Baxter prints.	
Latrobe, Alpenstock.	1829
Bulwer, Extracts from my Journal.	1852
Rendu, Théorie des glaciers.	1840
Hamel, Mont Blanc.	1820
Anderson, Chamouni and Mont Blanc.	1856
Jones, Regular Swiss round.	1865
White, Mont Blanc and back again.	1854
Zincke, Walk in the Grisons.	1875
Forbes, Tour of Mont Blanc.	1835
Longman, Lecture on Switzerland.	1857
Barry, Mont Blanc.	1836
Ducommun, Mont Blanc.	1858
Liddiard, 'Three months' tour.	1832
Schoberl, Geneva to Milan. Coloured plates.	1820
Brockedon, Journal of excursions.	1845
Ball's Guide in parts.	1873-6

These have been added to the library, though the Club already possessed copies of most, as they are all in very good condition, better than those already in the Library.

Subject Index to Club Publications and New Books.

- Accidents, 1918 :** *S. A. C. Echo.*
Africa : *Mountain Club Annual.*
Alaska : D. Keen, Harvard Glacier.
Alaska, N. : T. Winthrop, Canoe and saddle.
Andes : H. S. Palmer, Geolog. notes.
 — Bull. Amor. Geogr. Soc.
Apennines : G. Delle Piane, Guida.
Balnat : portrait, *S. A. C. Echo.*
Bernina : R. Staub, Tektonik.
Bleshorn : *Ski.*
Botany : G. L. Gordon, Vegetation types.
Caucasus : H. Raeburn, Adai-Khokh.
Chamois : L. Camerano.
Chamonix, C. A. F. Montagne.
 — H. Beraldi, Ramond in *C. A. F. Montagne.*
Col d. Trois : *S. A. C. Echo.*
Corsica : *Norsk Tindeklub.*
Dauphiné : H. Ferrand, Voies romaines.
Elbrus : *Ski.*
Geology : H. S. Palmer, Andes.
 — F. Sacco, Alpes occidentales.
 — R. Staub, Bernina.
 — G. Codara, Massi erratici.
Glaciers : Boll. Com. glac. ital.
 — *Ski.*
Guide-books : G. Delle Piane, Apennini.
 — M. C. Santi, Itinerari skiistici.
Himalayas : E. Ferraris, Spedizione M. Piacenza.
Italy : *C. A. I. Firenze.*
Jungfrau : *C. A. F. Montagne.*
Kabru : *Norsk Tindeklub.*
Kangchinjinga : *S. A. C. Echo.*
Karakoram : F. de Filippi.
Kibo : *Mountain Club Annual.*
Medel : *Ski.*
Miage : Boll. Com. glac. ital.
Mte Bianco : *C. A. I. Firenze.*
Mte Rosa : Bol. Com. glac. ital.
Mt. Baker : C. F. Easton.
New Zealand : F. du Faur, Mount Cook.
Norway : *Norsk Tindeklub.*
Oberland : *C. A. I. Firenze.*
P. Cassandra : *C. A. I. Firenze.*
Photographs : Dauphiné.
Portiengrat : *C. A. F. Montagne.*
Pyrenees : *Bull. Pyrén.*
Saussure : A. Michieli, Studi geografici.
Ski : E. Beard, Scotland.
 — — — Ski-touring.
 — N. C. Santi, Itinerari.
 — *Ski.*
Spain : *C. A. F. Montagne.*
Suanetia : Caucasian Museum.
Switzerland : N. H. Dole.
Table Mountain : *Mountain Club Annual.*
Trentino : *Succi.*
Tyrol : W. D. MacCrackan.
Valtellina : A. Saragat, Geogr. fisica.

ALPINE ACCIDENTS IN 1915.

FATAL ACCIDENT ON THE MORTERATSCH
GLACIER.

A LAMENTABLE accident has cost the lives of two men—one of them the well-known Walter Schaufelberger, who for the last two seasons was one of the official guides of the Canadian Pacific Railway Co. A passionate lover of the mountains, Schaufelberger had in his thirty-four years carried through a greater variety of expeditions than almost any other Swiss. Originally in business as a tea-dealer, the 'Drang' of the great mountains was so strong in him that he gave it up to become a kind of semi-amateur guide, and he was particularly noted as a great master of ski. In 'Alpina' 1915, pages 18–20, Dr. Hans König bears glowing testimony to the great qualities of his lost friend.

On January 13, Schaufelberger and Herr Riegg, of Zurich, went up to the Boval hut. As on the 18th they had not returned to Pontresina as arranged, three search parties set out the next day, one of which found an entry at the Boval hut that the two travellers had started on the 15th for the Crast'agüzza hut. It was assumed that it was impossible for them to have reached the hut in the existing snow conditions, and it was feared that they had been overwhelmed by an avalanche. However, on the 21st two friends of Herr Riegg, with four guides, reached with considerable difficulty the Crast'agüzza hut. On the way up they noticed at the so-called 'Mittleren Loch' two parallel descending trails bearing too much to the left. At the hut they found the following entries:

'15 Jan. J. Riegg; Walter Schaufelberger. From the Boval hut through the Labyrinth, and by the E. arête to Piz Bernina and here.

'16 Jan. In the morning bad weather; in the afternoon ascended Piz Zupô.

'17 Jan. Piz Palü and descend into the Roseg Valley, or through the "Loch" (to Boval), according to weather.'

The conclusion is that on the descent through the much-crevassed 'Mittleren Loch' the two travellers fell into a crevasse and perished.

Mountaineering on skis has come to stay, and within limits they are certainly admirable adjuncts to the tour, but it is idle to deny that they do induce and enable men to venture into places requiring great care even in summer conditions, and doubly dangerous when masked by winter snow. The loss of many good men bears all too eloquent testimony to the truth of this assertion.

NEW EXPEDITIONS IN 1913 AND 1914.

Graian Alps, Grand Paradis District.

ROCCIA VIVA (3650 m. = 11,976 ft.), BY THE N. ARÊTE.—July 14, 1913, SS. Francesco Pergamini and E. Stagno, without guides.

Leaving the Piantonetto Refuge at 3 P.M. on July 13, they crossed the Col de Money, and after traversing the upper part of the Money Glacier, in about an hour from the col, reached a little lake, and a few minutes W. of it found a bivouac on a sort of terrace above the Grandcrou Glacier. A beautiful photograph by Signor P. I. Tavani on p. 370 of the *Rivista* for December 1914 shows the route followed very clearly, but it is rather difficult to describe without the photograph.

A fairly well-developed rock ridge descends N. from the summit of the Roccia Viva. This ridge they eventually reached, but first they kept to their left on leaving the bivouac and mounted the glacier, then touched rocks, and then made a détour to the left. The upper part of their ascent on the ice and snow was under the great hanging glacier which clings to the ridge between the Roccia Viva and the Gemelli, and must have involved considerable risk, as they did not leave their bivouac till 5.20 A.M. on the 14th.

They used crampons, but had a good deal of step-cutting. When they reached the rock ridge, of which they climbed approximately the upper third part, they found the rocks very good—interspersed with tongues of glacier here and there. They reached the summit at 12.30 P.M. The descent was made *via* the Colle Baretti to the Piantonetto Refuge, but before they reached it they were overtaken in a heavy storm. (*Rivista C.A.I.* 1914, pp. 369 seq.)

Mont Blanc Group.

GRÉPON (3489 m. = 11,447 ft.), BY THE NANTILLONS FACE.—July 1914. Mr. V. J. E. Ryan, with Josef and Franz Lochmatter.

Mr. Ryan writes: 'I went up the Nantillons face of the Grépon, starting at the foot of the couloir between the Charmoz and the Grépon, going diagonally across the face to the Rolleston-Lochmatter¹ chimney by which we finished. . . . The Grépon is quite easy as far as Rolleston's chimney, but can only be done early in the summer, as the couloir gets all ice.'

Franz Lochmatter² has marked on the illustrations the line followed, and writes: 'The route from the couloir on the Chamonix side is shown exactly on the picture. The most difficult part was the great steepness of an ice-face, which in places was very unpleasant, and is about 80 to 90 m. long, and is just at the place marked by a cross. The remainder is not particularly difficult.'

¹ *A.J.* xxviii. 83.

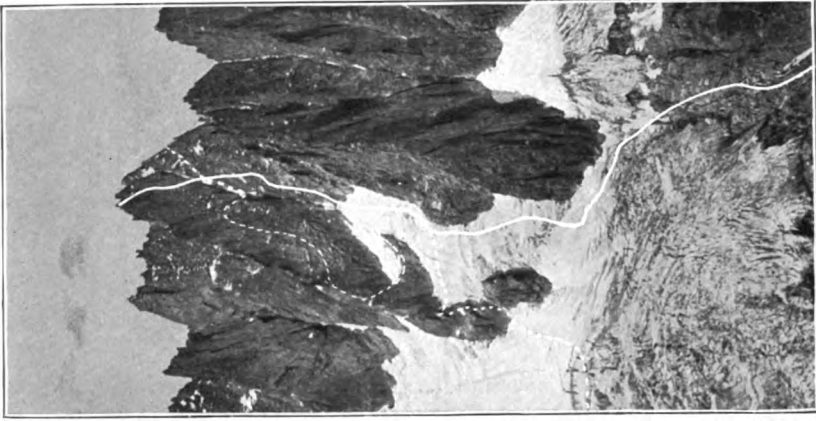
² He states that he has unfortunately mislaid his notebook containing details.



CHARMOZ AND GRÉPON,
from Aig. de Blaitière.

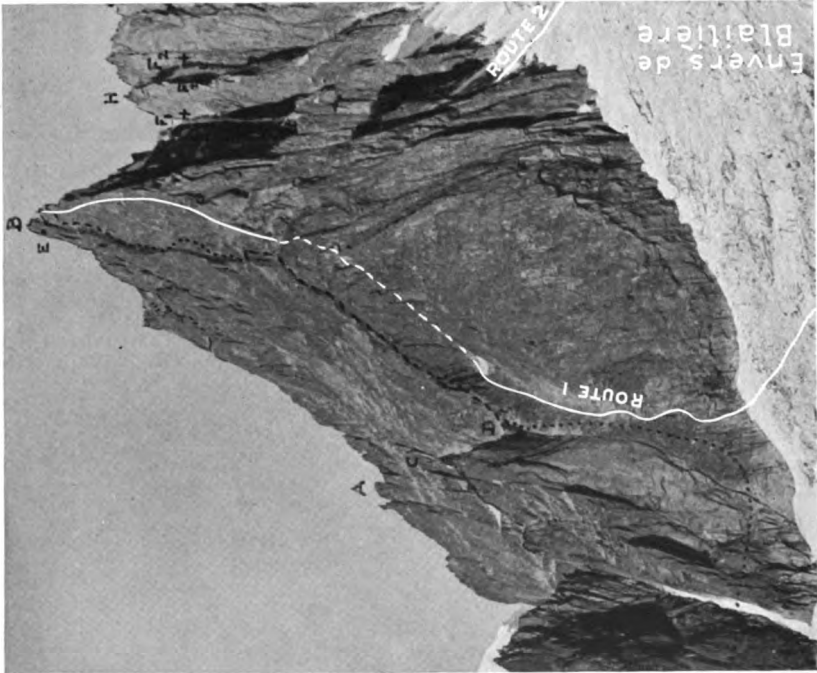


GRÉPON, FROM CHARMOZ.



AIGUILLE DE BLAITIÈRE.

Dotted line shows 1904 route of Mr. E. A. Broome and Alois Pollinger.
 Plain line shows 1914 route of Mr. Ryan with Jos. and Franz Lochmatter.



THE REQUIN, FROM THE MER DE GLACE.

Mr. Ryan's routes (white lines).
 (See A. J. XXVII., p. 443, for explanation of lettering.)

On July 20 with the same guides Mr. Ryan ascended the Grépon from the Mer de Glace by the 1911 route of Messrs. H. O. Jones, Todhunter, and G. W. Young, with Josef Knubel and Henri Brocherel, described in H. O.'s splendid paper 'Mont Blanc and the Grépon, 1911' ('A.J.' xxvi. 259 *seq.* 3).

Of this route Franz remarks: 'The route from the Mer de Glace was very much the same as Mr. Young's, of which you certainly have full details, and particularly the last bit was hard.'

Mr. Ryan then went *down* by his Nantillons route, and remarks: 'On this occasion the couloir was all ice, and we kept on using spare rope.'

AIGUILLE DE BLAITIÈRE (3521 m. = 11,552 ft.), S. PEAK, FROM THE MER DE GLACE.—July 1914. The same party.

Mr. Ryan writes: 'I also did a new climb on the Blaitière, quite different from my 1905 route.⁴ We started up Broome's Col des Nantillons route⁵ and then turned off to the left about 500 ft. below the col, and after crossing a couloir went straight up to the left peak (this is about 3 ft. lower than the central one). The last 600 ft. of this climb was difficult.

Franz has marked the route on the accompanying picture and remarks: 'The Blaitière route is seen very well. The last couple of hundred metres is a steep slab-natured (*blattenartig*) rock climb, and took a good bit of time.'

DENT DU REQUIN (3422 m. = 11,224 ft.).—July 1914. The same party.

Mr. Ryan writes: 'I also did two climbs on the Requin which I think were variations of former climbs:—

'1. Starting from the Mer de Glace at the lowest rocks up to a col between the Capucin⁶ and a big gendarme. This we turned on the Blaitière side and reached another col between it and the Requin proper, then by E.N.E. ridge (Mayer's route) to the top.

'2. Starting from the Glacier d'envers de Blaitière we reached this second col by a snow couloir, and finished by the same way as above. This was much shorter than the first way, as the rocks were very long and fairly difficult between the cols. I did not make any notes at the time.'

³ See also Mr. G. W. Young's note in *A.J.* xxv. 739–41 (with marked sketch), and Mr. Todhunter's note in *Revue Alpine*, 1912.

⁴ See *La Chaîne du Mont Blanc*, by Louis Kurz (1914 edit.), p. 178; also *Echo des Alpes*, 1905, p. 304, and 1910, p. 438 *seq.*, which contains a magnificently illustrated article by M. Fontaine on the N. point of the Blaitière.

⁵ See *A.J.* xxii. 353–6.

⁶ See *A.J.* xxvii. 443–4, with Mr. Donald McLeish's fine photograph, on which the Capucin is marked 'C.'

Franz writes: 'The Requin picture does not show the route very well, but it led up to a col, and from there lay always rather on the left of the arête, and is marked correctly if I understand that the previous route [of Dr. Mayer and Dibona] led up the couloir [on the E.N.E. face], and that the black shadow denotes the arête itself.'

VARIOUS EXPEDITIONS IN 1914.

Cottian Alps.

MONTE VISO (3843 m. = 12,609 ft.), FROM THE NORTH, BY THE 'COOLIDGE ROUTE.' Dott. Franco Grottanelli, Dott. Chiappero and Secondo Carpano.—First ascent without guides October 6, 1914.—From Rifugio Quintino Sella, skirting, from the Colle dei Viso, the rocky slopes of the eastern face of the mountain, we arrived at the base of the Coolidge Couloir, which, thanks to the help of crampons, was climbed without step-cutting, in spite of its steepness. At the top of the couloir we turned to the rocks, at the left, glad to escape from the falling stones which had many times whistled menacingly over our heads. This carried us to the level of the unnamed glacier which we followed by its eastern branch, by rocks and ice, as far as point 3500. At this point we took to a snowy rib, which higher up divides the northern basin of the mountain from that of the N.E., and which terminates, at about 3700 metres, at the rocks of the ridge, which rises from the Cadreghe di Viso to the summit. Arrived at these we continued to ascend to the left, following the glacier in the extremely steep couloir which leads in a few metres to the gap between the two extreme points. A laborious climb in a little couloir (corridor) of rocks and ice carried us at last directly to the summit. From the Rifugio to the summit, with hard work of the ice-axe, we took about fifteen hours.

Descending once more to the Rifugio Quintino Sella, we had the pleasure of finding it hermetically sealed, in spite of the fact that when the daughter of the concessionnaire came up with us from Crissolo to open it we had given the clearest categorical instructions to expect us on the return. Obligated to descend to Crissolo by the light of the moon, we had full opportunity for discussion upon the utility of 'hotel' refuges in comparison with those of the simple hut of Alpinists—upon guides who change themselves into hotel proprietors—upon the gay holiday-makers who carry to a high level above the sea their own light hearts and heavy digestions, upon the backs of mules, singing and drinking the livelong night, when modest climbers, who would make real ascents, desire to sleep—upon the abandoned condition of the Old Rifugio Quintino Sella in the Forciolline Glen. . . .

With similar discourses of Alpine pessimism we beguiled the long descent.—*Rivista C.A.I.* 1915, p. 19.

**CASUALTIES AMONG MEMBERS OF THE A.C. IN THE
BRITISH EXPEDITIONARY FORCE AND OTHER NOTES.**

MAJOR A. C. MORRISON-BELL, M.P., Scots Guards, was taken prisoner at Cuinchy, near La Bassée, in February. The trench which he was commanding was blown up and most of its occupants killed or put out of action — after a determined defence.

The *Devon and Exeter Gazette* publishes the following letter written from Friedberg, Hessen :

‘As I was passing my dug-out, the signaller said “There is a message just come in for you.” It was to say that the Germans were expected to attack in twenty minutes, preceded by a heavy bombardment, and that my trench had been mined, and to let the Coldstream know.

‘Suddenly an inferno began. A mine exploded a few yards from where I stood, but just round the bend in a trench. Tons of stuff seemed to come my way, and I remember bending my back to try and support the weight I could see falling. It knocked me down, but I was not buried, and still had a hold of my revolver. Simultaneously with the mine their guns started shelling us, but chiefly the left end of the company, I think, of the Coldstream, but something worse happened.

‘The explosion of the mine was the signal to the Germans, who were not a hundred yards off, to rush our trenches. They came across in hundreds, and stopped on the edge of the trench, shooting down into it. What could 130 men do against this ?

‘The whole thing was over in a quarter of an hour. Looking to the left, where the trench bent round a bit, you could see Germans kneeling on the edges, and just above I could hear them talking. They kept back as long as there was any firing, and I managed to get off nine shots with my revolver, and emptied the contents of a rifle I picked up. At last there were only three men left on my left, and one by one they were picked off.

‘I realised suddenly I was alone. . . . Two men jumped down and covered me with revolvers.’

CAPTAIN L. W. BIRD, 1st Royal Berks, was hit in the knee on February 27 as he was going with his men into the trenches at Givenchy, near La Bassée. His splendid regiment has again made good the reputation earned in many a campaign.

SECOND LIEUTENANT H. L. SLINGSBY, Yorkshire Light Infantry (we can surely claim the son of William Cecil Slingsby as one of us!), was seriously wounded in the head on February 24, near Ypres. A bullet entered above the eye and travelled round

to behind the ear, necessitating a serious operation. He is reported as progressing favourably. The services and unfortunately the losses of his famous regiment need no further mention.

MAJOR E. L. STRUTT has been appointed General Staff Officer, 3rd Grade, having partially recovered from his wounds.

MAJOR L. C. F. OPPENHEIM, who, as already reported, was wounded on November 10, has been appointed Military Attaché at the Hague, with temporary rank of Major.

LIEUTENANT C. R. TAYLOR, R.A.M.C., attached 2nd Battalion Royal Scots, a well-known mountaineer (although not a member of the A.C.), has served throughout the campaign with much distinction.

ALPINE NOTES.

'BALL'S ALPINE GUIDE.' VOL. I. THE WESTERN ALPS.—Copies of the new edition (1898) of this work, price 12*s.* net, can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART I.—A new edition (1907) of this portion of 'The Alpine Guide,' by the late John Ball, F.R.S., President of the Alpine Club, reconstructed and revised on behalf of the Alpine Club under the general editorship of A. V. Valentine-Richards, Fellow of Christ's College, Cambridge, is now ready, and can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C. It includes those portions of Switzerland to the N. of the Rhône and Rhine valleys. Price 6*s.* 6*d.*

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART II.—A new edition (1911) of this portion of 'The Alpine Guide,' by the late John Ball, F.R.S., President of the Alpine Club, reconstructed and revised on behalf of the Alpine Club under the general editorship of the Rev. George Broke, is now ready, and can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C. It includes 'those Alpine portions of Switzerland, Italy, and Austria which lie S. and E. of the Rhône and Rhine, S. of the Arlberg, and W. of the Adige.' Price 7*s.* 6*d.*

THE ALPINE CLUB OBITUARY.—Adams, W. Grylls (1864); Fox, J. H. (1859).

CORRIGENDA.—'A.J.' xxviii. page 335, line 9, read *interpellations*. 'A.J.' xxix. page 28, line 10, for ten read *two*. Page 38, footnote, read 'A.J.' iv.

‘A.J.’ xxix. page 23. The paragraph commencing ‘The rock arête’ in No. 9 does not refer to illustration No. 9, but to the picture in ‘A.J.’ xxviii. 227, which it had been intended to use again.

A NEW GUIDE TO THE PENNINE ALPS.—Reverting to the note on page 85, Dr. Coolidge now informs the Hon. Secretary that the book will appear in French as well as in German and that the right of translation into English has been reserved to himself, in terms of his contract of November 29 with the S.A.C.

ODE ON THE MATTERHORN.—‘Ode in Defence of the Matterhorn against the proposed Railway to its summit,’ by F. W. Bourdillon (A.C.), with coloured frontispiece from a water-colour by J. Hardwicke Lewis (A.C.). Copies of this are to be had from the author, Buddington, Midhurst, price 1s. nett. The proceeds are now devoted to the Fund for the Swiss Guides suffering from the War.

GUIDES’ RELIEF FUND.—The Association of British Members of the S.A.C. has remitted to the S.A.C. for the relief of Swiss guides, whose means of livelihood is jeopardized by the war, the sum of 5500 frs. Any further subscriptions will be received by the honorary secretary of the Association, Mr. J. A. B. Bruce, Selborne Lodge, Guildford.

CLUB HUTS OF THE S.A.C.—At the annual meeting of the S.A.C. to be held at Berne on April 11, it is proposed to grant subsidies for the following new huts:

1. In the Val Cadlimo (massif of Piz Blas).
2. Near the Wangserseeli (massif of the Graue Hörner).
3. On the Moosstock, about two hours above the Göschenalp Inn. This will be very useful for the traverse of the Dammastock and the other peaks and passes of the Winterberg.

Grants are also to be made for the reconstruction of the Calanda hut, destroyed by an avalanche, and for extensive repairs to the Schwarzegg and Strahlegg huts.

Some alterations are to be proposed in the Règlement for the conduct of the huts. The preamble already declares that the huts are meant to be *starting-places for mountain expeditions*, and not simply excursion objects or mountain inns, and the alterations generally aim at carrying out this definition, which of late years has been completely lost sight of.

By Article 22 it is determined that all huts are to be supplied with firewood at a fixed price.

Article 24 fixes the charge per night, for members at 50 cts., non-members 2 frs. Firewood is extra. The charge for guides is as for members.

Article 25 requires any considerable caravan of tourists desiring to stay at a hut to arrange ten days beforehand with the Committee

of the owning section—otherwise a prolonged stay ('längerer Aufenthalt') can be refused them.

Further, '*one-fourth of the sleeping-places shall be reserved to members of the S.A.C. ; these places shall be expressly termed " reserved places."* The sections shall agree with the Central Committee the time during which these places shall be reserved.'

This is, no doubt, a move in the direction of restoring the *raison d'être* of the existence of Club huts, but it would seem that the S.A.C. would enormously increase its numbers and strengthen its influence by definitely confining the use of its huts to its own members and members of reciprocating Clubs, as was suggested in 'Alpina' of August 1 last. The tendency of late years has been for the huts to become more and more excursion points for the visitors at the valley hotels or stopping-places, often for days together, of people who contribute nothing to the S.A.C. The S.A.C. has done splendid work in constructing these huts, but its hospitality has become liable to abuse detrimental to its own members.

PIERRE BLANC of Bonneval, the constant companion of Mr. C. F. Meade in the Alps and Himalaya and one of the very best of the younger generation of guides, is in the Chasseurs Alpains, and has been in the hard fighting in the Vosges since August last. His many friends in this Club will follow his fortunes with great admiration and earnest hopes for his safety.

JEAN JOSEPH BLANC-LE GREFFIER OF BONNEVAL.—The death of this famous guide and chamois hunter occurred at his home in October last, aged seventy-two. He was the father of Auguste Blanc, killed on the Mont Dolent, and of Pierre Blanc, two of the ablest of the younger generation of guides. Owing to the absence of so many of the French guides on active service, a fuller notice of his career is postponed until the next number of the JOURNAL.

DEATH OF MRS. ULRICH ALMER.—We regret to learn that Ulrich Almer's wife died at Grindelwald on February 28, aged 65. The doughty little man himself was 66 in April. She was a Boss, one of the great families at Grindelwald (not the Bär branch). Her brother Fritz Boss was second guide to Ulrich and Mr. Gibson when they reversed the Purtscheller-Zsigmondy traverse of the Meije. He was shot by accident when chamois-hunting a few years ago.

DR. RICHARD WEITZENBÖCK of Graz (Austria), one of the authors of the admirable 'Mont Blanc Führer' published by the Austrian Alpine Club, is reported to have been killed in action.

CASUALTIES IN THE D. UND OE. ALPENVEREIN.—Up to about the end of last year the number of members killed in action is stated to be 653.

REVIEWS.

Mountains, their Origin, Growth, and Decay. By Prof. James Geikie.
Published by Oliver and Boyd, Edinburgh, 1913. Price 12s. 6d.

THE publication of this admirable work will, we feel sure, be welcomed by all members of the Club. It is a plain and straightforward story of the causes which have produced the present surface relief of the earth's crust. In this volume we are introduced to that fascinating branch of the realm of nature occupying the borderland between geology and geography, and the author occupies himself not so much with the scenery of mountains as with their architecture and origin, thus supplementing in many respects the late Lord Avebury's volume on the Scenery of Switzerland. 'Sentimentalists,' the author remarks, 'have sometimes expressed the fear that a study of the structure or anatomy of mountains may diminish one's appreciation of scenery, but surely it ought rather to lend an additional interest to our contemplation of Nature'; and we think that any mountain-lover, after reading this book, will agree with him.

As regards the definition of a mountain the author takes a very catholic view; no protuberance on the earth's surface is considered too humble to be included under the word, and perhaps a very serious mountaineer might be tempted to remark that the author had occasionally made mountains out of mole-hills. Hills and mountains are considered under two great divisions—'Original or Tectonic,' and 'Subsequent or Relict.' Under the former we have descriptions of the elevations due to piling-up of material at the surface; these include volcanic cones among the larger features and glacial accumulations and sand dunes among the smaller excrescences.

But the chapters which will appeal most forcibly to the members of this Club are those which deal with the origin, architecture, and denudation of the Alps, in which the author has brought together the most recent observations and conclusions of the Swiss and French geologists. Few scientific opinions have undergone so thorough a change as those concerning the true structure and mode of origin of the Swiss Alpine Chains, and de Saussure would indeed stand aghast were he to be 'personally conducted' round his old haunts by Messrs. Schardt, Lugeon, and Heim, and shown how the great crust folds which were formed on what is now the south side of the chain were urged forward like breaking waves over the present site of the Alps and actually translated for many miles to the north, until they were dumped down on the plains of Switzerland to form the present foot-hills or Pre-Alps of Switzerland. No fewer than four such translated rock-sheets or 'Decken' have now been traced by Swiss and French geologists, and to these the names 'Helvetian,' 'Lepon-tine,' 'East Alpine' and 'South Alpine' have been given.

The first, the Helvetian sheet, originated in the southern border of the Aar Massif, between Chur and Martigny. Here certain geological strata were folded on themselves and driven over the northern continuation of the same formations, giving rise to two zones of similar rocks, between the Todi and Balmhorn, one occupying its original position to the north, but covered in places by a second folded mass of the same rocks translated from further south. The second series of folds appear to have developed to the south of what is now the St. Gotthard range and to have crept over the surface of the Helvetian sheet, forming the 'Lepontine' sheet. This includes certain southern types of rocks which are absent from the Helvetian sheet.

The third fold from the south next appeared as the East Alpine sheet, originating still further south and advancing over the 'Lepontine' sheet, while the fourth or 'South Alpine' mass came from still further south, from the district now occupied by the North of Italy. The time required for these movements to take place was probably a long one, and the author remarks: 'If it took millions of years to bring together materials for the construction of the Alps, long æons were required for the process of building, for piling up rock-sheet upon rock-sheet. Crustal movement had begun before the close of Eocene times, was continued throughout the subsequent Oligocene and Miocene periods, and had apparently not quite ceased before the advent of prehistoric man, if indeed it has even now completely died away. In a word, the movement of compression must have extended over several millions of years.'

These movements seem to have been succeeded by a period of comparative rest, during which conglomerates up to a thickness of 6000 feet were deposited along the south shore of an inland sea, the pebbles being derived from the denudation of these folded rock-sheets, and are now exposed in the Rigi and elsewhere between the Lake of Constance and the Lake of Thun.

Following this quiescent period new movements took place on the site of the Alpine Chains, and the Massifs of the Aar, Gotthard, Aiguilles Rouges, and Mt. Blanc bulged upwards, forcing forward the denuded remnants of the northern rock-sheets in great folds over the depressed area to the north, doubling back and incorporating the Miocene conglomerate and crumpling up the Mesozoic rocks of the plains beyond, to form the present Jura and Säntis Ranges.

Such is now generally considered to be the origin of the Alpine Chains, but denudation has since not only exposed the crystalline core of the Alps, but has also isolated fragments of the translated rock-sheets, so that these now form outliers of older Mesozoic fragments resting on newer Tertiary rocks. The name 'Klippen' is given to these isolated masses, and they are characterised by having no 'roots.' Examples are seen between the valley of the Rhine and the Lake of Thun in the well-known Mythen, Stanserhorn, Gisweiler Stock, and others now forming peaks upwards of 6000 feet high.

After a clear exposition of the foregoing views the author next considers the denudation which the Alps have undergone, and deals generally with mountain forms, showing the relation of their present outlines to their various geological components and to the original lines of weakness traversing the rocks.

Then follows a brief sketch of the development during three successive epochs of folded mountains in post-Cambrian, post-Carboniferous, and post-Eocene times, known respectively as 'Caledonian,' 'Hercynian,' and 'Alpine' periods of movement. A description of 'Block' mountains or 'Horsts' and mountains due to the intrusion of massive igneous rocks follows; the former are well illustrated in Europe by the Vosges and Black Forest, between which the depression of the Rhine Valley has been faulted down, and in America by the Great Basin Ranges, while good examples of the latter occur in the Henry Mountains of Utah and in this country in Goatfell and the Coolin Hills.

In Chapter 10 the author discusses the various theories which have been advanced to account for the forces which have produced tectonic mountain chains. Thus Hall, in America, developed the theory that the materials of which folded mountains are composed were accumulated in shallow depressions of the crust, and as these strata may be (as in the case of the Appalachians) 40,000 feet thick, he considered they must have been deposited on a gradually subsiding sea-floor, the sagging being due to the increasing weight of sediment. The increasing pressure would, he thought, cause wrinkling and folding such as we find in mountain chains; but while it accounted for this, it left the elevation into mountain chains still unexplained—it was in fact a theory of mountain-formation with the mountains left out! Studer and Dana, on the other hand, considered that the accumulation of a thick series of shallow-water sediments was due to the sinking of the crust beneath them, and that the sinking was not due to the accumulation; according to Mellard Reade the folding has resulted from the dilatation of the rocks due to heat which has been generated by the accumulation of thick masses of sediment and also by that due to the intrusion of igneous rocks, the subsequent contraction of the strata on cooling causing the foundering of portions of the crust, other portions being wedged up between.

Several objections to this expansion or thermal theory have been advanced, and the theory of 'mountain-making' which finds most favour to-day attributes the origin of folded mountains to the sinking of the crust upon the cooling and contracting nucleus. The most unstable areas of the crust appear frequently to have coincided with lines where continents and oceans meet, and it is precisely here where sedimentation will always be most active. The coincidence, therefore, between thick deposits of sediment and mountain ranges pointed out by Hall is rather what we should expect.

The final effects of denudation in shaping the present mountain forms are treated in the last chapter, where the reader will also find

an account of the isolated portions of plateaux now appearing as 'relict' mountains due to the same causes. The book is lavishly illustrated throughout with admirable photographs and diagrams, which have been very carefully selected by the author to elucidate the text, and both author and publisher are to be heartily congratulated on the evident care with which the book has been produced.

E. J. G.

The Conquest of Mount Cook and other Climbs. An Account of Four Seasons' Mountaineering on the Southern Alps of New Zealand. By Freda Du Faur. Allen & Unwin, London, 1915. Price 16s.

MISS DU FAUR has written one of the best and most comprehensive books dealing with the New Zealand Alps that have yet been published. Climbing in New Zealand has now reached the stage when the first pioneer days are over, at all events in the Mt. Cook district; the huts in the neighbourhood of the Hermitage allow of a number of climbs to be made without the interminable carrying and tent work which took up the time and wasted the energies of the earlier climbers; and the route up a number of peaks is now sufficiently known, so that ascents and fine weather are for the climber in a somewhat similar ratio to Switzerland. There is, however, plenty of new work even near the Hermitage; apart from Mt. Cook only three of the bigger peaks have been climbed by more than one route. Miss Du Faur was fortunate in coming to the Southern Alps when she did, and in being able to devote two or three months for four seasons to climbing, but the climbing world is equally fortunate in having someone who could write as brightly and vividly as she has done of her climbs there. The book ought to spread some of the writer's enthusiasm for a climber's paradise with the added charm of untrodden forest and distant seascapes.

Miss Du Faur is an Australian who was simply drawn to the hills and eternal snow by that longing which the true climber knows so well but finds so hard to explain. Chapter 2 is an interesting piece of self-analysis written after some remarkable climbing had been done, but while the first impressions were not too distant to be blurred. Miss Du Faur was fortunate in finding a mentor like Peter Graham, who, instead of rushing her up the highest—and the highest tariffed—mountain, set to work to train and instil some of his own craft and skill. In this Miss Du Faur had a great advantage over the average person who begins in Switzerland. It is difficult to pick out passages for special mention, but the author has managed to convey the charm of the Franz Josef Glacier when the rata tree is in flower, a charm that is only rivalled by its neighbour the Fox.

The ascent of Mt. Tasman will always be a climb of first-class importance, and Miss Du Faur's account of her ascent is well worth reading; this is only the second ascent of Tasman. The ascent of Mt. Lendenfelt by the col between Lendenfeldt and Haast from the

Big Plateau—the first ascent by this route—is a glacier expedition that has few rivals; unfortunately, there is not a photograph showing the line of ascent. The traverse of the three peaks of Mt. Cook was a magnificent expedition and one that will be repeated but seldom, as it depends upon perfect conditions. This was a first traverse, as was that of Mt. Sefton. Sefton had not been climbed from the Hermitage since the first ascent by Mr. Fitzgerald in 1895, and will always be a difficult climb, if not a dangerous one. Bad weather set in on the descent to the west, and the difficulty of finding the one way down from the upper Douglas and the subsequent adventures in the bush must be read in full. The book is very well illustrated; some of the photos have already appeared in the 'A.J.' Those who are tantalised by the absence of names on the panorama at the end of the book will find a small reproduction with names on p. 228. The book is one of the most interesting that have been published for some time; it recalls the freshness and the enthusiasm of fifty years ago, when the Alps of Switzerland were young to climbers, and it will be a classic in the mountaineering literature of the New Zealand Alps.

Norsk Fjeld Sport.

In most so-called civilised countries there has been of late years a notable development of the sport of mountaineering. Nowhere is this more evident than in Norway.

The remarkable achievement, the ascent of Kabru, by our fellow-member, C. W. Rubenson, in the year 1907, undoubtedly gave an additional stimulus to Norsk mountaineering and awakened an enthusiasm which led to the formation of the 'Norsk Tinde Klub' in the spring of 1908. Though fully recognised by, and on the best of terms with, the grand old club, the 'Norske Turist Forening,' which, since the year 1868, has been the great agent in creating and fostering a genuine love of mountains amongst the people of Norway, the Norsk Tinde Klub is entirely independent of, though in many ways indebted to, the parent Club. In fact, the Norsk Tinde Klub is to all intents and purposes an Inner Circle, the admission to which demands at least as stiff a mountaineering qualification as does the Alpine Club.

In the August following the formation of the Club, my second son—now serving his King and country in Belgium—and I had the honour and pleasure of dining as guests of the newly formed club at Holmenkollen near Christiania. A most enthusiastic and a jolly gathering it was indeed. Nor did it end there, as we supped at Frognersæter.

Since the birth of the Club several of its members have scored notable mountaineering successes of difficult peaks, especially within the Arctic Circle in Norway, as well as in other countries. As it has been deemed eminently desirable that a tangible record of these ascents should be preserved, the Club has, this year,

published a book of 218 pages under the title of 'Norsk Fjeld Sport.' Every contributor was a member of the Club.

It is most refreshing in these days to turn for a while from the all-absorbing newspapers, magazines, and books full of war news, military, naval, and political matters, to the accounts of grand mountain ascents and to the beautiful illustrations with which enthusiastic mountaineers have enriched 'Norsk Fjeld Sport,' and it is none the less satisfactory to note that several of the views are from photographs by our own members—Woolley, Collie, Priestman—as well as Rubenson himself.

Though, with one exception, the papers are all in Norsk—a language unfamiliar to most of us—I, for one, can testify that each paper in Norsk affords delightful reading. In all respects this remarkable book reflects great credit upon the editors, and is not only worthy of its subject, but ought to find a place on a shelf in the library of every British mountaineer who is at all interested in Norway.

By the courtesy of the N.T.F. the editors of the 'Norsk Fjeld Sport' were allowed to reproduce a paper which appeared in the 'N.T.F. Aarbok' for 1911. Undoubtedly this new addition to mountain literature will still further encourage the votaries of a noble sport and lead more and yet more of the sons and daughters of Norway to take their pleasures upon the mountains. This is all to the good. Whether it will lead to an awkward precedent or not by causing the readers to expect, at an early date, another book of equal interest, is a question which we in this country can safely leave to our friends in Norway to decide.

There is a short introductory chapter by the President, the enthusiastic Rubenson. It contains, not only golden truths and maxims concerning mountaineering in general, but picturesque and poetical descriptions as well. Only eight pages, but every sentence is worthy of the subject, and worthy of the man. One of the illustrations in this introduction, of the Grand Moulin on the Mer de Glace, with the Dent du Géant and its companions in the background, is one of the most artistic photographs of this well-known view I have ever seen. It is by Finch.

Rubenson has also contributed a paper on Kabru. It is, of course, in Norsk and written in that most happy strain which he gave us a few years ago in the Alpine Club. The illustrations accompanying the paper are some which he showed us at the Alpine Club, and they are excellently reproduced.

One paper has a peculiarly melancholy interest. It describes a grand rock climb of some 4000 ft. on Skagastólstind which was made by the late Kristian Tandberg and his friend Rostrup. It entailed seven hours of hard work on exceptionally steep and difficult rocks, and took the climbers from the glacier at its northern base up to the very summit. It is one of the grandest, if not the very grandest, great ascent which has been made in the range of the Horungtinder, and none but men of the calibre of Tandberg could

lead on an expedition of such severity. Tandberg was probably the greatest and the noblest of all who have mountaineered in Norway. In every sport in which he engaged he was the best of all his companions, notably was this the case with ski-jumping. Bold as a lion, he was prudent also. Possessed of all the finest qualities of his race he was in life beloved, and mourned in death, by all who knew him. He died after a lingering illness which he endured with fortitude.

His friend Gröndahl has contributed a beautiful memoir in 'Norsk Fjeld Sport,' which should be read by all who can understand Norsk. The world can ill spare men like Tandberg.

H. Heliessen describes the ascent of a remarkable rock needle near Göschenen. No one who sees the accompanying photograph, with a man on the top of this slim rock, can express surprise when told that it was a first ascent. The paper also includes a description of the first winter ascent of the Tödi.

The honorary member of the Club was commanded to write in English, for the benefit of English readers, a paper on 'The History and Development of Norsk Mountaineering.' He obeyed. The illustrations are the redeeming feature of the paper.

The subject of one of the papers is that of a very successful winter mountaineering tour in Corsica by the genial Alf. Bryn. This, too, is beautifully illustrated.

The mountains within the Arctic Circle have, during the last few years, attracted several parties of the Norsk Tinde Klub. The successful outcome of these visits is shown in the papers which appear in 'Norsk Fjeld Sport.' Fortunately on each of these expeditions the weather was exceptionally good. Ah! It has not always been so.

'Med Norsk flag i Nordland' is the title of the first. Strange though it may appear, the translation of the first line is 'It was away in Westmorland one evening in the spring of 1910.' Yes, my friend Ferdinand, it is a delightful paper, and the illustrations, —some of Woolley's, some of Collie's, some of Rubenson's, and some of your own—are exactly what they ought to be. It is well worth a second appearance and does credit, not only to the N.T.K., but also to the maternal N.T.F. and to yourself. Yes, it has been reviewed once before, and by me.

H. Tönsberg has enriched the book with two first-rate papers. The first is a detailed description of the magnificent ascents made in 1913 within the Arctic Circle, both in the Lofoten Islands, and on the mainland, by S. Saxlund, W. Eger, R. Löchen, and himself. They formed a strong party; they accomplished much. They vanquished the hideous monster Husbyviktind, and alas! they had read in 'A.J.' vol. xxvi. p. 467, where I made a statement connected with this mountain that 'there is in Norway one grand peak which is absolutely unassailable and invincible.' Of course they went for the peak, and having been well tutored by the seven-year-old bare-legged laddie Lars, on a rock in Lofoten, the leader Löchen

ascended the one really bad place barefoot. The moral to be deduced is this :

Never say that a rock face is impracticable when merely studied from the front. Always see it in profile.

I can, however, say something more about this mountain, but not now. Meanwhile, I heartily congratulate the party on their success, but, at the same time, I heartily regret that I do not now know any mountain in Norway or elsewhere which I can say is 'invincible.' This paper will recall to several Alpine Clubmen many happy days spent in Lofoten with genial companions.

Tönsberg's second paper is a masterly review of the growth of mountaineering as a sport in Norway, in which he fills up many of the gaps left in the paper on 'The History and Development . . . ' which latter he had presumably seen in manuscript, and in doing this he is merciful, and very flattering to the writer of this English paper, who ought to be duly grateful. Tönsberg is especially qualified to write with authority on the sport, owing to the fact that he is not only a first-rate rock climber, but is also an adept in the higher branch of mountaineering—snow-craft—and is a prudent and capable leader.

He points out the fact that as his countrymen were rather late in the field, the principal peaks in the Horungtinder and other fine ranges in Central Norway had already been ascended by their obvious lines of least resistance before the N.T.K. came into being and that, consequently, new expeditions meant usually new and often very severe routes up mountains, on which for years the inevitable cairns had been built. This led to very difficult ascents and sufficed for a while. Lastly, it became fully realised that in Arctic Norway there was still a host of noble peaks which had yet suffered no desecration from the human foot.

The list of new ascents, and ascents of great severity too, which have been made by this small Club from 1908 to 1913, and which appears at the end of the book, clearly shows the activity and versatility of its members.

WM. CECIL SLINGSBY.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, W., on Tuesday, February 2, 1915, at 8.30 P.M. The Rt. Hon. Lord Justice Pickford, *President*, in the Chair.

Mr. Reginald Graham and the Rev. John Pearce were balloted for and elected members of the Club.

The PRESIDENT said: I need only interpose between the Club and the Lecturer for two or three minutes, as I have few matters

to mention. I am glad to say I have no deaths of Members of the Club to announce. I should like again to draw the attention of Members to the fact that, at the last Meeting of the Club when a Member asked whether any record would be kept of Members serving in His Majesty's Forces, I told him that the Committee thought that it would be desirable to keep such a record and requested Members so serving to send in a note to that effect to the Hon. Secretary. Up to the present the Hon. Secretary has received the names of some thirty Members, but there are a good many others who have not, so far, sent in their names. There may be some Members present who are in touch with these and I hope their attention will be drawn to the existence of the List, as we should like it to be as complete as possible.

Mr. HAROLD RÆBURN then read a paper entitled 'In the Caucasus — 1914,' which was illustrated by lantern slides.

The PRESIDENT invited discussion on the paper.

Mr. H. SCOTT TUCKER said : Our thanks are due to Mr. Ræburn for his lecture this evening, and the Members of the 1914 party are much indebted to him for a remarkable holiday which resulted in the realisation of a long cherished hope. It would be impertinent for me to offer any criticism of Ræburn's leadership, but I feel that climbers generally are obliged to him for having shown that the Caucasus is open to men of limited leisure and moderate means. Without approving the wisdom of naming parts of mountain chains after individuals, I think that if this is done there should be recorded the name of the leader of the two successful expeditions of 1913 and 1914.

Mr. W. N. LING said : I am afraid I cannot add anything to what Mr. Ræburn has told us about his 1914 Caucasian Expedition as, unfortunately, I was prevented from accompanying him as I had hoped to do, but I wish to thank him for, and congratulate him on, the very interesting paper he has given us to-night. I was out there with him in 1913 and we had a very successful time, and the conditions in 1913 seem to have been somewhat better than they were in 1914. The soft snow in 1914 made their work very arduous and they accomplished a great deal in the time they had at their disposal.

Mr. A. L. MUMM said : In the first place I wish to congratulate Mr. Ræburn on his paper, and more especially on the fact that, in the face of the conditions prevailing last season, he was able to snatch such a successful expedition. But my main object is to summarise, briefly, the history of the peak climbed by Monsieur de Déchy.

He visited the Caucasus in 1884 and claimed that he had made the first ascent of Adai Khokh ; in fact, he wrote a paper with that title in the JOURNAL. That was the first stage. Then about 1889 Messrs. Holder and Cockin went up Adai, and they reported that de Déchy's mountain was not Adai but the double-topped peak which Mr. D. W. Freshfield had seen in 1868, I think from the heights

above Gebi; and it is remarkable that everyone, including de Déchy himself, was perfectly satisfied that they were correct. So matters stood for many years till de Déchy began his book on the Caucasus. Looking over his own notes again in the light of later information, he reconsidered the matter and came to the conclusion that after all it was Adai that he had ascended in 1884. The whole subject was reviewed by Mr. Freshfield in a note in the *JOURNAL* from which I gathered that he agreed with that conclusion. And with that I thought, till this evening, that finality had at last been reached. But now comes Mr. Raeburn and we learn that de Déchy did not ascend either Adai or Mr. Freshfield's double-topped peak, but a third mountain which has never appeared in the story before. As a humble searcher after truth in Alpine matters, I have, of course, encountered difficulties of this kind before, but I know of no case quite so curious as this one.

The PRESIDENT said: I am sorry that there are not more Members here able to continue the discussion on the very interesting paper we have had to-night, but I think he must be a very bold man who will get up and amplify anything that Mr. Raeburn has told us about his expeditions in the Caucasus. I am afraid that the question raised by Mr. Mumm will be found hard to settle on the spot, as neither of the routes taken by Mr. Raeburn, either to the Caucasus or back to England, is available at the moment, and it may be that de Déchy himself cannot give us any more light on the subject, as we have reason to believe that he died some time last year. All we can do, therefore, is to wait until another Raeburn arrives who, we hope, will be able to relieve Mr. Mumm's mind on the subject. I think we are all at one with Mr. Scott Tucker in our admiration for the way in which Mr. Raeburn must have managed the expedition from the beginning, and all that now remains for us to do is to pass a very hearty vote of thanks to him for his most interesting paper and a very pleasant evening.

The vote of thanks was carried with acclamation, and Mr. Raeburn in returning thanks said in reply to Mr. Mumm's point that he had read everything written by M. de Déchy on the subject: his papers in the 'A.J.' for 1885, his long paper with the map in Petermann's 'Mitteilungen' for 1889, and his full account of the ascent in his great work (published in 1905).

He had carefully compared these various accounts on the spot, and he had seen and studied Adai and its neighbouring peaks from every side.

His conclusion was that M. de Déchy, led by Alexander Burgener, one of the boldest and most determined guides Switzerland ever produced, certainly ascended a summit in the Tsaya basin. M. de Déchy's description can only be made to fit the line of ascent of the great double-peaked mountain called Mamison or the 'Curtain.' It lies between Adai and Tshantshakhi—the peak first claimed by M. de Déchy, and called Adai—and is lower than either.

It was misty when M. de Déchy reached his summit.

The first ascent of the true Adai¹ was undoubtedly that of Messrs. Holder and Cockin with Ulrich Almer in 1890, and the first from the Tsaya basin that of Dr. Vittorio Ronchetti in 1913.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, W., on Tuesday, March 2, 1915, at 8.30 P.M. The Rt. Hon. Lord Justice Pickford, *President*, in the Chair.

Mr. Thorleif Ferdinand Schjelderup was balloted for and elected a Member of the Club.

The PRESIDENT said: I have really nothing to announce to the Club of any interest and I will, therefore, ask the Honorary Secretary and Treasurer to present the accounts for 1914.

The Honorary Secretary and Treasurer presented the accounts and balance-sheet for 1914, and Mr. E. H. F. Bradby moved that they be adopted. Sir Edward Davidson seconded the motion, which was carried unanimously.

The PRESIDENT mentioned that Mr. Douglas W. Freshfield had very kindly presented to the Club a photograph of François Dévouassoud, as the Club did not possess one, and that the thanks of the Club had been accorded to Mr. Freshfield through the Committee.

Mr. NEVILLE S. DONE then read a paper entitled 'Some Common(-) Places,' which was illustrated by lantern slides.

The PRESIDENT invited discussion on the paper.

Mr. JOHN J. WITHERS said: There was one thing that struck me in the very interesting paper we have heard. Mr. Done mentioned that when coming down the Argentière Glacier he had observed a curious phenomenon, namely a stream of water spurting upwards for about four inches out of the ice, and he wondered what had caused the upward pressure. That was very odd, as I noticed practically the same thing, except that the water was spurting up to a height of about four feet and the stream was about three inches broad.

SIR ALEXANDER KENNEDY said: One remark in the paper afforded a striking illustration of the way in which detailed features in a glacier remained constant over long periods. I have myself been twice upon the Col des Grands Montets between fifteen and twenty years ago, and on each occasion I found in a most unexpected position close to the summit of the col the very large crevasse or bergschrund found by the author in 1913. No doubt the neck of rock between the Aiguille Verte and the little Aiguille des Grands Montets may be a very deep and sudden depression, which causes fracture on the little glacier coming down the ridge of the Verte. I congratulate the author on having shown the most beautiful series of slides which the Club has seen for a very long time.

¹ Mr. Raeburn's topographical note in the present number of the Journal, giving the history of the name peak Adai, will, he trusts, clear up the mystery and confusion hitherto surrounding the question of the first ascent.

Mr. H. V. READE said : I, like the reader of the paper, found the Col des Grands Montets rather more of an expedition than I expected. On the Montanvert side it was easy to lose the way below the glacier, and on the glacier my party had some step-cutting, and certainly required a rope.

Capt. J. P. FARRAR, at the invitation of the President, gave some particulars of the new expeditions in the Mont Blanc Range done last summer, fuller particulars of which will be found in this (the May) number of the JOURNAL.

The PRESIDENT said : If there is to be no more discussion on the paper, we have now only to pass a very hearty vote of thanks to Mr. Done for his paper. It is a most interesting paper, and we shall certainly all agree with Sir Alexander Kennedy that it has been illustrated by some admirable slides, and we all offer Mr. Done our very hearty thanks for his paper and the slides he has shown us.

The vote of thanks was carried with acclamation and Mr. Done briefly returned thanks.

DEATH OF JOSEF LOCHMATTER

At the moment of going to press, we learn with very great regret, that this very well-known guide died of brain fever, at Brieg, on April 19. Aged about 40.

Particulars of his career will appear later.

THE ALPINE JOURNAL.

AUGUST 1915.

(No. 209.)

LIST OF MEMBERS SERVING IN HIS MAJESTY'S FORCES.

- BARTRUM, Lieut. G., 8th Battalion Oxford and Bucks Light Infantry
(Pioneers).
BATTYE, Major H. M., 1/5th Gurkha Rifles. (*Killed in action.*)
BIRD, Capt. L. W., 1st Royal Berkshire Regiment, VI. Infantry
Brigade, 2nd Division, Expeditionary Force. (*Mentioned in
Dispatches.*)
BLACKDEN, Brig.-Gen. L. S., Jamaica.
BRADLEY, Capt. M. G., 17th Battalion, Middlesex Regiment.
BROWN, Lieut. J. W., Army Service Corps.
BRUCE, Lt.-Col., The Hon. C. G., M.V.O., 6th Gurkha Rifles, India.
(*Wounded in action.*)
CARFRAE, Capt. C. F. K., Oxford and Bucks Light Infantry.
(*Wounded, but remaining at duty.*)
CARR-SAUNDERS, Lieut. A. M., Army Service Corps.
CASSEL, Lieut. F., K.C., M.P., 19th Battalion London Regiment.
CHUBB, Capt. E., Motor Transports, A.S.C.
CHUTE, Lieut. C. L., 16th Battalion Middlesex Regiment.
CLARK, Lieut. C. INGLIS, 71st Motor Transport Company, A.S.C.
2nd Indian Cavalry Division Supply Column. Expeditionary
Force.
CLAYTON, Lt.-Col. J. M., 6th Battalion Sherwood Foresters.
CORRY, Major J. B., D.S.O., Royal Engineers, 3rd S. & M., Indian
Army, Expeditionary Force. (*Killed in action.*)
COURTAULD, S. L., Artists Rifles.
CRAWFORD, C. G., 82nd Punjabis, Indian Army Reserve.
DAVIDSON, Lieut. G., Army Service Corps.
DENNISTOUN, 2nd Lieut. J. R., North Irish Horse, attached to the
54th Division (East Anglian Territorials).
DE WESSELOW, Lieut. O. L. V. S., M.B., R.A.M.C.
EATON, J. E. C., 28th City of London Regiment (Artists Rifles).
ECKFORD, Brigade Major P. G., Belfast Garrison.

220 *List of Members Serving in His Majesty's Forces.*

- ETHERTON, Capt. P. T., 39th Garhwal Rifles, Indian Expeditionary Force, France.
- EWEN, 2nd Lieut. G. T., 3rd Battalion Manchester Regiment.
- FLETCHER, Lieut. P. C., 5th Battalion Manchester Regiment.
(*Wounded in action.*)
- FURNEAUX, Major L. R., Rossall School, O.T.C.
- GASK, Major G. E., F.R.C.S., R.A.M.C. (T.)
- GIBSON, 2nd Lieut. H. O. S., 2/11th Battalion London Regiment.
- GILLETT, Lt.-Col. W. A., 5th Battalion East Surrey Regiment.
- HEAD, Major BERNARD, 1/5th Royal Welsh Fusiliers.
- HODGSON, Commander J. C., Royal Navy.
- HOWARD, Battalion Qrmstr.-Srgnt. G. E., 28th City of London Regiment. (*Artists Rifles.*)
- HOWARD, Lt.-Col. HENRY, Vice-Chairman, Worcestershire Territorial Association.
- JAMES, W. W., F.R.C.S., Honorary Consulting Dental Surgeon to the Military Hospitals in London.
- JARDINE, J. W., Anti-Aircraft Corps.
- JOHNS, Major W. G., 13th Battalion King's Royal Rifles.
- KNOX, Capt. H. V., 6th Battalion Oxford & Bucks Light Infantry.
- LIVEING, Major C., Royal Field Artillery.
- LONGSTAFF, 2nd Lieut. T. G., 1/7th Battalion Hampshire Regiment (T.F.), (India).
- MACROBERT, 2nd Lieut. H., 17th Battalion Highland Light Infantry.
- MAKINS, Col. Sir GEORGE H., K.C.M.G., C.B., F.R.C.S., R.A.M.C.
(*Mentioned in Dispatches.*)
- MASON, Capt. KENNETH, Royal Engineers. Indian Expeditionary Force A.
- MEADE, 2nd Lieut. C. F., Surrey Yeomanry.
- MINCHINTON, Lieut. H. D., 1st (K.G.O.) Ghoorkha Rifles, Indian Expeditionary Force.
- MONRO, Lieut. the Rev. C. G., R.A.M.C.
- MONTAGUE, C. E., 2nd Sportsmen's Battalion Royal Fusiliers.
- MORRISON-BELL, Major A. C., 1st Battalion Scots Guards.
(*Wounded in action and prisoner.*)
- MOTHERSILL, Major H. J., 2/5th Battalion Cheshire Regiment (T.F.).
- MURRAY, Flight Lieut. D. G., Royal Flying Corps, Naval Wing.
(*Interned in Holland.*)
- MURRAY, 2nd Lieut. E. D., Black Watch.
- OLIVER, Capt. D. R. G., Indian Army, Expeditionary Force (Persian Gulf).
- OPPENHEIM, Major L. C. F., 4th Battalion Highland Light Infantry. Military Attaché at the Hague. (*Wounded in action.*)
- PICKARD, Lt.-Col. R., Commander, 24th Field Ambulance, 8th Division, Expeditionary Force.
- PILKINGTON, Capt. E. F., 6th Battalion Manchester Regiment.
- POWELL, Maj.-Gen. C. H., C.B., Indian Army, Commander, Ulster Division.
- RAWLENCE, C. V., Anti-Aircraft Corps.

- ROLLESTON, Major L. W., R.A.M.C., Officer Commanding Napsbury War Hospital.
- ROSS, MALCOLM, Overseas Contingent.
- ROWS, Major R. G., R.A.M.C., Medical Officer in Charge of the Military Hospital, Maghull, Liverpool.
- RUNGE, HARRY, London Volunteer Rifles.
- SHARPE, 2nd Lieut. W. S., 1st Battalion City of London Regiment (Royal Fusiliers).
- SLINGSBY, Capt. A. M., Indian Army, Expeditionary Force.
- SPRANGER, Lieut. J. A., Royal Engineers.
- STEELE, L. J., Electrical Engineer, H.M. Dockyard, Portsmouth.
- STONHAM, Lt.-Col. C., C.M.G., F.R.C.S., O.C. Field Ambulance, London Mounted Brigade. (T.F.)
- STRUTT, Major E. L., 3rd Battalion Royal Scots, General Staff. (*Wounded in action.*)
- TODD, Capt. O. E., 5th Gurkha Regiment, India.
- TUBBY, Colonel A. H., Consulting Surgeon, R.A.M. Service, British Mediterranean Expeditionary Force.
- TYNDALE, Lieut. H. E. G., 8th Battalion King's Royal Rifles.
- WALKER, Lt.-Col. HARRY, 4th Battalion Black Watch, Expeditionary Force.
- WERNER, Capt. C. A., 2nd Battalion Rifle Brigade. (*Missing and reported killed.*)
- WHEELER, Lieut. E. O., 1st K.G.O., S. & M. Indian Contingent B.S.F.
- WHERRY, Lt.-Col. G. E., R.A.M.C. (T.) 1st Eastern General Hospital.
- WILLIAMS, Qrmstr. A. F. BASIL, Mobile Red Cross Unit, France.
- WOLLASTON, Lieut. A. F. R., M.B., Surgeon, Royal Navy.

SOME COMMON(-)PLACES.

BY NEVILLE S. DONE.

(Read before the Alpine Club, March 2, 1915.)

IN the mystery of one's ill-written manuscript it was easy to evade (as more august tribunals have been known to do) the necessity of pronouncing a judgment on the question of title which was found to be involved in the proceedings. In the case in hand that question was no less momentous than whether the commonplace part of the title should be written as one word or as two. The writer cherished a hope that the common places would be depicted in the slides that are to illustrate the paper; but he could not stifle the fear, doubtless well-founded, that his audience would attribute them to the paper itself. The audience being considerate, the question might have remained unanswered if it had not been for the

printer. Deservedly are printers (and certain members of the junior Bar) associated with the Evil One! The printer would tolerate no evasion, and the clumsy compromise seen above was devised to appease and at the same time to defeat him. The truth is that the paper stands in relation to the slides where the *gourmet* put butter in relation to cheese—if it's bad cheese, it needs it; if it's good cheese, it deserves it. In the Honorary Secretary's view the *paper* is introduced, like the maiden of bashful fifteen, to 'prove an excuse for the *glass*.'

According to authority, our modern commonplace started life centuries ago as two words, signifying 'a striking or notable passage'; then it passed through a hyphenated stage, when what was once notable had come to be generally accepted or taken for granted, 'an everyday saying'; and finally it assumed the form of a single word connoting 'anything common or trite.' Is not this an exact illustration of the position in which the would-be writer on mountaineering finds himself to-day? Two generations of members of the Alpine Club have explored every summit and glacier of the Alps, and their most brilliant intellects and skilful pens have thought and written all that can be said about mountains in general and mountains in particular and every experience and incident of mountaineering, so that, while topographically through their expeditions what was once 'a notable passage' is now a common place (reversing history), the reflections of a latter-day mountaineer must appear ordinary in themselves and their expression a commonplace. One is sometimes tempted to doubt whether the schoolboy deserved as much censure as he got for translating one of Horace's familiar lines thus: 'The deeds of our ancestors are unmitigated filth.' But if this is perhaps a trifle too strongly, as well as crudely, expressed, we could applaud their exploits more ungrudgingly if they had not set themselves so resolutely to appropriate all the fame that could be earned both above the snow-line and in the field of literature. If, for instance, they had contrived to climb a few of their peaks for the second or third time and had left to us the making of the first ascents, or if they had acknowledged as derived from us some of their glowing word-pictures and priceless witticisms, with what different feelings we should have regarded them!

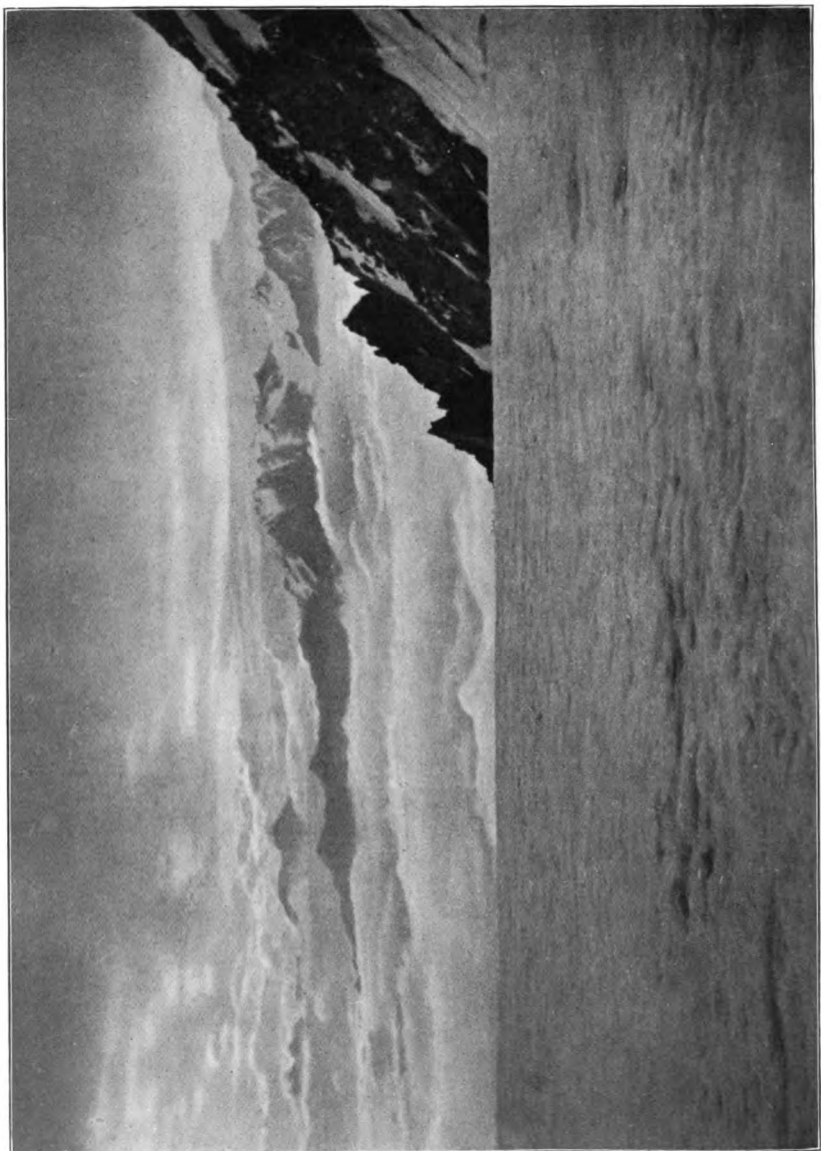
Yet, though our expeditions may have been anticipated a hundred or a thousand times, what matters it to us when we are at grips with Nature? Her forces are untiring, and we can never lay aside our weapons of care and skill if we would escape disaster and attain our goal; and her changing moods give

us always a fresh reward. There is no stalemate in this great game with Nature : each time it is victory or defeat, and never twice are the incidents and the conditions of the struggle the same. Sometimes it would seem as if Nature were our friend, smoothing our path and helping us forward to an easy conquest ; but soon we learn (if we live) that she smiled only to beguile us, that through a false confidence we might suffer defeat when all her forces were arrayed against us. For the true mountaineer every climb is a first ascent : it has called forth his best, and his best has rejoiced in responding to the call. It is not his best, but his selfish baser part, that can find an added joy in the thought that he has attained what no other has and that to him all comers must yield pride of place. Such a thought is bred of the struggle of man with man : it has no relation to the struggle of man with Nature, and it should find no place in the ethics of mountaineering. But if a sop must be thrown to the Cerberus of our selfish instincts, let me suggest this thought—On every peak we have when we stand upon it something which is all our own, which none before us has had and which none after us shall have—no, not we ourselves if we should climb the peak again—a vision of worlds to be seen only from that summit at that moment and through our eyes. I remember my first summit vision. It did not extend quite as far as the edge of the cornice which crowns the Tschingelhorn and onto which in my ignorance I was about to walk when the guide pulled me back. The rest of this world was blotted out in cloud and driving snow. What a chance for the imagination—a blank canvas all around to be filled in at one's wayward pleasure ! The picture was never painted : I had scarcely decided on the scheme of decoration when our stay on the summit came to an end. It had lasted just as long as it took us to turn round ; and in a few minutes we were sheltering under a rock, extracting sardines from a tin by their tails, and eating them as one eats asparagus, with as much elegance as was compatible with the endeavour to avoid dropping oil onto our clothes.

Other summit visions have appeared so clear and complete that the soul has found no task but contemplation. Others again, more suggestive, reveal to us dark islands in a tempestuous sea of cloud. Most fascinating of all are the visions of mountain ranges in countless succession, confined by no horizon, whose bases are set on insubstantial vapour and their summits lit with a soft light of unearthly purity. In such a vision the mountaineer realises his Paradise. His body, sunk

into repose and soothed by warmth and the wreathing smoke from his pipe, no longer fetters his imagination, and fancy is free to fashion and to dwell in unknown worlds. There is only one vision which can compare with this—the first vision of the eternal snows. From many a summit we have seen glorious visions, but is there any one of them which remains unfaded in memory's picture gallery like that first glimpse of the great mountains? In a schoolboy's diary I find written, 'Lovely voyage down the Lake of Thun, stopping at every landing-stage. During the voyage we saw the snow-clad peaks of the Jungfrau, *our first snow.*' A mere matter-of-fact record; but in the realisation of that eagerly-awaited vision, when the mist veil was drawn aside and a new world above the clouds was disclosed in curves of glistening white, it would have taken more than a boy's pen to record the feelings it had aroused—feelings which grew as his gaze was riveted on the mountains in the days and years that followed, of wonder as to the mysterious secrets of those far-off fastnesses, of reverence for the mountains, of awe inspired by their greatness, and of his own impotence in their presence. I venture to think that without this lesson, taught during a period of novitiate below the snow-line, no man will become a true mountaineer. He may acquire skill as a climber, but he will lack the spirit of the mountaineer, which brings him half his joy and, from a practical point of view, saves him from disaster because it maintains his respect for the mountains. I have very little hope for the man who by his own agility or that of hired professionals, and in the former case through the misplaced indulgence of Nature, contrives to get to the top of the first mountain he sees. A few days after that first record is another. 'Walked right up the valley to the glacier and . . . brought a lump of ice as a trophy.' The spirit of the mountaineer was revealing itself in the boy. Fifteen years later he sat on the summit of the Jungfrau and through the wind-driven mist saw for an instant the glint of light on the Lake of Thun. The earlier vision was still fresh, and it lent bitterness to the disillusionment which the climb had wrought, for up there was neither solitude nor mystery, but commercialism rampant, defiling the sanctuary of the mountains.

During the dull winter days of strain and activity our thoughts have perhaps sometimes wandered longingly to the mimosa-scented, palm-girt Riviera coast, where sunlight glistens on blue waters; but the time for repose is not yet, and for us who profess the mountaineer's faith—'I will lift up mine eyes unto



Neville S. Done, photo.

SUNRISE FROM THE COL D'ORNY.

Swan Electric Engraving Co., Ltd.

the hills, from whence cometh my help'—there can, I think, be no better recreation than to climb for an hour in fancy to those high places where, far from the din of strife and traffic, we have known

‘The silence of eternity
Interpreted by love.’

Many months have passed since most of us were among the mountains, and in the meantime our whole mind has been turned elsewhere, so that it is not easy for us to revive the mountain atmosphere; and herein, I trust, may be found the justification for a paper which recounts in a style unadorned by literary distinction a series of very ordinary expeditions over ground that is familiar to everybody. So much by way of preface and apology; and it is high time to act on the farmer's exhortation to the auctioneer, to 'cut the cackle and come to the 'osses.'

The party of which in August 1909 I was the *tertium quid* was led by the late Dr. P. R. Parkinson, a sound and capable mountaineer and a most charming companion. Its other member, who, though worthy, has not yet sought a place among the elect, may be conveniently designated by that overworked symbol which indicates a value unknown and to be discovered (but, in the case of my own algebraical studies, usually unknown to the end). Let us call him X. Our plan was to spend three weeks in guideless exploration of the Mont Blanc Chain, beginning on the small peaks which bound the Trient Plateau and ending with the traverse of Mont Blanc itself. In anticipation of considerable periods of hut life we laid in a variety of stores, whose bulk came near to upsetting our programme at the start by attracting the curiosity of the Paris *octroi* officials. We had none too much time to get across from one station to the other, and Parkinson, who was struggling with a large canvas kit-bag as well as a rucksack and a Gladstone, was stopped for examination of the kit-bag. Its miscellaneous contents came forth in unending procession—a rope, climbing boots, underclothing, crampons—until somewhere from the middle depths appeared 3lb. of bacon. After this we were allowed to go. We found other occasions for gratitude to that bacon later, when it came in crisp rashers from the frying-pan to make us an evening meal.

Misty valleys and steep wooded hills and rocky scarps touched by the finger of dawn told of the approach to Switzerland. This first sunrise in the Alps is joy enough to compensate

for the discomforts of the journey ; but it is surpassed by the dreamy morning beauty of the mountains of Savoy beyond the pearl-like waters of the Lake of Geneva. The afternoon found us at Lac Champex. We bought bread by the *mètre* and other things in proportion, and for a time the village store did a roaring trade as purveyor to the expedition. The next day we loaded up two porters with our provisions and set off for the Cabane Julien Dupuis on the Col d'Orny, but not until civilisation had exacted from us a parting tribute in the formalities required to procure the posting of our main baggage to Courmayeur. The path winds pleasantly through woods and meadows into the Vallée d'Arpette and then rises steeply to the Col de la Breya, whence it passes into the Combe d'Orny and reaches the lower hut at the foot of the glacier. The Dupuis hut is an hour and a half further on at the head of the glacier, which is innocent of crevasses, but little better than a morass in its lower part in the afternoon. All 'hut grinds' are to me a weariness and a vexation of spirit; but this one remains impressed on my memory by two circumstances : we met a party of nineteen coming down the glacier, and through lack of training I suffered as I walked from cramp in both legs at the same time, in one set of muscles which could only be eased by bending the legs, and in another set which found relief only in their straightening.

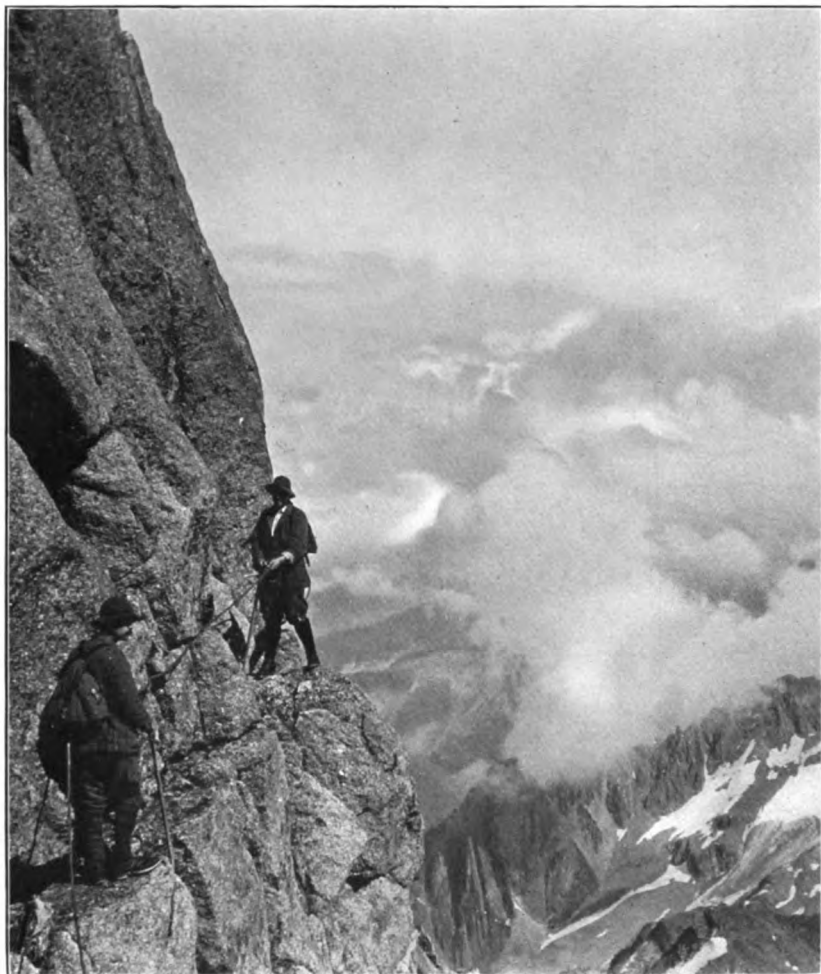
Our first climb was up the Portalet. The scramble up to the Col des Ravines Rousses is unpleasant. It abounds in loose stones and stones which are only not loose because they are icé-bound. From the Col to the summit the climbing along the ridge, with occasional traverses onto the face, is easy over good rock. The hissing of our axe-heads warned us of a thunderstorm, and we raced it to the top and brought off a dead heat. The peal of thunder which heralded our arrival sent us in undignified haste down the stone-strewn southern face of the mountain. We recrossed the Col and got back to the hut wet through. The rain continued, so that we could do nothing the next day beyond taking an afternoon's tread-mill exercise on the Trient Plateau and getting another wetting.

Two considerations had led to the selection of the Col d'Orny for our first headquarters. One was the theory that a stay of some days at an altitude of 10,000 feet would expedite our training ; and the other was the proximity of the Aiguilles Dorées. To the latter, therefore, we now turned our attention. The good behaviour of the weather was not assured, but we decided to start and were witnesses of one of those mountain

sunrises which are given as a reward to the sluggard who overcomes his sloth. We crossed the ridge of the Aiguilles by the Col Droit at its eastern end, cutting up the short couloir to the Col, and thence traversed the magnificent rocks of the southern face. We visited only one of the minor summits, the descent from which was by a short chimney. Parkinson went down first and moved away to the right. As second man I was standing at the foot of the chimney, taking in the rope from X, when I heard a crash of stones above and made a jump for safety. It was a narrow escape, for my axe, swinging from my wrist, was caught by two large stones and its shaft broken across the middle. Recriminations followed. X vowed by all his gods that he had not touched the stones, but it was pointed out that they had shown no disposition to move until the heavy man of the party came to close quarters with them. A hand cut by the wrench of the axe-head was bound up, and we went on our way, leaving the Javelle Crack to the more ambitious, though X, led astray by a promise of the best dinner in London if he climbed the Crack unaided, gave us an exhibition in it which ended in his getting a damaged knee instead of a dinner for his pains. The traverse of the S. face is made by a series of ledges, but at one point their continuity is broken by a clean-cut chimney that requires some negotiation. It is possible to stride across the top of the chimney, but it is a long stride, and the ledge beyond is overhung by a holdless wall which makes it a delicate matter for the leader to persuade his second leg to join the first on the far side and at the same time to maintain his balance. He can be secured against a fall by a curious hook of rock in the wall above the middle of the cleft, but some manœuvring would be needed to restore him to *terra firma* on either side if he swung onto the hook. Beyond this obstacle we had an attractive view of the Aiguille d'Argentière rising like an island out of a sea of mist, and in a short distance we came onto the crest of the main ridge at the Col Copt. It cost us an hour's step-cutting through the snow into the ice beneath before we gained the narrow top of the snow-saddle, and then a short icy gully brought us to the summit of the Tête Biselx. We had intended to complete the traverse of the Aiguilles, but while we rested mists rolled up and hid everything from view, and prudence dictated a return by our upward route. By the time we had regained the rocks below the Col Copt the mists had finally dispersed, and we had magnificent views of the Aiguille d'Argentière and its neighbours, and finished the

climb in grateful sunshine. (It is one of the merits of a long traverse that it is a climb whether one is ascending or descending the peak. Mountaineers, like other people, do not confess to *climbing down*.)

The hut's reservoir is apt to provide humorous entertainment for the hut's occupants. The débris-strewn slope by the hut on one side and a curving ice-wall shelving inwards at the bottom on the other side form a hollow to contain a small pond fed by a little stream at the far end. From this pond or the stream, according to the energy and regard for hygiene of the water-carrier, the supply is drawn. The previous evening a porter arriving late with a party found the cans empty and had to go down in the dark for water. In a few moments hilarious shouts announced that he had walked into the pond. This evening I was the 'source of innocent merriment.' In regard to the menial duties of hut life I generally contrive to practise a modest retirement. I am always ready, for instance, to dry the utensils of a meal after my companions have displayed their skill in removing grease with cold water; and if one of them should be inspired to emulate my modesty I am generally able, after a little rock climbing, to point to a cut finger as a reason for declining promotion to the first position in the washing-up. On this particular evening, however, I forgot my usual self-effacement and set out to replenish a water-can. On the way I met the masculine superintendent of a *pensionnat* of four *demoiselles*. He was returning with the other can full of water, and they were sitting in front of the hut, taking a lively interest in all that was going on, an interest of which on account of my attire I seemed to absorb an undue share, and which on the same account was not free from embarrassment for me. My ordinary clothes were hanging up to dry, and I was clad in a sweater and a pair of huge clogs, while a blanket adapted as a skirt and held round the waist by a belt supplied what else was lacking. The man exhorted me in voluble French to fill my can from the stream at the top of the pond, and I obeyed his behest; but during the traverse of the slope of unstable boulders my heterogeneous covering caused me so much exasperation, not unmixed with anxiety, that I shrank from crossing it again with the added encumbrance of a heavy can of water, and determined to invent a route over the ice where it curved gently round the edge of the pond. The first part was easy enough, but gradually the slope steepened and the ice became harder and smoother, until from moving with caution I found myself



Neville S. Done, photo.

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TRAVERSING THE SOUTH FACE OF THE AIGUILLES DORÉES.

at last unable to move at all, unless it were involuntarily to a chilly bath. I could do nothing but stand where I was, balancing the can on a fraction of its rim and myself on such part of the soles of my clogs as could be brought in contact with the ice. The *pensionnat* had throughout studied my movements with amused interest, which now assumed an expectant attitude that in all probability was only robbed of its gratification by the timely arrival of the superintendent with an ice-axe. He handed me the axe and I gave him the can. One step cut in the ice released me from my difficulties and I made a blushing return to the hut, greeted by the jeers of my companions and the smiles of the young ladies. I may be permitted to add that the next day I again undertook to fetch water with the sole purpose of vindicating the superiority of my route, which with climbing clothes and boots and axe I did to my own entire satisfaction.

This second excursion round the pond was preceded by a visit to the Fenêtre de Saleinaz and an ascent of the Aiguille du Tour. On the way up to the peak the Col du Tour gave us our first sight of Mont Blanc. The climb is short and easy, but the view from the top is, in guide-book phrase, 'good and extensive.' Though the Aiguille du Tour seems so insignificant, yet, owing to the very considerable rise in the surface of the Trient Plateau at this point, it can claim a height of 11,615 feet, nearly 100 feet higher than the Tête Biselx, which looks so much more imposing.

This little expedition brought our stay on the Col d'Orny to an end, and the following morning saw us by star and candle light making our way across the snowfield to the Fenêtre de Saleinaz. In the dawn twilight we stumbled down the shaly slope to the Saleinaz Glacier, and there the sunrise revealed to us the Aiguille d'Argentière in its most beautiful aspect. Our programme had included the traverse of the Aiguille, and the five days' stay in a training-ground among minor peaks had been designed in part to fit us physically for this expedition; but X's injured knee, which was still painful, compelled us to take the direct route to Lognan. Firm snow and crampons enabled us to climb the couloir to the Col du Chardonnet instead of wrestling with the rotten rocks at the side. On the Col we had our second breakfast and looked longingly at the ridge of the Aiguille d'Argentière, which springs upwards from the Col, but we had to turn our backs resolutely upon it and resume our march to the Glacier d'Argentière. The moraine near the foot of the Glacier du Chardonnet offered one of those superlative

contrasts that only Nature's handiwork can devise. Before us in majestic beauty swept one of the greatest glaciers contained by the most stupendous mountain-wall of the Alps, and at our feet was the perfect loveliness of a garden of tiny wild flowers whose very presence might have escaped our notice if we had not sojourned amid the barrenness of perpetual death. What unimagined glory of colour an eye that has become accustomed to look only on rock and snow and sky and distant valleys may find even in an uncropped meadow !

It was still early enough when we reached Lognan to give us an excuse for having a third breakfast, and we did such justice to the meal that we were charged double for it. A bath afterwards was grateful and comforting ; the removal of week-old beards from sunburnt faces was less so, but by tactfully securing the first use of Parkinson's safety razor with a new blade I contrived to render the process as little painful to myself as might be. The rest of the day was spent on the grassy hillside near the ice-fall as reposefully as flies and a restless spirit would permit. When the rich red of the sunset glow had faded from the cliffs of the Aiguille du Chardonnet and the chill of evening had set in and our thoughts, stimulated by hungry cravings, were set on dinner, we made the discovery that we were now on French soil and our watches were an hour in advance of the time.

At Lognan we also made from picture postcards two topographical discoveries. One was that the Pillar Rock had been transported from Cumberland to the neighbourhood of Chamonix. At any rate, there was a photograph of the passage of the Nose on the Pillar Rock entitled 'Chamonix—grimpée d'une aiguille.' Our other discovery was of the hut on the Jardin d'Argentière, of whose existence we were hitherto unaware, and which suited our plans so well that we decided to move up there the next day. As a preliminary to further work, however, I had to pay a visit to Chamonix to replace my broken axe. The run down to Les Tines, with glimpses of the glittering snows of Mont Blanc through dark pines, was altogether fascinating. The way had increased strangely in length and steepness when I returned after a visit to the Pâtisserie des Alpes and under a hot sun ; and some fruit which I had purchased for the common benefit melted away in spite of its unripeness as I rested in a patch of shade. Parkinson had left for the hut before I got back to Lognan, taking with him two porters loaded with provisions and firewood, and after tea X and I followed them. The hut bunks were designed



Neville S. Done, photo.

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TOUR NOIRE AND MONT DOLENT FROM AIGUILLES DORÉES.

to accommodate sixteen persons (including one who would have to sleep on a missing board), and the mattresses covered little more than half the boards; the night before our arrival there had been nineteen in occupation. The utensils were adequate for three people, if they could manage without knives, of which there were none. Our cutlery for all purposes consisted of two pocket-knives between the three of us. Apart from these details the hut was comfortable enough. A shovel of large proportions stood outside the door, and there was some speculation as to its function. The mystery was solved by one of the scientists of the party, who triumphantly declared that the shovel was provided for digging the hut out when it was buried in snow.

Our first expedition from this hut was directed to the Tour Noire. (Whatever maps and guide-books may say to the contrary, I personally insist on the feminine form of the name.) The glacier was steep and the snow soft and seamed by crevasses, for the most part small and concealed, into which one's foot plunged unawares; but after something under three hours' plodding we gained the Col d'Argentière. Hence the route lies up the ridge until the final tower of the south peak is reached and a traverse across the east face becomes necessary. After a first step on a sloping slab without handhold, there is a good ledge leading round the face to the foot of a short chimney below the gap that separates the two peaks. I should have stood with less equanimity beneath our heavy member while he climbed the chimney if I had known, as I discovered when my own turn came, that one of the wedged rocks in it was loose! We chose the slightly higher northern summit, which afforded us at once a fine view and the opportunity of standing with one foot in France and the other in Switzerland. The graceful shape of Mont Dolent, that meeting-place of three frontiers, attracts the eye; and the dark, forbidding steepness of the Col Dolent is set off by its background of distant snow on the Graian Alps bathed in the light of an Italian sun. Ten miles away Mont Blanc stands in unchallenged supremacy of height 3000 feet above us, with the great bounding wall of the Argentière Glacier for foreground, a wall nowhere less than half a mile in height and reaching its climax in the Aiguille Verte, where it rises a full mile above the glacier.

We returned to the Col d'Argentière, and then rebellion broke out in the party. The sun was hot, and the younger spirits shrank from plunging down steep soft snow, uncertain at every step whether the foot would find earth or air beneath

it ; and we spoke of a sitting glissade. Our leader uttered words of discouraging wisdom. We retorted that we had come up the glacier without finding patches of ice ; that *he*, following in our steps, would not have to discover the presence of a crevasse by wrenched knee and headlong fall ; and that a more suitable spot for the discussion of orthodox methods would be the hut. (By this time we had acquired sufficient momentum to put an end to argument.) The hut stands some 250 feet above the Glacier d'Argentière, and is reached by a steep and stony track that has first to climb over the rampart of the moraine. In the hope of escaping this labour we attempted a traverse from the Tour Noire Glacier at the level of the hut. The experiment cost us much toil and exasperation, and is only to be recommended to one's enemies. When night came and found us sole occupants of the hut, we took a mattress a piece and spread ourselves out almost to the point of discomfort in our determination to make the most of so rare an opportunity for spacious sleep.

After this luxurious night we might have been expected to do great things the next day. We intended to, but did not. We intended, in fact, to go one better than Mr. Withers' first crossing of the Col des Cristaux the previous year, by climbing to the Col and thence ascending Les Courtes. Whether this ambitious scheme would in any case have been feasible in practice I do not know, for we signally failed to accomplish even the first stage. In truth I think we were all rather tired, for, though we had not had any very long days, we had not had a complete off-day since we came out from England. At any rate, we made every possible mistake as to the route and climbed at our very worst, so that, while the first party took $2\frac{1}{2}$ hours to reach the Col, we had only gained the top of the rock ridge about half-way up after $3\frac{1}{2}$ hours' going. X then said that his knee would not let him go any further ; with that curiosity which always wants to see what is on the other side of the wall, I said I would go to the Col, but not a step beyond ; Parkinson, finding that there was no possibility of his wishes being realised, expressed a strong desire and readiness to complete the expedition. In the end, of course, we came down. Having no taste for the descent of the rather unpleasant rocks of the ridge, we took to some unstable scree and loose rocks on our right, and before we had completed the descent the heap of detritus on the glacier below had been considerably augmented. Our course was not in any case free from the danger of falling stones, but the risk varied progressively

according to one's position on the rope. We shot the doubtful snow bridge over the bergschrund by separate and carefully-controlled sitting glissades, and got back to the hut to find that the heat had dried up our water supply. Considerable excavations were necessary before the prevailing mutual resentment could be drowned in hot soup. By three o'clock the whole ridge of Les Courtes was in the vortex of a thunder-storm which raged for the rest of the day, with snow falling on the heights and rain in torrents at the hut. Indeed we were almost disposed to congratulate ourselves on remarkable foresight in not having persisted in our expedition. Not unnaturally, we again had the hut to ourselves.

When morning came, the sound of rain on the roof suggested the futility of early rising, and we lay on until the process of turning over to rest each hip-bone in turn after a period of pressure on the hard mattresses had become monotonous. By the time we had gone through the usual routine of breakfast and washing-up the rain had stopped, and while the other two amused themselves by inspecting the flowers in the Jardin and rolling stones down the hillside, I sat for an hour waiting to photograph an avalanche on the side of Les Courtes. There had been avalanches in plenty before I got my camera; then they dried up and patience went unrewarded. When these pastimes palled we held a council of war, and X obtained the congenial task of remaining on guard at the hut while Parkinson and I went down to Lognan for provisions and fuel to save us from being starved out. On our way down the glacier we noticed four little spouts of water in a row, like the fingers of a hand, shooting up steadily from the ice to a height of three or four inches. The surface of the ice around appeared to be level and was much percolated by water, and we could not detect the source of the upward pressure which was so curiously manifested.

It was becoming urgently necessary for us to regain touch with our principal baggage, and the shortest route to Courmayeur lay over the Col Dolent. Rain kept us in bed until 6 o'clock, but the sun was shining as we plodded up the slope of soft snow towards the bergschrund, taking it in turns to tread the track. The crossing of the schrund delayed us for some time. The actual cavity was more or less securely bridged, but the other end of the bridge abutted against a 15-foot wall of ice. Luckily a detached flake of ice close at hand provided us with a means of rising to the level of the upper lip, and some careful manœuvring enabled Parkinson

to establish himself in the steep powdery snow of the slope above and to bring his followers up. Another period of step-kicking carried us to the rocks on the left of the couloir. Meanwhile the weather had changed. When we escaped into shadow from the sun's heat, he sent his allies, the rain and the snow, to smite us. We were wet through and shivering and our fingers numbed, and above us the rocks towered defiantly till they were lost in seething cloud. We scaled them for 100 feet and found them steep and unreliable, coated with ice, and becoming more and more concealed by snow. We had to admit defeat; and our discomfiture was completed during the succeeding hours of hungry plunging and slipping down the glacier, often up to the knees in slush, while pelting wind-driven rain drenched and chilled us. Our appearance may have had something to do with the unanimous declaration of the hotel proprietors of Argentière that their houses were full and we must go on to Chamonix; but we had our revenge, for we selected the most imposing hotel, ordered tea, and left three pools of water in the dining-room where we had sat. We went by train to Chamonix and had some anxious moments while it seemed in doubt whether we should meet with a similar welcome there. Couttet's Hotel was full, but at length we were introduced to the unpretentious little Restaurant des Gourmets, where we found plain food but a good bedroom. We poured the water out of our boots and deposited our clothing in a sodden heap on the landing, and in various picturesque makeshifts of towels and quilts we had dinner in our room, after which we tossed for the single bed, the losers sharing a double one. In the morning we were held prisoners in our room until a number of tentative excursions onto the landing at length produced the chambermaid and our garments, which efforts continued through the night had scarcely sufficed to dry. As if to tempt us to fresh encounters, the sun blazed forth; but we were taking no risks, and in the afternoon strolled up to Montanvert as a first stage on the highway over the Col du Géant.

If I may digress here for a moment, I should like to call attention to the description in *Ball's Alpine Guide* ('The Western Alps,' pp. 342-3) of the route over the Col des Grands Montets, a description which in 1913 altogether misled Mr. E. D. Murray and myself as to the nature of the expedition. The *Guide* describes the walk by the Chapeau and the Mauvais Pas to Montanvert, and proceeds—'A more serious undertaking . . . is the passage of this Col . . . This *walk*' (the italics are mine) 'should not be undertaken by ordinary

travellers without a guide. . . . Starting from the Montenvers, the Mer de Glace is crossed to its r. bank by the ordinary route to the Chapeau, and a small path at once leads up the hillside past the foot of the Nant Blanc glacier. A short climb up an easy rock wall then leads to the Grands Montets Glacier. . . . A descent of $1\frac{1}{2}$ hr. down the upper or lower slopes on the l. side of the Argentière glacier leads to the little *Lognan* inn. . . . Merely as a guide to the route this description is wholly inadequate, because, as seen from Montanvert, there are three couloirs separated by rock ribs descending from the Grands Montets glacier, and there is nothing to indicate which of these is to be taken or on which side the rock wall is to be climbed. The path does not help one, because it disappears in characteristic fashion when it reaches a cattle alp. Murray and I chose the northernmost couloir, and on our way towards it we noticed from time to time the familiar little square holes made in earth by an axe-point, and on the snow we found old tracks; so that it would appear that our choice was correct. We climbed the rock wall on our right at its lowest point, about half-way up. The rocks were not difficult, but required careful climbing. After following the crest of the rock rib to its highest point we bore to the right across snow which sloped steeply to the edge of a small precipice. So far, perhaps, the expert mountaineer will not have found anything to complain of in the *Guide's* description, except that it does not really help him to find his way. But it was a considerable surprise to us to find ourselves, near the summit, in a region of crevasses, and to discover that the Col was almost cut off by a large bergschrund from the slopes on the other side, and that those 'slopes' were split by many crevasses, both great and small; in short, that the pass was one which, as much as any other snow-covered glacier expedition, called for a third man on the rope. Of all this the *Guide* contains no hint; indeed the impression which its description had made on my mind was that if one were reasonably competent as a mountaineer one might stroll unconcernedly across the Col alone. The seriousness of the risk which would attend such a proceeding must be my excuse for referring to the matter. Modesty is, as we all know, a pleasing characteristic of the true mountaineer, the climber who is imbued with the spirit of the mountains; but if his modesty be carried to the length of minimizing the difficulties or the potential dangers of an expedition, it may become a source of peril to others. I believe that the lamentable list of disasters on the Jungfrau may be referred

in part to such a practice having given rise to a reputation of easiness which, however justified it may be when the mountain is in good condition, is terribly false at other times. The inexperienced do not realise the importance of changed conditions or take account of dangers which are not manifested in technical difficulty.

It would be an impertinence for me to describe the passage of the Col du Géant. Suffice it to say that on the afternoon following our arrival at Montanvert we sauntered into Courmayeur, I with my hat held nonchalantly behind my back to cover rents in my attire which safety-pins no longer served to conceal. A large blue patch neatly inserted by the village tailor presented a pleasing contrast of colour on its greenish-brown background, and proved so efficient that it outlived the rest of the garment. At Courmayeur we lived for a day in luxury and ease, neither putting on our boots nor wandering out of earshot of the dinner gong—a real off-day. X left us to return home, the condition of his knee putting further climbing out of the question for him that season; and Parkinson and I made our preparations for the traverse of Mont Blanc. We selected the route by way of the Rocher du Mont Blanc in preference to the Dôme route, as being the safer for a party of two; and we engaged a porter to help us with the carrying as far as the Quintino Sella hut, and incidentally to show us the way thither. In negotiating with the *Guide Chef* we laid emphasis on the latter qualification and let ourselves in for a guide's fee in consequence. Early on the second morning after our arrival at Courmayeur we were half dressed before our sleepy eyes had awakened to the fact that it was raining steadily. We came down and interviewed the porter, and finding him like-minded with ourselves as to the impracticability of starting we returned thankfully to bed.

According to the idiosyncrasies of the season's weather we ought now to have a couple of fine days, and it was a glorious morning that saw us start at 7 o'clock for the Quintino Sella hut after posting our bags to Martigny. The walk up the Val Veni in the cool freshness of the pine woods was a delight, with the soft rays of the morning sun illumining the mountains opposite, from the grim crags of the Aiguille Noire de Péteret to the distant mass of the Grandes Jorasses. While we refreshed ourselves at the Chalet du Miage the proprietor was voluble in a mixture of French and Italian, typical of the district and for the most part unintelligible to us. Further on the path steepens and becomes more open, and as we toiled upwards

with our loads we cherished the hope that the new snow above was melting as rapidly as we were below. At Lac Combal—reduced at the end of August to a puddle in a mud-flat—we turned aside and scaled the moraine which opened up to us the wilderness of stones that conceals the lower reaches of the Italian Glacier de Miage. An hour and a half of journeying in the wilderness brought us to the Glacier du Mont Blanc, and we halted at its foot for lunch. The hut stands 3000 feet up on the right bank of this glacier, and the ascent begins up the ice until the bank can be gained above a chasm between the ice and the rock-wall caused by the shrinking of the glacier and extending upwards from the foot for some hundreds of feet. The ice was straightforward enough at first, but presently it became disordered, and so did our porter's courage. He was in doubt about the way, and we found that his supposed qualification to act as a guide rested on the slender foundation of his having been to the hut once before with mattresses. That was in July; and he explained plaintively that the glacier was now '*moins commode*.' He feared, moreover, that if he came down alone on the morrow he might slip and no more would be heard of him. We felt that there was some force in this contention, so we promised that if he would come up with us far enough to put us on the way above the ice we would bring him down again to the same spot; and to give him courage we put on the rope. But the respite thus obtained was short-lived. We came to a particularly narrow and flimsy-looking ice-ridge extending across a wide gulf, and nothing would induce the porter to cross it. His pretext this time was falling stones, the one thing of which there could be no danger. We had evidently to lose either our porter or our expedition, and we decided to sacrifice the former. From the far end of the ice-ridge Parkinson called instructions to me to take the porter's load and come on; but he had to come back and take his share, and then it needed some ingenuity to induce two sacks to accommodate what had previously filled three. Once across the ice-ridge our difficulties were over. On the bank of the glacier we found a trickle of water, and, being late already, we spent three-quarters of an hour in collecting and boiling water for tea, while with malicious satisfaction we watched the porter's anxious return to level ground. During the next two hours of labouring up scree slopes and climbing rocks, following such vague hints of the direction as we had extracted from him, we cursed him with increasing emphasis and ourselves for having been weak enough to pay him in full. It was 6.10

when we at last found the hut, hidden away behind a pinnacle on the crest of the ridge ; but we could find no water supply. Time was short : in an hour the sun would have set, and all the sources of water at that altitude would be locked in ice. So we fetched out every utensil in the hut that would hold water and arrayed them all in a row along the foot of the west wall of the hut to catch the drops from melting snow on the roof, and by this means when sunset came we had half a pailful to our credit. The warming capacity of a spirit stove is limited, and after supper we were glad to turn in under all the blankets we could find, first covering our boots and our pail of water with a mattress to keep them from freezing.

At 3 A.M. a melancholy voice across the breakfast table jerked me out of somnolence, and I learnt that my companion had become temporarily but severely indisposed during the night. With unselfish courage he had got up and taken his share in the preparations for departure, and in the dim candle-light my drowsy eyes had not detected the change in him. Now that it was revealed, prudence triumphed and no start was made. Instead we returned to our bunks and stayed there until 10 o'clock, lest, if we got up, we should eat more of our provisions than we could afford. When we did get up again our first concern was to find water. The sun was high in the heaven and the air was full of the sound of running water, but it needed the power of divination to locate it. At length, by scratching at the snow, I found a trickle, and with infinite patience and a ladle collected a pailful of muddy liquid that after some days of settling would have passed for water. This done, I was free to lounge away the rest of the day in the sun's warmth in that superb solitude, 11,000 feet up on the side of Mont Blanc ; and those hours spent in contemplation of the presence of great mountains are never to be forgotten. The mountains were then living realities, sending forth their challenges in the ceaseless clatter of falling stones, the crash of rending ice, and the distant boom of avalanches, in constant interchange of voices.

The day's rest had sufficiently restored Parkinson's strength to justify a start, and at 4 A.M., after giving the crockery the only washing-up it received during our stay at the hut, we set out. The feeble light of the lantern of a party leaving the Dôme hut, shining out of the darkness far below, strangely emphasised the sense of aloofness from the peopled world. With our crampons we were able to walk for some distance straight up the ice-slope in front of us, and when the angle

increased so that the limit of their holding power and of the endurance of our leg muscles was reached, Parkinson, with excellent judgment, led out on to some rounded humps of honeycombed ice on the right, by means of which in an hour and a half and after cutting only an occasional step we found ourselves on the ridge bounding the basin of névé that is the source of the main branch of the Glacier du Mont Blanc. Using the rope doubled according to Mummery's plan as a precaution against crevasses, we traversed the basin and by 6 o'clock were taking our second breakfast in the hollow beside the track of a recent snow avalanche, while the distant Italian peaks reflected the pink glow of dawn. A small bergschrund was crossed without difficulty, though an incautious step into a hole which I mistook for Parkinson's footmark seated me violently on the edge of the lower lip of the schrund with my feet dangling inside, a flimsy snow bridge in front, and a steep slope falling away behind, a predicament from which it took me some moments to extricate myself. On snow and ice we worked up beside a rock buttress until we had got high enough to mount to its crest on our left. Then we sat down to take stock of our position. There appeared to be a difference of opinion as to the route between the map and the *Climber's Guide*. The latter suggested that we were on the proper ridge, directly opposite the Rocher du Mont Blanc; the former, by placing our ridge further to the south, seemed to carry the route away to the right (looking upwards). In fact, between us and the great buttress springing from the Col Emil Rey there were only two minor rock-ridges which ended unpromisingly beneath a great ice-wall that stretched across the face of the mountain. In these circumstances we made our own observations and decided to continue by the ridge we were on, thus choosing the right route, as empty bottles and similar evidences of civilisation proved to us some hours later. I turned round to pick up my sack, which I had propped against my back. Before I could grasp it, it slipped away and in an instant was rolling and leaping headlong down the snow-slope towards the glacier basin. The first impulse was to leave it; but it had in it not only my camera and other treasured possessions, but also most of our food. It is not pure altruism that makes me willing to carry weight in food while the other man carries bulk in cooking utensils, but a calculation of the relative advantages in case of accident separating the members of the party. On this occasion the food saved the camera; but it must be admitted that this was an unforeseen contingency. There was

nothing for it but to go in quest of the wanderer, and after descending the rock-ridge for some distance we saw the sack lying innocently where we had breakfasted nearly two hours before. To my surprise and joy the sack and its contents were intact, except that my only spool of unexposed films had disappeared and the contents of an opened tin of condensed milk had become inextricably mixed up with my sweater; but the loss of time and energy was serious. The longer an expedition is made, the longer it becomes: by the time we had regained our former position on the buttress we needed another meal. The climbing afterwards, though continuous, is not difficult. In one place the snow-slope on our right overflowed the buttress, falling in a wide couloir down to the left, and across this we had to cut. While we were crossing, a few stones came bounding with curving flight down the snow from far above and hummed harmlessly past. In another place, at the level of the ice-wall, the ridge broke off and started again slightly to the right, making an angle of treacherously loose rock. Above this break the crest of the ridge was narrower than it had been below, and the rock frequently gave place to clean-cut snow arêtes, along the steep sides of which steps had to be carefully and laboriously kicked, necessitating changes of leadership. The best piece of rock climbing—though perhaps my partiality is due to the fact that I happened to be leading at the moment—came in an open, slightly iced chimney, just before the ordinary route up the Calotte was joined 25 minutes below the summit. For some time the ridge had seemed interminable. We knew that we were gaining height, for we could look down on the Bosses du Dromadaire and saw people, looking curiously large, passing over them in the descent; and yet the ridge was ever stretching upwards high above us. When the end came at last, as so often happens when the long-expected is suddenly realised, we were taken by surprise. At 3.35 P.M. we stood on the summit of Mont Blanc. Spiritual elation very soon yielded to physical discomfort, for a chill wind cut through us, and in a few minutes we were drinking tea in the Observatory after stumbling down the spiral staircase which, on the telescopic principle appropriate to the place, goes on lengthening out as the Observatory itself sinks deeper and deeper under the snow.

The interior of the Observatory was perhaps not ideal as a view point, but it was warm and the tea was refreshing. At 4 o'clock we were afoot again, starting on the long descent to Chamonix. During the few moments of our halt which were

spent aboveground, only two features of the prospect impressed themselves on my mind. One was Chamonix, our destination, seeming very close at hand in spite of the two-and-a-half miles of vertical height which separated us from it; the other was the heavy gathering of clouds in the west. Those clouds and the change which they portended we now set out to race. We hurried and slid down the snow, stopping once or twice for a backward glance at the summit or to relieve ourselves of extra clothing which was becoming oppressive now that we were warmer; and in two hours we had turned our backs on the Grands Mulets hut and the thoughts of tea with which our hopes had associated it. We had still to find our way through the maze of the Junction and across the tortured ice of the Glacier des Bossons, where there would be no tracks to guide us, and we dared not curtail our small margin of daylight. A rickety ladder constructed of two sapling pines, placed horizontally across a chasm and threatening to turn over bodily as one crossed it gingerly on hands and knees with eyes gazing into space beneath, made one solicitous that the rope should be firmly held. In an hour from the Grands Mulets we were off the glacier and coiling up our rope. We had now only to jog down the path to Chamonix; but not the least exciting part of the day's proceedings was enacted on that path. Though at Pierre Pointue we again called resolution to our aid and passed on without a stop, black darkness and rain overtook us in the woods. Again and again we got off the path, and sometimes the first intimation of our nearness to a tree was conveyed by actual contact with its hard trunk or dripping branches. At 8.55, wet again, but victorious this time, we sought and found once more the friendly shelter of the Restaurant des Gourmets.

So ended our holiday. When day came, cloud and rain filled the air. Nature, foretelling what should happen, had ended the chapter of our impressions where we stood together as comrades in the spacious solitudes of the snow, while the sun sank into gloom beyond the hills; and, as we went on into darkness and the unseen, she wept for my friend, because for him it was ordained that the book of the mountains which he loved had been closed for ever.

CRAMBE REPETITA.

BY A. D. GODLEY.

[Read before the Alpine Club, April 13, 1915.]

I SEEK in vain for any real justification of this paper, for I may as well confess at once that my subject is simply a series of—what are now—ordinary walks. Perhaps in these days when the course of events is compelling us to revise our estimate of so many things, something might be said for a consideration of Alpine expeditions in their primitive and strictly utilitarian aspect,—not as the ascending of a row of spikes up which we painfully crawl, like the ant, only to crawl down again, but as the natural attempt to get from one place to another. On the same principle of a possible return to Nature and the simple life I might perhaps try to justify, to a generation accustomed to find one of its highest satisfactions in the contemplation of moving pictures of itself, the absence of pictorial representations of Nature even in a state of repose. I will not, however, adopt a line of reasoning which might itself savour of subtlety and artificiality. The plain truth is that of the great Swiss passes, and especially the passes about Zermatt, an audience like this has in its own mind far better pictures than any that I could show. It might be permissible for a layman to dilate before a congress of mathematicians on the acknowledged fact that $2 + 2 = 4$; but few would have the courage to demonstrate it on a blackboard, nor have I. Another and perhaps an equally potent reason for my non-employment of slides is that I have not got any.

I must further explain, by way of caution, that nothing sensational is to be expected. I have nothing to say about the Domjoch, or the Nadeljoch, or the Sesiajoch. For one thing, I have not been there. For another, it becomes now necessary to define a pass. It is a route leading from one inhabited or habitable place to another but not necessarily every route that every man may select. When a variety of routes lead from and to the same places it is for the judicious to decide which are in the true sense passes. Though the Theodul lead also to Breuil, yet the Furggenjoch may still be a pass; though the Col Durand lead to Zinal—eventually—yet the Triftjoch, if it had not abolished itself by its own stones, might have still been a pass; but the passage of the Matterhorn between Zermatt and Breuil has never, to my

knowledge, been included in the category of passes. Granted that you want to get to the other side of a row of houses, and that there is a practicable and fairly direct way between (let us say) No. 12 and No. 13, the traveller who should prefer to climb over the roof of No. 12 would not be justified in claiming that his route was a pass because (forsooth) he had not ascended the chimney-pots. Concerning Domjochs and such, let so much have been said.

Nature made peaks (it has been observed) and men made passes. This is an epigram; and like most epigrams, it is neither scientific, nor logical, nor even true. Even a grammarian could demonstrate its absurdity. However, it has this amount of truth in it, that there is more humanity about a pass than a peak. The tops of mountains do not naturally appeal to man. Till lately, they were so little accounted as not to be worth naming. Ancient races, with their truer business instinct, only regarded inclined planes as deserving of names in so far as they served some practical end. The obvious way in which the northern barrier of Italy contributed to human happiness was that it provided pastures for cattle, Alps. Further, it had to be crossed for business reasons, but nobody wanted to go higher than the point of crossing; adjacent peaks, mere gendarmes on the arête, might be entirely ignored: and the pass alone was 'The Mountain,' Mons Jovis, or whatever it pleased you to call it. This was the natural Latin method. The Latins, through whose eyes we see so much of our ancient history, were too sensible to take account of unnecessary things, such as climbing peaks. The cold logic of the South revolts from what is essentially unreasonable. I know that there is a French Alpine Club, and an Italian, and I know that there are brilliant French and Italian mountaineers: but I am not going to let a broad general principle be invalidated by particular instances. The true and real Latin view of Alpine expeditions was expressed by Bompard, when he was roused very early in the morning—at that hour when humanity and truth are least trammelled by conventions,—'What nonsense,' he said, 'the whole thing is!' *Le Mont Blanc—quelle blague!* Only when the Teutonic nations became, in a manner, civilised, did people begin to climb mountains for the mere purpose of getting to the top.

Any business men, then, can understand the instinct that prompts to pass-crossing; there may be substantial reasons; there may be the mere universal desire to travel and see the world. You are in touch with the common wants of humanity;

you need not go about like the collector of peaks to justify your existence. The travelling instinct, which requires for its fullest gratification that there should be definite visible barriers to be crossed—something which at present hides the distance from you—can nowhere be better satisfied than on the great passes which descend into Italy. It is the very essence of change of scene—change accomplished by your own will and your own labour. Not imperceptibly nor by mechanical traction—except, perhaps, the traction of the rope—but in a conscious moment and on your own feet you are brought to where a knife-edge of snow or ice discriminates northern from southern Europe. The traveller may sit on the Arête Blanche of the Schwarzberg Weissthor astride the roof of Europe with one foot in a Latin and the other in a Germanic civilisation; here is in its most concrete and visible form the great barrier which has witnessed so often the passage of armies and of nations; and something of the spirit of his migratory forefathers is upon him as he descends into the valleys of Italy.

When the work on Passes and their relation to humanity (to which *magnum opus* some such reflections as these might form the inadequate Prolegomena) comes to be written, some sort of classification will doubtless be necessary. Simple enumeration of routes will hardly suffice: there must be categories; but what is to be the principle of classification? Some will classify passes autobiographically, as passes which I have crossed and passes which I have not crossed: but this is unscientific and excessively tedious. Other writers will draw a distinction between routes that are historical and routes that are not. This appears at first sight a promising method, if indeed the intention is to divide passes with a past from passes without one. But as the most learned of all Alpinists refuses to call a pass historical because it is only known to have been used by natives, I confess that the word *historical* seems to me better left alone; and our categories must be sought with reference to other characteristics. But while peaks have definite and well-marked characteristics, being for the most part visited in fine weather, passes are various and mutable; it might even be said that like most women (according to the late Mr. Pope), they have no character at all; so dependent is their reputation on external things, the condition of the weather and the want of condition of the mountaineer. On the whole it seems safest to fall back on that element which is always present, and make our classification meteorological: passes being ranked according to the weather in which they have been

or might most appropriately be traversed. I do not say that this method is not open to obvious objections. But as I do not personally intend to arrange Alpine routes in categories (merely suggesting it as a diversion for others), the due estimation of the method and arguments of objectors may be left to the consideration of the judicious.

I am not unaware that a captious critic might urge that if you are to consider passes in relation to weather you might be driven to the conclusion that they should not be crossed at all. For, if the day be fine (he might say), the true Alpinist ought to be climbing a peak; and if it be foul, then he is mad if he goes into the high Alps when he should be at home playing bridge or looking at the hotel barometer. This dilemma may appeal to some; others, more liberal-minded, will allow that there are circumstances when fear of bad weather is overcome by stronger motives, and starvation or satiety will drive a man out of his hotel to seek fresh eggs and pastures new. Were it not that there are depths of triviality to which I do after all hesitate to descend, I might weary the ear of the Club with tales of travel definitely brought about by bad weather, begun, continued, and ended in rain; I might (but do not) relate how a party, almost repelled by storm from the summit of the Theodul, did eventually reach that hut which was once built by a philanthropist working (as he said) for humanity, and where now in the land 'wo die Citronen blühen' you can buy a lemon for three francs; how they descended to Breuil over pastures variegated with wild flowers, and thence crossed the Col de Valcournera to Prarayé: how they passed the Col de Collon in a blizzard: how, having started very early on a moist morning to return from Arolla *via* the Col d'Hérens, they were met at the Col de Bertol by a storm so terrific that even the rocks of the pass were difficult, in spite of the aids with which the S.A.C. endeavours to ensure the permanent overcrowding of the Bertol hut; and how that same day they descended to Sion in weather of which the Noachian deluge was but a faint and inadequate imitation—all this I do not relate; but if I did, it would illustrate the kind of thing that he does who comes to the Alps for sunshine. Yet after all this party had at least seen the Valcournera. On that day, by some strange meteorological freak, the rain was not actually falling. Very fresh and green were the pastures of that most Arcadian valley, very beautiful the blue mountains of Cogne in the distance; it was such a scene as the admirable Tschudi, with emotion severely abbreviated by the limitations of his printer, is in the habit

of describing as ID. (*idyllisch*). And in the descent from the top of the pass to Prarayé there were occasional places where it was quite necessary to proceed with care. Altogether, a delightful pass; and if it had not been raining at Zermatt we should probably never have seen it.

But not only bad weather induces these expeditions. There are times when it is fine, but no weather for peaks: after the storm, for instance, which used to bring a foretaste of winter in the latter part of August. It was after such a revival of the weather (in fact, just after the great and disastrous storm and snowfall of 1904—you will remember how the deficiency of snow in early August was more than compensated by excess in the later part—) that two travellers, of whom I was one, took to ourselves a guide and proposed to cross a low pass of 9000 feet or so from the Simplon Hotel to Saas. The high passes were not in good condition; it was thought that something lower would offer enough snow for our requirements—as indeed was the case. So we walked westwards over the pleasant pastures in the sunshine. But there came a time when the sun no longer shone; we were surrounded by mists, being then, as far as I remember, on or about the snout of a glacier which we judged to descend from the Fletschhorn; and our guide, who was a plain man, none of your Andereggs or Pollingers, frankly confessed that he knew no more of the way than we did. I cannot say that I was surprised. The experience was familiar to me; I had a low standard for guides just then. I had just come from Stein, where the secrets of the mountains had been revealed to us by a leading citizen of the valley (by trade, I believe, a registrar of births and deaths) whose contempt for real dangers was only equalled by his meticulous caution when the peril was purely imaginary. Now let no one disparage good guides, who are a gift from heaven. But given a fine day and an enterprise where the great issues of life and death are not involved, there is something also to be said for bad ones. They are less instructive, but more amusing. When your guide does not know the way, but merely entertains a colourable opinion about it, and of course you don't know it yourself—why, if this doesn't actually produce a feeling of mutual confidence, it begets, what is perhaps even better, a sense of equal brotherhood in face of elemental Nature. Well, we had lost our way; and there was nothing for it but to sit down on the cold ice in the cold mists, and wait for something to turn up; while our leader alternately bewailed the disgrace to his apparently hitherto untarnished reputation and invoked

the protection of heaven. It was as bad as that. Let no one expect hairbreadth adventures. It ended quite tamely. Presently there was a rift in the mists, taking advantage of which we arrived—I would not presume to say at the particular pass of our desires, which may have been the Simeli or the Gamserjoch, but anyhow at a point of passage to the Saas side. Here we realised that our guide's openmindedness was by no means confined to his own native valley. That once left behind, even opinion began to totter on its throne; the party was therefore driven perforce to follow the traveller's last resort, the course of the nearest stream,—which must after all lead somewhere. I have read in poetry somewhere that a brook is the traveller's best companion. It is so, no doubt, on occasion; but not on a mountain-side; the banks of a torrent are usually precipitous, its bed is always damp; and when it comes to a cliff it falls over with a safety that the mere mountaineer cannot imitate. Wearied of the caprices of Nature, we followed Art in the form of a Wasserleitung; and a Wasserleitung is very good at leading water. But it does not lead man,—not with any comfort. The thing needs no description. One balances oneself on the edge; from time to time one falls in; and the Wasserleitung is temporarily and perhaps deservedly dammed. And in time we reached Saas Grund. There was nothing exciting about it; it was just a rough day on the hillside: such a day as one gets when high mountaineering is impossible, but the subalpine or intermediate routes are open to such as are not too proud.

These expeditions tend naturally to group themselves about Saas,—before yet H. G. Wells had begun to make the Mittag-horn a scene for amorous adventures, and the Fabian Society by consequence had migrated in a body to Saas Grund. There was a year when the weather broke while we were in the mid-tide of achievement—that is to say, we had accomplished the Egginergrat, and hung dependent over the plains of Italy from the precipice of the Portjengrat; had sat and shivered for I know not how long of a rainy morning under the highest pine in a vain attempt to get up the Sudlenz (in those days one walked up from Saas Fee very, very early in the morning, instead of sleeping in a luxurious hut). The weather, then, broke; and we being confronted with the alternative of, on one hand, a sport which combined the attraction of lawn tennis and bathing, and on the other, seeing the world—we did in this stress of circumstance walk over the Monte Moro. At Macugnaga the spell of fine weather, which had lasted us

quite from Mattmark, broke again; but in a day or so it was so far reconstituted that the world opened before us anew. I don't know how many people ever now think it worth while to cross the Colle delle Loccie; but it remains in my mind as a pass of unforgettable beauty and some mountaineering interest. There is an unequalled view of the eastern cliff of Monte Rosa in the early morning light as you climb over moraines of Titanic size; later on, séracs drove us to avoid them by taking to very slippery and unpleasant rocks; but in the afternoon we descended to the Pile Alp, and further down to chestnut trees and clear streams, and Alagna. I don't know why we went to Alagna. We might as well have gone on to the Colle d'Olen: it was our shortest way, as we were bound ultimately for the Lysjoch; but we were out to see the world. Anyhow, we slept at Alagna—as far as we were allowed by the distinctly subalpine recreations of persons whom we judged (on the authority of Baedeker) to represent the Italian nobility; the next day we climbed some 9000 feet to the lofty Gnifetti hut, from which it is said that you can see the harbour of Genoa: and so, in a cold proportioned to the 14,000 feet of the pass, over the Lysjoch to Zermatt.

But the great Zermatt passes need no excuses of bad or dubious weather: it would be profane to suggest such a thing. They are ends in themselves; and will always, as the noblest series of Alpine routes, be visited by the feet of the faithful, until man, in the progress of human degeneracy, loses his taste for mountaineering. Leaving out of question the Great Divide between Switzerland and Italy, they separate valleys various in their scenery and interesting even to the most superficial traveller in the characteristics of their inhabitants,—Zermatt as German as any Valais glen can be,—Zinal and Arolla thoroughly French,—Saas with its strong admixture of Italian names and Italian art. To cross any one of them is a first-class expedition: there is not a dull half-hour among them; they are difficult, but only with the legitimate difficulty that is annihilated by skill and long practice. And there is not one that is not in the grand style, like Homer. Wherever you go, foreground and background are alike grandiose; you are everywhere confronted with the giants of the Alps, and tread in the footsteps of the great Alpine explorers.

They are real passes, too, with reason for their existence not only in the eyes of mountaineers. We have done something, no doubt, to diminish their magnitude and remoteness by scattering huts about them, so that one can do them in a series

of comparatively short excursions. Yet a pass, to be great, must have the attribute of length. Ancient philosophers, as I understand, considered size indispensable to true greatness. One can correct this modern depravation, no doubt, by disregarding intervening Mountets and Fluh-Alps and Cabanes Britannia, and going straight on; but this, it may be argued, while it improves the pass, does not improve the traveller; and it may even tend to degrade the character by inducing spiritual pride in works of supererogation. Leaving such points of casuistry, we may confess that the true objective of these routes has been obscured by our turning them into a chaos of holiday excursions. We are tempted to forget that each pass has a separate utility of its own: the Windjoch leads from St. Niklaus to Saas; the Mischabeljoch from Täsch to Saas; the Allalin from Täsch to Mattmark, the Alphubel from Täsch to Saas, the Adler from Zermatt to Mattmark. South and west, I admit of course, that the Furggenjoch and the Col Durand do not serve any practical purpose. But few would wish to abolish them.

Anyone who dips (as I have done) into the history of the Zermatt passes will see at once that it offers problems to the learned. Except of course for the Theodul, very little is certain about their ancient state. Antiquity was sadly incurious about chronicling its new expeditions, and when it did so it sadly lacked topographical exactness: as in the case of Hannibal. In Forbes' day there was a reputed way from the Saas to the St. Niklaus valley, from the Findelen glacier, as he says, north of the Strahlhorn; this sounds like the Adler, which for the rest is a conspicuous pass from the S.W., and might be supposed to tempt early travellers. But Mr. Coolidge says that the Allalin pass is meant, and who would dare to disagree with him? Or, again, the Climber's Guide finds no use for the Schwarzberg Weissthor before 1825. But Mr. Coolidge says it was a pilgrims' route and well known in the sixteenth century. Any researcher may find himself involved in very pretty controversies. When one is assigning marks, a little historical or topographical problem may count for something.

Each has something salient and distinctive to remember it by. The Mischabeljoch has a moraine of which it may be reasonably proud. This is not quite perpendicular (as I wish to speak the truth), nor is it really as sharp as a razor; but it will compete with a paper-cutter. The Allalin and Adler routes to Saas, after their junction, have so many crevasses that the intervening ice is practically negligible. I remember very

well a walk from Saas Fee to Zermatt, when the said crevasses were covered by much snow, and each member of a fairly experienced party fell successively and conscientiously into nearly all of them. It was a safe and simple process: as the leading guide fell into one he was automatically jerked out by the descent of the next man on the rope into a crevasse behind him; so that between us we did all the crevasses. We intended then to cross the Adler. But that pass can be seen from very far off on the Saas side; and there came a time when for all our walking we were apparently no nearer it—and the Allalin beckoned enticingly from our right, and one member of the party remembered at this supreme moment that, whereas he had crossed the Adler, the Allalin would be a new expedition; so we chose the primrose path, and had tea at the Täsch Alp. Years elapsed before I revisited the Adler, and then the crevasses were visible, and also we had slept at the Plattje. Then for the first time I realised the true nature of that remarkable pass. When I first crossed it the snow was deep, and I thought that the story of an icewall was a fond thing vainly invented. But in 1911 every step down had to be hewn in hard ice, and the big crevasse at the bottom was no mean obstacle; we crawled down very, very carefully, our feet on the cold ice and our backs in a blazing sun, exactly repeating the experience of Mr. Justice Wills when he traversed the pass and called it the Col Imseng. In such conditions I do not think anyone would deny the right of the Adler to be called a very fine route. Which of the great passes best satisfies the canons of beauty, far be it from me to decide. Some will praise the magnificent extent and openness of the view from the Alphubel. For myself I have seen no spectacle more impressive than that which we beheld from the summit of the Schwarzberg Weisssthor. This, too, was in 1911, the year of wonderful sunshine; yet even then the cloud-columns of Italy beleaguered the great eastern bastion of the Alps; at our feet the precipice seemed to drop sheer, and the valley of Macugnaga was a crater full to the brim of rolling and shifting masses of vapour. But, far above and far beyond, blue Italian ridges hung like the hills of heaven in the bright morning air. It was a Dantesque view—a circle of the Inferno at our feet, Paradiso in the remote distance. If the pilgrims who are said to have used this sublime route journeying to I know not what shrine—perhaps to the sanctuaries of Saas, perhaps to the holier mountain of Varallo—if they saw, as often they must have seen, such a prospect of cloud and mountain as then met our profaner eyes, it may

well have seemed to their exalted fancy that they descried beyond the chaos and tumult of this present world some vision of eternal peace.

But if passes are to be classified according to merit, that one to which I personally should assign most marks is the Schwarzthor. It is reasonably difficult; the way requires finding: it could not be crossed in all weathers. It satisfies the practical test; if you want to go to Fiéry, there is no other direct route from Zermatt. In fact, its origin is encircled by a halo of utilitarianism. You will remember how Mr. Ball could not at first understand the keen interest taken by Zermatt in his intention of trying the pass, until it was discovered that new possibilities of smuggling were revealing themselves. But these dreams came to nothing, on the experiences of Mr. Ball's guide.

There is nothing petty about the Schwarzthor. Reading the memorable chapter in 'Peaks, Passes, and Glaciers,' I have formerly thought that the illustrations were no better than others which one has learnt to suspect in an age when even the camera, which cannot lie, does occasionally prevaricate. But the grandiose icicles and cornices of Mr. Ball's pictures are nothing but sober truth. Everything is raised to its highest power: the séracs are super-séracs, the schrunds on the Swiss side are wider and deeper than other schrunds, the snow itself is more obstructive than other snows. Further, you can see your pass steadily and see it whole. You can prospect your route from the familiar slopes above the Riffelhorn lake; better still, you can lie there in the sunshine and see spread before you the scenes of your recent heroism.

Our own passage of the Schwarzthor turned out to have been an anniversary study—on August 18—when I subsequently looked up the date of its first crossing. Except for the Riffel-Alp, not much had changed in sixty-eight years. Age had not mellowed the glacier: in fact I cannot but think that had the honoured ghost of John Ball come back that day, with his alpenstock, and his umbrella, and Mathias, he would have found the pass even a tougher job than he did in 1845—all for the want of a proper ice-axe. We first attacked the séracs, as far as I remember, about the middle of the Schwärze glacier. Pretty clearly, there was no way there. That was soon obvious to the naked eye; and the tracks of another party, which had essayed the same route a day or two before and turned aside at the same point, were there to justify us; for we had reason to believe that the said party was not one which would lightly

be turned from its purpose. So we diverged to the left and tried to turn the great schrund and the séracs higher up. No good : there was nothing for it but to work diagonally downwards through the most imposing ice formations till haply a way up might reveal itself. Which presently it did—I never quite remember how. I have an impression of descending along ice-arêtes which sometimes required quite careful going, and as a result of descent finding that in some way not altogether explainable we had got above the main line of obstruction ; wherefore we sat down and took credit to ourselves for perseverance and ingenuity. Needless to say, the credit, if any, was entirely due to the leading guide, Alois Kalbermatten, whom I mention for the sake of honour.

The traveller who has won his way to the top of the Schwärze séracs thinks that an easy stroll lies before him ; the pass looked like that when he prospected from the Riffelhorn slopes. And somehow when one thinks of snow one always imagines it comfortably hard. But many things, as a philosopher has said, turn out contrary to expectation. Had I written a description for the *Daily Mail* I should have said that we sank literally up to our necks at every step. I suppose that would not have been quite true. Nevertheless we did get to the top. From thence John Ball and poor Mathias seem to have begun the descent, as one naturally would, on the Breithorn side of the glacier ; we took what I suppose is the recognised route, to the left, over the shoulder of Pollux. This brings you, by steep ice and a few crevasses where care is necessary, to a kind of step, whence, by traversing first to the right and then slightly to the left over ice and moraine, one arrives at the highest pastures of the Fiéry valley. It is a steep descent, but nowhere difficult. And the alp is repaying when you get there. It is many-fountained, and there are abundant flowers, and the larger air and clearer light tell you that you are in Italy.

The rest of our expedition lacks sublimity. We had meant to return by the Felikjoch, but weather (for in the evening it rained) and the recollection of soft snow deterred us ; so there was nothing for it but to cross the Col des Cimes Blanches to the Theodul, as pretty a walk as a man need have after a fairly hard day. And if anyone says that to pass a night weather-bound in the Theodul hut is not to face the terrors of the Alps, I join issue with him.

Perhaps these simple diversions will not continue to please generations nourished on fiercer excitements ; and the age of

Alpine walks, for Englishmen, may be drawing to its close. In that case, the task of the historian should begin, and contributions, however humble, may assist him. Possibly that is the present chronicler's justification. Anyhow, it is pleasant to recall old days: to feel the satisfaction of the man in Homer's simile, who, having in his prehistoric way travelled in foreign parts, sits at home and says 'There I was, and there.' But I admit that he said it to himself, and had not the impudence to say it to the Alpine Club.

' A CLIMBER IN A FAR COUNTRY.'

BY MALCOLM ROSS.

(Read before the Alpine Club on Tuesday, February 3, 1914.)

THE lecturer began with a brief description of the mountain systems of New Zealand, dealing first with the volcanic belt in the North Island. Pictures were shown of Ruapehu (an extinct volcano and the highest mountain in the thermal zone) and of Ngauruhoe in action sending a column of steam three thousand feet into the air. There was also shown a rather remarkable view of the crater with the party standing on the very brink of the main vent, from which fumes and vapours were continually rising. Recently lava had been seen in the throat of this volcano, and it was thought possible that some day there might be an eruption on a grand scale. Such an eruption, however, would not do as much damage as similar eruptions in the more populous centres in Europe and the East, where towns and villages cluster at the bases and even on the shoulders of volcanic mountains, seeing that in New Zealand the country in the volcanic belt was barren and sparsely settled. From a mountaineering point of view the volcanoes, it was explained, presented no difficulties, but they were decidedly attractive to the climber interested in vulcanology, geology, and botany.

Leaving the volcanic zone, Mr. Ross took his audience on a hurried trip amongst the peaks and through the passes of the South Island in the vicinity of the fiords and the great lakes, where the granite rock-climbing was of quite a different kind from that which the mountaineer obtained on the softer rocks of the higher mountains of the Alpine Chain. Interesting

pictures of Mount Tutoko, Mount Balloon, Mount Mackenzie, and The Remarkables were shown.

It was explained that the Southern Alps extended in a series of ranges from the N. to the extreme S. of the Middle Island. In the S. the ranges were intersected by the splendid fiords on the one side and by the arms of the long, deep lakes on the other. The mountain masses, in some places, fell sheer to the water's edge, and their bases were far below the level of the lakes or of the sea. Many of their lower slopes were densely wooded, while their summits were capped with perpetual snow and ice. In the region of Milford Sound they rose steeply from the water's edge, and their solid and sometimes smooth granite walls seemed uninviting to the foot of the climber. Going further N. there was another fine series of mountains in the region of lakes Wakatipu and Wanaka. Though not high, as heights go in the European Alps or in the Himalaya, they were imposing mountains. Only within comparatively recent years had passes been discovered between the lakes and the sounds, and although these passes did not lead the traveller beyond the sub-Alpine heights, they took him through scenery that was no less remarkable for its beauty than for its grandeur—a fitting introduction to those greater marvels in the heart of the Southern Alps.

Northwards, from Mount Aspiring, at the head of the southern system, the Alps proper extended in an almost unbroken chain along the western side of the Middle Island of New Zealand to where Mount Cook or Aorangi rose, dominating the landscape, and giving an outlook from sea to sea. Here one was amongst the monarchs of the range, and the views were indescribably grand. There was a glorious Alpine panorama stretching N. and S., and, though all the highest mountains had been climbed, there were hundreds of untrodden peaks and passes still awaiting the foot of the climber.

Interesting pictures were shown of the pioneering days when the rivers were unbridged and it took the coach two days from the nearest railway to reach the accommodation house at Mount Cook ; when the Hooker river had to be crossed on a cage slung on a wire rope high above the foaming water ; and when the hardy mountaineer had to make his bed under some overhanging rock, on the hard, uneven surface of an old moraine, or upon the gravel bed of some unexplored river.

The Tasman Glacier—greater than the largest of the European glaciers—was traversed from terminus to source, and some fine views of the ice-field itself and of the mountains

on either side were put upon the screen. Climbs on Haidinger, Elie de Beaumont, De la Bèche, the Minarets, and on the Liebig range were briefly referred to, and the lecturer then proceeded to take his audience with him on the first traverse of Mount Cook, which was, a few years ago, accomplished after one continuous journey of 36 hours. Splendid pictures of the well-known Bivouac Rock, and views from that point looking towards the highest peak of Mount Cook and across the Tasman Valley to the Liebig and Malte Brun ranges, were shown and briefly described. The climb to the highest peak by way of the N.E. Arête was stated to present few, if any, difficulties to the experienced climber, though there was a tedious crossing of a high snow plateau—best done at night—and the ascent of a steep three-thousand feet snow slope that was apt to try the patience of the most patient mountaineer, and even to produce somnolence in those who were mechanically following in the path of the step-cutter. Beyond that there were steep but not difficult rocks and snow arêtes. On the occasion referred to, the highest peak was reached in a little over 13 hours from the Bivouac Rock on the Haast Ridge on the E. side of the range.

The descent—undertaken under especially adverse conditions, the rocks being glazed with ice and coated with recently-fallen snow—was graphically described. After some interesting work on the ice-plastered ridge, a break in the ridge brought the party to a sudden stop; but by bringing the spare rope into requisition and lowering the climbers down one by one the difficulty was left behind. Soon afterwards another almost vertical cliff blocked the way. At the foot of this cliff there was a narrow chimney that fell away from the perpendicular and sloped inwards. On its final 12 feet there were neither hand- nor foot-holds. There was accordingly nothing for it but to unrope again and be lowered down singly. 'Graham,' continued the lecturer, 'lowered me down with one rope, Fyfe and Turner anchoring on the rocks above. For a little way, by clawing at the rock with feet and hands, and by the friction of my body, I was able to descend with some slight amount of dignity. Then, as I reached the part where the chimney sloped inward from the perpendicular, I lost contact with the rocks, and hung suspended, like Mahomet's coffin, between heaven and earth. When, after my brief and more or less graceful gyrations at the end of the rope I found the strain removed from my waist, and footholds and handholds once more actual realities, I made no complaint,

even though the middle finger of my left hand, which had been cut on the sharp rocks, was spurting blood, and dyeing the snow at my feet a beautiful crimson.

'The spot on which I found my feet was not the best of landing-places, for the rock shelved outwards into snow. It was now Peter's turn to descend, so I planted myself as well as I could, and watched the operation. He was a good stone and a half heavier, so there must have been a considerable strain on Fyfe's arms. As he slid off the rocks into the air, his ice-axe caught in the chimney and sent him swinging round. I saw a long body, a swirling mass of arms and legs, and a nice felt hat sailing down on the wind to the Linda Glacier thousands of feet below, and then a somewhat blown but otherwise cool mountaineer, with a little assistance as to where to plant his feet, landed beside me. Peter's descent was so comical that I could not refrain from laughing. Turner was the next man, and Fyfe urged him forward. The rope was fastened round his waist, and he, too, cut a comical figure as he slid off from the perpendicular, clawed at vacancy, and eventually landed beside us. Fyfe's grinning countenance peered over the edge of the cliff above, as if he were enjoying the sport. Sensational as this performance was, especially until a landing-place had been found, a more serious one remained for Fyfe to accomplish. Once more he hitched the double rope over a rock, and scrambled down the precipice. The only rock available was slightly loose, so he had to be very careful at the start in case the rope should slip over the projection. Such experiences are apt to be a little nerve-shattering, and these two sensational descents—especially the latter one—must have taken something out of him. However, he was again equal to the emergency, and, assisted by Graham's long reach as he swung over the last few feet like a pendulum, he was soon beside us in safety.

'We climbed on down the ridge for some time, and eventually, at a quarter to 7 on Wednesday evening, we had left the dreadful arête behind us, and Peter cut steps across a frozen slope that led from Green's Saddle into the long 2000-foot couloir that sloped steeply down to the Hooker Glacier. It was a quarter to 7 on the evening of Wednesday, and, as we had now been going since 11.15 P.M. on Tuesday, or for 19½ hours, we hoped to find the couloir in good order. Our hearts sank as we saw Graham plying his ice-axe. Fyfe shouted to him to endeavour to do without the cutting, and to kick steps; but this was impossible—the slope was frozen hard! The wind was increasing in violence, and it was bitterly cold. There was still the

alternative of cutting down to the Linda Glacier on the eastern side and of a comparatively easy and comfortable descent, out of the wind, to the great plateau, from which we could gain the Glacier Dome, and then descend to the Bivouac Rock by means of our steps of the night before. The matter was mentioned between Fyfe and myself, but we scarcely gave it a second thought, and decided to stick to our original intention to "col" the peak. The word was given to go forward down the couloir, and young Graham, who was leading, treated us to a splendid example of ice-craft and physical endurance as he proceeded to hack a way with his axe down that 2000 feet of frozen slope. It was a narrow, steep gully, varying in width from about fifteen to twenty yards, and flanked on either side by great walls of precipitous rock. Hour after hour went by, and we seemed to be getting no nearer to the foot of the couloir. The wind was cutting keen, and every now and then it would send a shower of broken ice from the precipices above swishing about our ears. In one place we took to the rib of rock in the middle of the couloir. Occasionally the rocks on the left of the couloir were used for hand-grips, thus enabling Graham to cut smaller steps. Turner then began to feel the want of sleep, and he asked me to talk to him to keep him awake which I did with all the cheerful energy I could command for, had he fallen, upon me would have devolved the honour of holding him on the rope.

'A few minutes later, some bits of rock, dislodged, no doubt, through the falling icicles that were broken off by the wind, came whizzing past us, and as Turner immediately cried out "Oh, my head! my head!" I knew that he had been struck and in a moment had driven the handle of my axe into the frozen snow and had hitched the rope around it; while Fyfe, behind me, had already taken a firm stand. Turner, in his account of the accident, says: "We would have been dashed to eternity if I had fallen and upset Graham out of his step while step-cutting, which would have been a very easy matter." Such, however, was not the case, for both Fyfe and I had the rope absolutely taut, and, being well anchored, we could easily have held up three times Turner's weight. As a matter of fact, he could not have fallen a yard. Fortunately the accident was not a serious one. It resolved itself into a scalp wound about three-quarters of an inch long, and Turner, after a few minutes, was able to continue the descent. Had the stone struck Turner on the top of the head, it would undoubtedly have cleft his skull in twain. Luckily it only grazed his head at the base of the skull.

'We had now descended about a thousand feet of the couloir.

The sun had dipped to the rim of the sea, and the western heavens were glorious with colour, heightened by the distant gloom. Almost on a level with us, away beyond Sefton, a bank of flame-coloured cloud stretched seaward from the lesser mountains towards the ocean, and beyond that again was a far-away continent of cloud, sombre and mysterious, as if it were part of another world. The rugged mountains and the valleys and forests of southern Westland were being gripped in the shades of night. A long headland, still thousands of feet below us, on the south-west, stretched itself out into the darkened sea, a thin line of white at its base indicating the tumbling breakers of the Pacific Ocean. Difficult as was our situation, Fyfe and I would find ourselves gazing in contemplation of this mysterious and almost fantastic scene of mountain glory. Turner was concerned mostly with his head, and Peter had to devote his whole attention to the step-cutting.

'We climbed down a rib of rock in the dusk between the lights, and then zigzagged on down the couloir in the steps cut by the never-tiring Graham. Presently the moon rose and bathed the snowy slopes of Stokes and Sefton and other giant mountains in a flood of silver. After the accident we kept closer in to the rocks to evade any falling icicles or stones that might come down the couloir. Graham, anxious, no doubt, to get out of the couloir, was now making the steps rather small, and there was sometimes difficulty in seeing them in the semi-darkness, and in standing in them once they were found; but we got occasional hand-grips on the rocks, so that the danger from a slip was reduced to a minimum. On one occasion I did slip in a bad step; but Fyfe was easily able to hold me on the rope. Down, down, down we went on this apparently never-ending slope. Hour after hour went past, and still the end of the couloir seemed a long way off. Very little was said. Occasionally there would be a request by Turner for me to hold him tight on the rope, or a plaintive cry of "Peter, where are the steps?" I had to cheer the stricken one by repeatedly telling him that there was only another hundred feet or so when there was a thousand or more. I can only hope that the Recording Angel turns his eyes from those in trouble in the High Alps to devote his attention to less aspiring sinners. Else there is a black page in his book to my account for all the lies I told Turner about the length of that couloir between 9 and 12 o'clock that night. However, it is just possible that the end justified the means, and that, after all, there will be an entry to my credit on the other side of the ledger.

' The wind continued bitterly cold, and the shadow of the precipices in the moonlight seemed to fill the head of the valley with gloom. Some lines of Shelley's seemed to fit the situation :

“ The cold ice slept below ;
Above, the cold sky shone ;
And all around,
With a chilling sound,
From caves of ice and fields of snow
The breath of night like death did flow
Beneath the sinking moon.”

' Towards the bottom the couloir broadened out somewhat, and the work was easier. We progressed a little more quickly and at last reached the bergschrund. This schrund, in ordinary seasons a very formidable one, had been often in our minds during the past few weeks, and gave us some concern from the commencement of the descent ; but we reckoned that we could cross it somehow, even if we had to sacrifice an ice-axe and one of the lengths of Alpine rope. The first attempt to find a bridge failed ; but Graham, with a pretty bit of snow-craft, in the uncertain light found a comparatively safe snow bridge, over which we crossed one by one, while the others anchored with their ice-axes and held the rope taut in case the man on the bridge at the time should show an unpraiseworthy desire, by reason of his weight or the rottenness of the snow under him, to explore the unknown depths of the schrund. In a few minutes we were all across in safety, and just after midnight—on Thursday morning—we stepped on to the upper slopes of the Hooker Glacier, and the first crossing of Mount Cook had been safely accomplished !'

Mr. Ross went on to describe how the party threaded their way by lantern light through the broken ice of the Upper Hooker, and after that the weary trudge down the valley to the Hermitage which was reached 36 hours after they had left the bivouac rock on the E. side of the range.

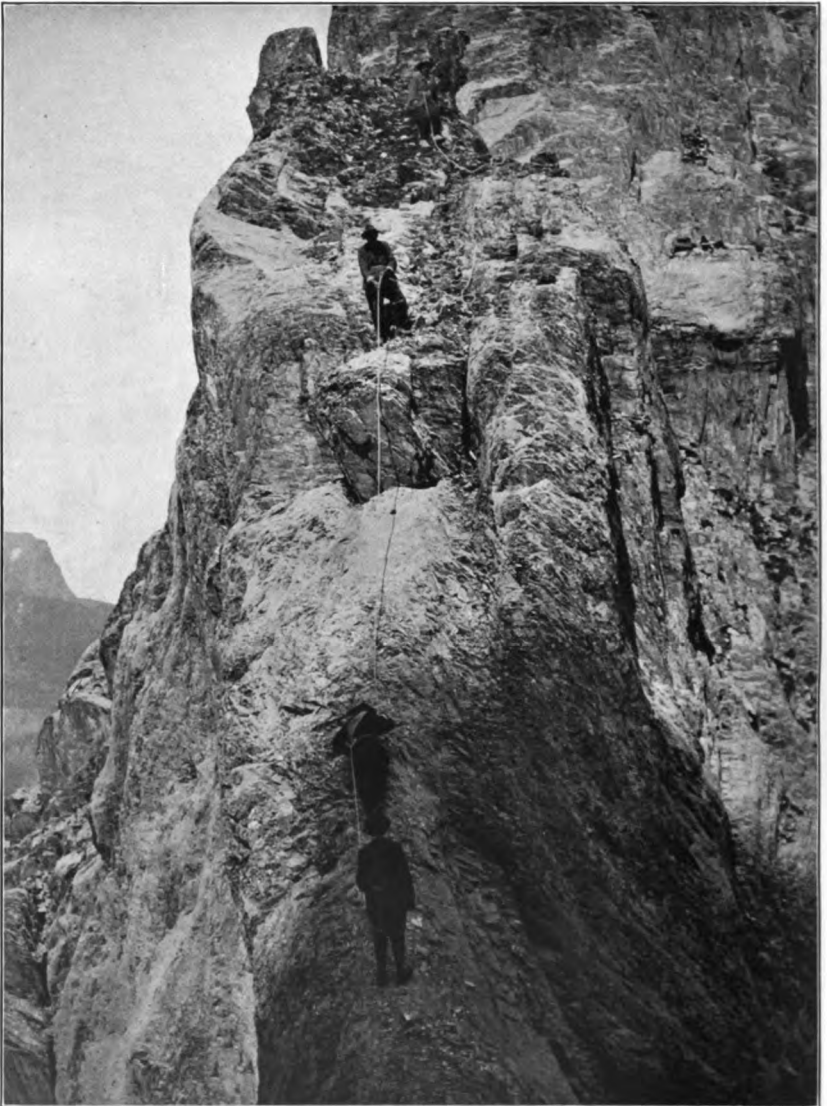
Finally the lecturer, while expressing a just pride in the fact that New Zealanders had taught themselves the craft of mountaineering in a new country and had climbed almost all their highest peaks without guides and without a serious accident, paid a glowing tribute to the work of the Members of the Alpine Club, whose precept and example they had so carefully followed. He also eulogized the splendid pioneering work done by the Rev. W. S. Green, the father of Alpine climbing in New Zealand.

THE ALPINE CLUB PHOTOGRAPHIC EXHIBITION.

THE Photographic Exhibition of May 1915 fell in a very direct fashion under the all-pervading influence of the war, for the summer season of the preceding year ended before it had well begun, and thus the usual source of novelties was dried up. However, the Committee courageously decided to hold the exhibition as usual and to admit old exhibits provided they had not appeared on the Club walls during the last five years. How far exhibitors availed themselves of this liberty we are not in a position to state; no doubt a considerable number did so, while others had recourse to their stores of old negatives. Those must have been few indeed who were able to display pictures taken in the Alps in the summer of 1914. In the result the course taken by the Committee was amply justified; the number of photographs fell slightly, but only slightly, below the average of recent years; the exhibition was a varied one, well up to the standard to which we are accustomed, and attracted a large number of interested visitors. Mr. Spencer once more deserves the thanks of the Club as organiser in chief, and is to be congratulated on having so successfully exercised his abilities in difficult circumstances.

The most prominent objects which met the eye on entering the room were four enlargements of unusual size, sent by Mr. C. F. Meade, of scenes in the Garhwal Himalaya; he also showed an extremely interesting view of 'the 24,000 ft. peak' taken from a camp at 20,000 ft. on Kamet. Dr. Kellas, whose Himalayan tour last year was cut short, managed to bring back three striking views of the S. face of Nanga Parbat. These were the only contributions of much importance outside the Alps. Japan was represented by one or two small views and some interesting lantern-slides from the Rev. Walter Weston, the Pyrenees by Mr. Barnes, the Rockies by Mr. Mumm, and an exquisite view of the snowy crest of Mount Resplendent taken by Mr. Byron Harmon, the official photographer of the Alpine Club of Canada. Mr. Woolley's solitary exhibit, a charmingly picturesque scene in the Lofotens, was the only Norwegian one. The rest of the exhibition consisted mainly of views, familiar and otherwise, from the old European playground.

Our photographers are pronounced centrists, more so than our climbers. The giant peaks and pinnacles and vast aggregates of snow and ice in the principal ranges exert a magnetism which seems to be irresistible, and season after season they devote the larger part of their energies to the Mont Blanc chain, Dauphiné, and the Great Pennine peaks. This does not always hold good of the Oberland, which, however, this year was better represented than usual. Probably the special circumstances of the exhibition accentuated this tendency, and fully four-fifths of the Alpine scenes shown belong to the four great ranges above-mentioned. Eight or nine Dolomite



G. D. R. Tucker, photo.

Swan Electric Engraving Co., Ltd.

**CASTOR SADDLE. STARTING THE ASCENT OF CASTOR,
ENGELHORN GROUP.**

(A. C. Photographic Exhibition, May, 1915.)

views, specially interesting to cragsmen, by Guido Rey and Leone Sinigaglia, were lent by Mr. Fisher Unwin, and constituted about half of the remainder.

The outstanding artistic feature in the exhibition consisted in the efforts, often very daring ones, after atmospheric and cloud effects. This characteristic was very marked in the case of Mr. Done, whose six views attained a very high level of excellence, and successes in the same direction were gained by several others, notably Sir Alexander Kennedy, Mr. Spencer, and Mr. Thurston Holland (the sky in his 'Oberland from the Pigne d'Arolla' was something to remember). The most audacious of these efforts was made by Miss Venables, and perhaps the most brilliant achievement of all was accomplished by Mr. E. R. Taylor in his 'Bad weather coming up on the Mer de Glace'—another solitary exhibit. Mr. F. N. Ellis, Mr. Holmes, and Dr. Williamson are all, like Mr. Done, photographers with a strongly marked individuality, and each of them sent characteristic contributions, among which Mr. Holmes's 'Pelvoux and Pic Sans Nom' and Dr. Williamson's 'From the Summit of the Lauterbrunnen Breithorn' may be singled out as specially happy specimens of their respective styles.

Of the other leading contributors the Rev. A. E. Murray and Mr. Morrish gave us a great variety both in subject and treatment (the latter's winter scene near Gsteig was very pleasing, and his 'Morgenhorn' curiously effective); Mr. Dawson showed a remarkably successful Matterhorn from a rather unusual angle, and Mr. E. G. Oliver presented some of the wildest scenes in the Alps, including a very striking view of the 'Coup de Sabre.' Mr. G. D. R. Tucker sent four pictures all bearing the same title, 'On Oberland Rocks,' of one of which we are inclined to say that it is the best representation we have ever seen of people in the very act of climbing; they seem to be actually moving, and quite unconscious that they are within range of a camera. This picture furnished a topographical problem, and its exact locality was the subject of much inconclusive discussion.

Among Mr. Quincey's exhibits were three dainty studies of spring blossom, with the Dent du Midi and other peaks showing faintly in the background; these were much admired, as were two exquisite little winter scenes by Mr. Elliott Peel. Miss Walter devoted herself mainly to subalpine subjects, and was joined here by the Rev. A. E. Murray with a charming view of the village of Tenda, and by Mr. Spencer with the Saas Fee Chapel and a picturesque 'bit' in Courmayeur, while Mrs. Eaton's varied contributions included a picture of La Grave which came as a surprise to those who had not seen that village since the eighties.

Of the remaining Alpine scenes it is not possible to do more than refer briefly to Mr. Douglas Murray's fine views from the summit of the Fletschhorn, and the good work of Miss H. F. Margaret King and Miss Sophie Nicholls among the ladies. But we cannot forbear

to mention three more items of unusual interest: a really wonderful moonlight scene in Chamonix by the late Gabriel Loppé, a startlingly vivid portrait of Alexander Burgener lent by Captain Farrar, and another, taken many years ago by Mr. Wynnard Hooper, of Melchior and Andreas Anderegg.

THE ALPINE CLUB LIBRARY.

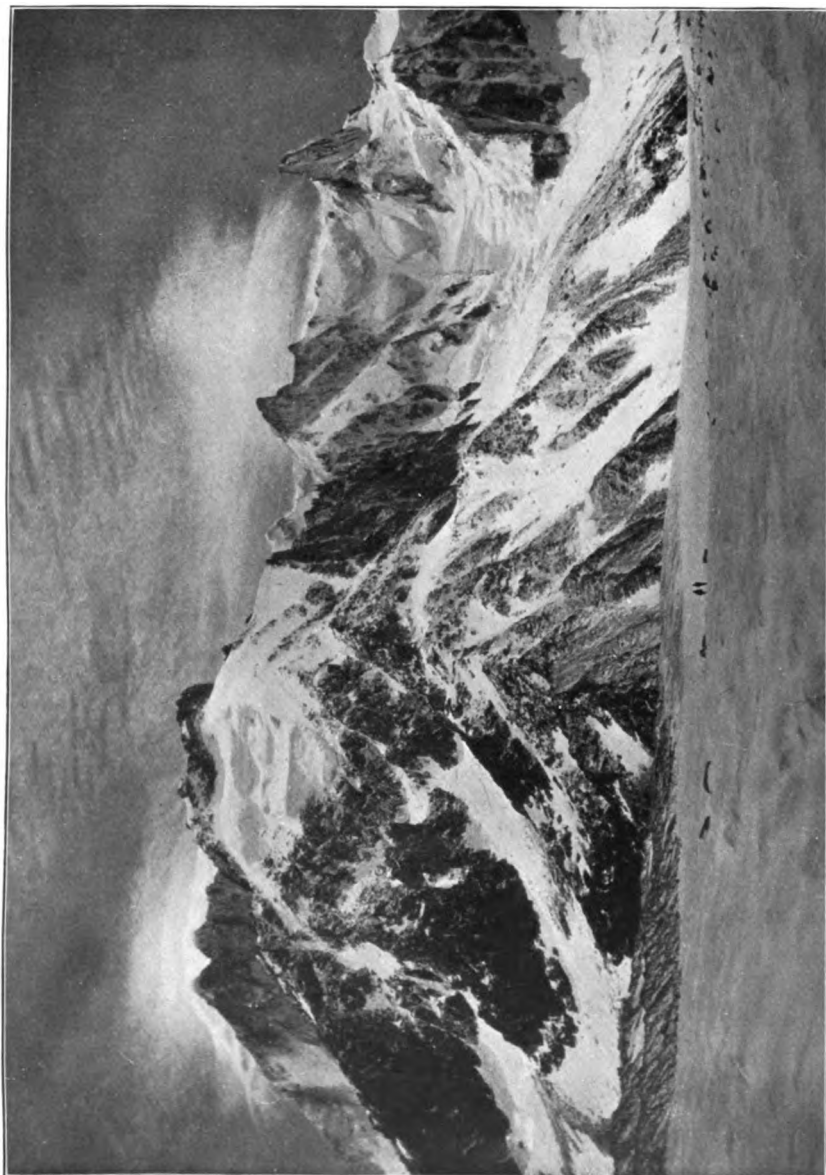
The following works have been added to the Library since April:—

Publications of Clubs.

- C.A.S. Chaux-de-Fonds.** Bulletin annuel No. 23. 1914
8½ × 5½ : pp. 86.
- S.A.C. Basel.** Jahresbericht pro 1914. Basel, Birkhäuser & Dübi, 1915
9 × 6 : pp. 40.
Mention is made of some new ascents by G. Miescher and also by C. Egger in the Caucasus.
- The Sierra Club Bulletin.** Vol. ix. San Francisco, 1913–1915
9½ × 6½ : pp. vii, 330 : maps, plates.
Among the articles are the following:—
W. E. Colby, Milestone Mountain and a new King's-Kern pass.
L. Nettleton, The Mountaineers' winter outing on Mt. Rainier.
V. L. Kellogg, Butterflies on mountain summits.
A. McAdie, Mt. Rainier or Mt. Tacoma—which?
John Muir, Tehipite Valley.
J. N. LeConte, Scrambles about Yosemite.
M. R. Parsons, Through the Olympics with the Mountaineers.
W. L. Jepson, First across the Sierra Nevada.
With portrait of Capt. J. R. Walker.
John Muir, Studies in the Sierra.
Reprinted from *Overland Monthly* May 1874.
M. R. Parsons, Pioneering in the Southern Selkirks.
W. L. Huber, The North Palisade Glacier.
A. E. Phoutrides, Mt. Parnassus.
- Unione Alpinistica Torre Pellice.** Bollettino Sociale 1915. 1915
6 × 4 : pp. 16.

New Books, etc.

- Brooks, Alfred H.** Mountain exploration in Alaska. Alpina americana, no. 3.
13½ × 10½ : pp. 22, map, plates Philadelphia, American A.C. 1914
A very finely illustrated history of mountaineering and description concerning Alaska.
- Calciati, Cesare.** Esplorazione delle Valli Kondus e Husheo nel Karakoram Sud-orientale. Reprinted from Boll. R. Soc. geogr. Roma, fasc. 9–10.
9½ × 6 : pp. 39 : map, ill. 1914
- Coolidge, W. A. B.** Die älteste Schutzhütte im Berner Oberland. Ein Beitrag zur Geschichte der bernischen Touristik. Jubiläumsschrift.
9 × 6½ : pp. iii, 77 : plate. Bern, Grunau, 1915
- Daly, Reginald Aldworth.** Geology of the North American Cordillera at the forty-ninth parallel. Canada, Depart. of Mines, Memoir no. 38. Parts 1–2. Ottawa, Govern. Print. Bureau, 1912
9½ × 6½ : pp. xxvii, 546 : xxvii, 547–840 : plates.
— Part 3.
17 maps and 3 plates.



E. Reginald Taylor, photo.

Swan Electric Engraving Co., Ltd.

BAD WEATHER COMING UP ON THE MER DE GLACE.

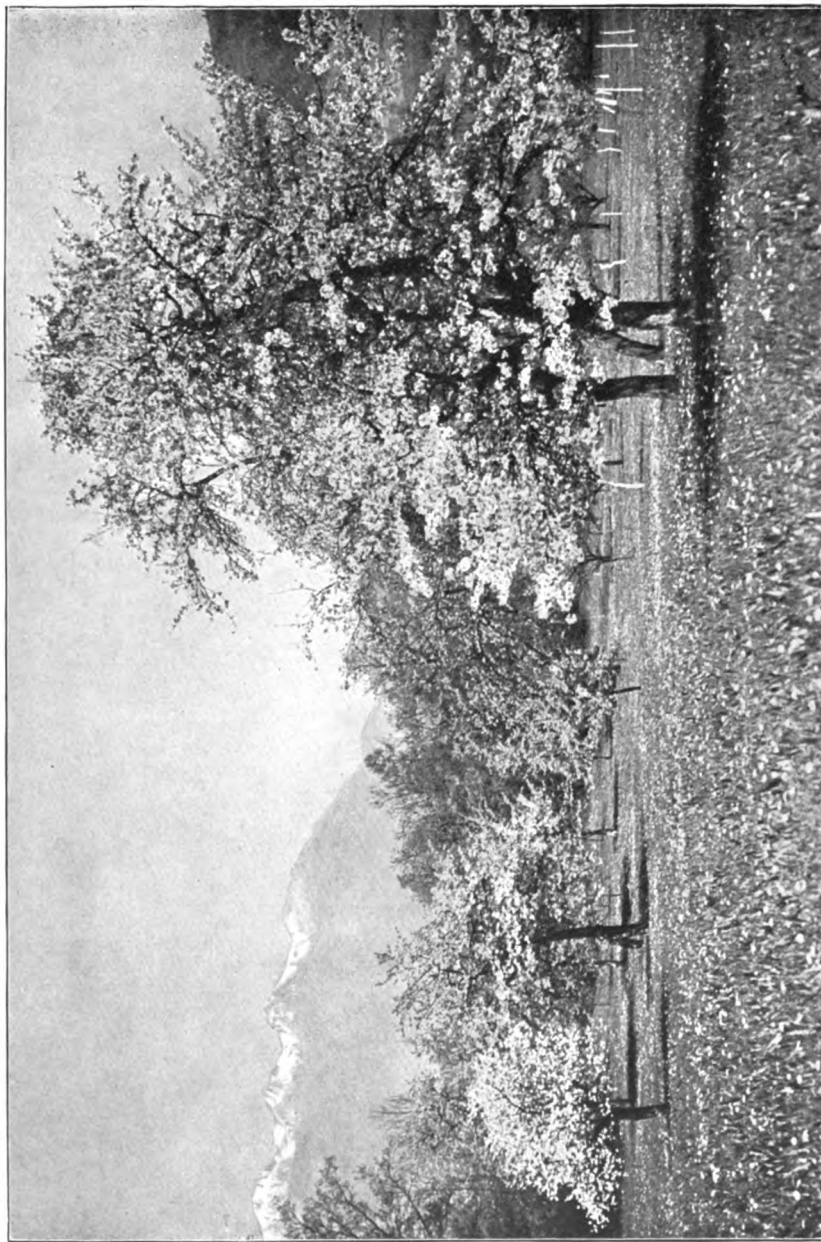
(A. C. Photographic Exhibition, May, 1915.)

- De Filippi.** Spedizione asiatica. Rendiconto finanziario. In Boll. R. Soc. geogr. Roma, ser. 5, vol. 4, num. 4. 1 Aprile 1915
 $9\frac{1}{2} \times 6$: pp. 354-364.
- The Geographical Journal.** Vols. 44 and 45. 1914, 1915
 $9\frac{1}{2} \times 6\frac{1}{2}$: pp. viii, 656: viii, 590: maps, ill.
 Among the articles are the following:
- 1914: July. Sir Aurel Stein's expedition in Central Asia.
 Oct. Capt. F. M. Bailey, Upper Brahmaputra.
 D. Carruthers, Kundelun Mountains, Mongolia.
 Dec. Dr. De Filippi's Asiatic expedition.
- 1915: Mar. H. Raeburn, Adai-Khokh group.
 F. De Filippi's Asiatic expedition.
 G. Isachsen, Spitsbergen.
 May. Sir Aurel Stein's expedition in Central Asia.
 June. J. W. Gregory, Suess's classification of Eurasian mountains.
- Giannitrapani, Luigi.** La Savoia, monografia geografica. In Boll. R. Soc. geogr. Roma, ser. 5, vol. 4, num. 3. 1 Marzo, 1915
 $9\frac{1}{2} \times 6$: pp. 227-276: ill.
- Hyde, Walter Woodburn.** The mountains of Greece. In Bull. Geogr. Soc. Philadelphia, vol. 13 no. 2. April 1915
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- Inclan, Suarez.** Los Picos de Europa y de Tres Aguas: su hidrografia. In Bol. R. Soc. geogr. Madrid, t. xi, no. 9. Septiembre 1914
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- Keen, Dora.** Studying the Alaskan glaciers. In Bull. Geogr. Soc. Philadelphia, vol. 13 no. 2. April 1915
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- Myrtil, Georges.** Autour du Mont-Blanc. Un Don Quichotte ignoré. Le guide Marie Couttet, dit "Moutelet." In Savoyard de Paris, 18me année, no. 31. 2 août 1913
 25×18 : pp. 1-2: ill.
- Norway.** A guide to Selected Health Resorts and Hotels in Norway. London, Cook [1915]
 $7 \times 4\frac{1}{2}$: map, ill.
- Oseki, K.** Some notes on glacial phenomena in the North-Japanese Alps. In Scot. Geogr. Mag. Edinburgh, vol. 31, no. 3. March 1915
 9×6 : pp. 113-121: ill.
- Pyrénées.** Les Pyrénées de Luchon à la côte basque. Livret-guide du touriste. Paris, Thioliér, 1914
 $8 \times 3\frac{1}{2}$: pp. 52: maps, ill.
- Ronehetti, Vittorio.** Na Uilpata-Tau iz dolinui Tzei. Moskva, Kushnerev, 1915
 $8 \times 5\frac{1}{2}$: pp. 16: plates.
- Torras, César August.** Pireneu Catala. Guia itinerari. Vall de Ribes, altes valls del Fresor. Centre excurs. de Catalunya. Barcelona, Sabadell, 1914
 $7\frac{1}{2} \times 4\frac{1}{2}$: pp. xv, 231: map, ill.
- Vanni, Manfredo.** L'Elvo. Note idrografiche e morfologiche del Biellese. In Boll. Soc. Geogr. Roma, ser. 5, vol. 4, num. 4. 1 Aprile 1915
 $9\frac{1}{2} \times 6$: pp. 385-416: ill.
- Wagner, Albert.** Skisport. Ein Handbüchlein für Skiläufer und solche die es werden wollen. 3. Aufl. Zürich, Bürgi, 1915. Fr. 1
 8×5 : pp. 64: ill.

Older Books.

- Badin, Adolphe.** Grottes et cavernes. Bibliothèque des merveilles. 2me édition. Paris, Hachette, 1870
 $7\frac{1}{2} \times 5$: pp. 328: ill.
- Clarke, James.** A survey of the lakes of Cumberland, Westmorland, and Lancashire: together with an account, Historical, Topographical, and Descriptive of the adjacent country.
 Printed for the author, and sold by him at Penrith, Cumberland:
 18×11 : pp. xlii, 190: maps London, Robson etc. 1786

- Coulter, John M., and Nelson, Aven.** New manual of botany of the central Rocky Mountains. New York, etc. American Book Co. (1907). 10/-
8½ × 5¼ : pp. 646.
- Dunn, Robert.** Conquering our greatest volcano. The first ascent of Mount Wrangel, Alaska. In Harper's Monthly Mag. vol. 118 : no. 706.
9½ × 6½ : pp. 497-509 : ill. March 1909
- Gilpin, Rev. William.** Observations, relative chiefly to picturesque beauty, Made in the Year 1772, On several Parts of England; particularly the mountains, and lakes of Cumberland, and Westmoreland.
London, Blamire, 1786
2 vols, 8½ × 5¼ : pp. (lv) 230 : 268 : maps, tinted lithographs.
- Havergal, F. R.** Swiss letters and alpine poems. London, Nisbet, 1882
8 × 5½ : pp. vii, 356 : chromolith. plates.
- Hoppe-Seiyler, F.** Ueber die Bildung von Dolomit. In Zeits. d. deutsch. geol. Ges. 27. Bd. Berlin, 1875
8½ × 5½ : pp. 495-530
- Ice Sports** by T. A. Cook, M. Hill, etc. The Isthmian Library.
7½ × 5 : pp. viii, 335 : plates. London, etc. Ward, Lock, 1901
- Lake District, England.** Volume of views with extracted letterpress and MS. : plates by Allom, Aspland, etc. 1860
8½ × 5½ : about 120 plates.
- Leighton, John M.** The lakes of Scotland, a series of views—from paintings taken expressly for the work by John Fleming. With historical and descriptive illustrations by John M. Leighton.
Glasgow, Swan : London, Longmans, etc. 1834
10½ × 8¼ : pp. xii, 223 : 52 steel-plates.
- Loretz, H.** Einige Petrefacten der alpinen Trias aus den Südalpen. In Zeits. d. deutsch. geol. Ges. 27. Bd. Berlin, 1875
8½ × 5½ : pp. 784-841 : plates.
- Lovett, Richard :** edited by. Welsh Pictures Drawn with Pen and Pencil.
11 × 7½ : pp. 192 : ill. London, R.T.S. [1892]
- Norway.** A Norwegian Ramble Among the Fjords, Fjelds, Mountains and Glaciers. By One of the Ramblers. New York and London, Putnam, 1904
5 × 3½ : pp. xi, 232 : plates.
- (P)[alassou, Abbé Pierre Bernard.]** Essai sur la minéralogie des Monts-Pyrénées ; suivi d'un Catalogue des mines observés dans cette chaîne de Montagnes.
10 × 7½ : pp. xx, 346 : maps, plates. Paris, Didot, etc. 1781
- Reade, T. Mellard.** The origin of mountain ranges.
8½ × 5½ : pp. xviii, 359 : ill. London, Taylor and Francis, 1886
- Reiss, W.** Bericht über eine Reise nach dem Quilotoa und dem Cerro hermoso in den ecuadorischen Cordilleren. In Zeits. d. Deutsch. geol. Ges. Berlin, 27. Bd. 1875
8½ × 5½ : pp. 274-294.
- Roberts, Emma.** Hindostan its landscapes, palaces, temples, tombs; The Shores of the Red Sea; and the sublime and romantic scenery of the Himalaya mountains illustrated in a series of views drawn by Turner, Stanfield, Prout, Cattermole, Roberts, Allom, etc. from original sketches by Commander Robt. Elliot, R.N., and Lieut. Geo. Francis White. With descriptions by Emma Roberts. London, Fisher [c. 1836]
2 vols., 10½ × 8¼ : pp. 128 : 104 : 99 steelplates.
- Ross, Martin and Somerville, E. CE.** Beggars on horseback. A riding tour in North Wales. Edinburgh and London, Blackwood, 1895
7½ × 5 : pp. vi, 186 : ill.
- Smith, Alexander.** A summer in Skye. Edinburgh, Mitchell, 1880
7¼ × 5 : pp. (iii) 570 : col. frontispiece.
- Soler y Santalo, Juli.** Alts Pireneus catalans. La Vall d'Aran. Guia monografica de la Comarca. (Centre Excurs. de Catalunya.)
7 × 4½ : pp. 403 : maps, plates. Barcelona, Tip. L'Avenç, 1906
- Starke, Mariana.** Information and directions for travellers on the continent.
7th edition, thoroughly revised and corrected, with considerable additions,



E. de Q. Quincey, photo.

SPRING IN THE PAYS DE VAUD.
(A. C. Photographic Exhibition, May, 1915.)

Swan Electric Engraving Co., Ltd.

- made during a recent expensive journey undertaken by the author, with a view to render this work as perfect as possible. London, Murray, 1829
 $7\frac{1}{2} \times 4\frac{1}{2}$: pp. 615.
- Switzerland.** Gallery of the celebrated landscapes of Switzerland.
 Zurich, Preuss: London, Rothe [1880]
 $10\frac{1}{2} \times 6\frac{1}{2}$: 100 photographs with letterpress.
- Topham, W. F.** The lakes of England. Illustrated with eighteen coloured etchings.
 London, Allman, 1869
 $8 \times 6\frac{1}{2}$: pp. 38: col. plates.
- v. Tribolet, Maurice.** Geologie der Morgenberghornkette und der angrenzenden Flysch- und Gypsregion am Thunorsee. In Zeits. d. deutsch. geol. Ges. Berlin, 27. Bd. 1875
 $8\frac{1}{2} \times 5\frac{1}{2}$: pp. 1-29: plate.
- Tschudi, J. J. v.** Travels in Peru, during the years 1838-1842, on the coast, in the sierra, across the Cordilleras and the Andes, into the primeval forests.
 $8\frac{3}{4} \times 5\frac{1}{2}$: pp. xii, 506: frontispiece. London, Bogue, 1857
- Vidal i Riba, Eduard.** El Montseny. Guia monografica della regio. Centre excurs. de Catalunya. Barcelona, Tip. L'Àvenç, 1912
 $6\frac{1}{2} \times 4\frac{1}{4}$: pp. 157: map, plates.
- Walton, Elijah.** The peaks and valleys of the Alps by Elijah Walton, with descriptive text by T. G. Bonney.
 London: Original Subscription Edition, reissued by Sampson Low, 1868
 22×14 : pp. 42: 21 col. plates.

Items.

- 4 coloured plates from water-colour sketches of the Jungfrau, the Wetterhorn, Engelberg and Mürren: advertisements of the 'summit' goods of Messrs. Austin Reed, London. Excellent views. 1915.

ALPINE NOTES.

'BALL'S ALPINE GUIDE.' VOL. I. THE WESTERN ALPS.—Copies of the new edition (1898) of this work, price 12s. net, can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART I.—A new edition (1907) of this portion of 'The Alpine Guide,' by the late John Ball, F.R.S., President of the Alpine Club, reconstructed and revised on behalf of the Alpine Club under the general editorship of A. V. Valentine-Richards, Fellow of Christ's College, Cambridge, is now ready, and can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C. It includes those portions of Switzerland to the N. of the Rhône and Rhine valleys. Price 6s. 6d.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART II.—A new edition (1911) of this portion of 'The Alpine Guide,' by the late John Ball, F.R.S., President of the Alpine Club, reconstructed and revised on behalf of the Alpine Club under the general editorship of the Rev. George Broke, is now ready, and can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C. It includes 'those Alpine portions of Switzerland, Italy, and Austria which lie S. and

E. of the Rhône and Rhine, S. of the Arlberg, and W. of the Adige.' Price 7s. 6d.

THE ALPINE CLUB OBITUARY.—Battye, H. M. (1914); Beaumont, F. M. (1877); Thorp, P. H. (1903); Werner, C. A. (1906).

CORRIGENDA.—'A.J.' xxviii.

In the plate opposite p. 134 for *Skatikom* read *Karagom East*.

'A.J.' xxix.

P. 113, note 2, add in line 2 'to the E. and N.'

P. 115, note 3, should read 'This is *not* the great couloir . . .' and add 'What is meant is the couloir Perazzi shown on the marked illustration, p. 128.'

P. 125, footnote 9. Hans Knubel was killed in the *next* year.

P. 128, note 2, for *Carugat* read *Carugati*. For particulars see 'Rivista C.A.I.' 1915, pp. 111-2.

P. 133, line 1, read *Gspaltenhorn*.

P. 135, 6 lines from bottom, read *Chapons de Bresse*.

P. 137, footnote 5, line 2, read *to one another*.

P. 138, footnote 7. Route No. 20 brings you to the Valsesia hut, whence route 9-9-12 is followed to the Northern shoulder of the Parrot *over which the Sesiajoch leads*. The depression marked in the illustration p. 128 'Colle Sesia' is, as stated, not crossed. In this illustration there are misprints: *Alagua* for *Alagna* and *Guifetti* for *Gnifetti*.

P. 148. The photograph of Vologata is by *Mr. J. R. Young*.

P. 171, line 10 from bottom, read *Meije* for *Maye* and *Col du Clot des Cavales*.

P. 187. Sir Edward Davidson is good enough to point out that the *second* ascent of the Petit Dru was made on August 6, 1883, by Mr. J. Walker Hartley and the two Reys, ('A.J.' xvi. 293 seq.), and that the *third* ascent was made in August 28, 1884, by Mr. J. T. van Rensselaer with François Simond and Edouard Cupelin ('A.J.' xii. 128).

Gaspard was one of the guides of the *fourth* ascent made on August 2, 1885, by M. Henri Brulle and the Comte Denys de Champeaux ('A.J.' xiii. 459).

MEMORIAL HUT TO THE LATE S. L. KING, A.C., IN NEW ZEALAND.—

NORTH IRISH HORSE, 54TH DIVISION,
HEMEL HEMPSTEAD, July 21, 1915.

DEAR SIR,—We are erecting a hut in New Zealand to the memory of Sydney Locke King, A.C., and his two New Zealand guides, D. Thomson and J. Richmond, who were overwhelmed by a huge avalanche on the upper Linda Glacier after making the ascent of Mt. Cook. This sad and absolutely unavoidable accident on February 22, 1914, is the only fatal accident we have had amongst climbers in New Zealand above the snow line.

The hut is to have two rooms with eight bunks, and is to be erected

on the Haast Ridge close to Green's historic bivouac about 4000 feet above the Tasman Glacier. The ridge is very steep and rotten, and only those who have toiled up and down it with heavy swags will be able to realise what a joy a staunch hut will be with comfortable bunks and dry blankets to return to after being caught high up in the torrents of rain so characteristic of the fickle New Zealand weather.

We have practically all the funds we require, but I am sending this letter to the JOURNAL in case there are any friends of Kings who would care to send a small subscription.

Donations may be sent at once to me or else to A. F. Wright, 11 Hart Street, Roslyn, Dunedin, N.Z.—the latter might be best as we may go to the Front at any moment now.

Yours truly,

J. R. DENNISTOUN.

THE FRENCH ALPS IN 1915.—Full details as to the inns open, and the guides available at the various centres in the French Alps, as well as information with regard to automobile services, will be found in 'La Montagne' for April to June (published as one number) 1915.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, W., on Tuesday, April 13, 1915, at 8.30 P.M., the Rt. Hon. Lord Justice Pickford, *President*, in the chair.

Major Bernard Head and Mr. Herbert O. Frind were balloted for and elected members of the Club.

The PRESIDENT said: I have to call the attention of the Club to the deaths of two very old members.

Mr. William Grylls Adams was elected a member of the Club in 1864. He was Emeritus Professor of Natural Philosophy and Astronomy in King's College, London, and formerly Fellow of St. John's College, Cambridge. He was born in 1836 so that he has lived to a good old age. He was a distinguished man, though not so distinguished as his elder brother John Couch Adams, the famous discoverer of the planet Neptune.

The other member is Mr. J. H. Fox, who was elected in 1859. He preserved his vitality for many years, for in the account of his life which I have had put into my hands, I see that he played hockey at the age of seventy-two, and therefore was a testimony to the general good effects of mountaineering. I do not think that he was very well known to the majority of the present members of the Club, as he was a man of eighty, but he will be remembered as the father of another of our former members, Mr. Henry Fox,

who met his death in the Caucasus with the late Mr. Donkin, many years ago.

Mr. A. D. GODLEY then read a Paper entitled 'Crambe Repetita.'

The PRESIDENT invited discussion on the Paper.

Sir EDWARD DAVIDSON said: I have risen to try and start a discussion, and more particularly to see whether I cannot induce my friend in khaki at my side here, Mr. Wherry, to give us his views on the passes round Zermatt, with which he is so well acquainted.

I once had the privilege, and it is a privilege that has been accorded to few, of seeing Mr. Wherry's travelling copy of the S.A.C. map of the district round Zermatt and Saas. At first I thought it must be a chart of the venous circulation of the human body, as there were so many red lines meandering over its surface—there was not a single inch that was not marked with red lines—and on looking at it more closely I discovered that every one of these red lines represented one of Mr. Wherry's routes across the peaks, passes, and glaciers depicted on the map.

Most of the passes described in Mr. Godley's Paper are comparatively well known. There is, however, one which is but seldom crossed, although its ridge is not infrequently reached from the Zermatt side, and that is the Schwarzthor. The Val d'Ayas, however, into which the pass descends on the Italian side, is one of the most recondite, romantic, and beautiful valleys in the Alps; one seems there to be quite alone with nature. I vividly recall descending it a good many years ago, when practically every kind of game to be found in the Alps was to be seen there: chamois, marmot, blue hare, blackcock, and ptarmigan. We also saw numerous hawks, an eagle, and many specimens of the weasel tribe, including a very large polecat ('fouine').

Unfortunately on the occasion of my last visit it was rather late in the season, and we therefore did not see the flowers at their best, but earlier in the year the floral beauty of the valley is remarkable. I have often wondered why this valley is so seldom visited. Most of the passes which have been mentioned by Mr. Godley are familiar to us all, but this particular pass is not so well known, especially on its Italian side, and I can most cordially recommend it to my brother members.

Mr. G. E. WHERRY said: It is really a shame that I should have to stand up before the Club and make remarks, as has been suggested, upon the passes which have been mentioned in the Paper to-night, and which I consider are all too well known to need any; but I should like to offer my tribute to Mr. Godley as the reader of the Paper, and I should also like to offer tribute to him as a companion in the Alps, not only for the Alpine knowledge with which he has illustrated the views he has brought to our minds, but also for his unflinching humour.

I remember on one occasion that I mentioned to him that ladies

of Professor Giles' party had been benighted on the Gorner Glacier. The reply came quickly—'Yes, they very nearly were goners' (Gorners). And again, when we went into the valley of Saas where the great and prosperous Supersaxo lived, his remark that it would be more appropriate to call him 'Supertaxo.' Those of us who were with him will remember the occasion when, after a hard walk before dinner, when we were nearing the hotel, someone remarked on hearing the dinner bell, 'That's the tocsin of the soul.' 'No,' said Mr. Godley, 'that's the first bell, the ante-tocsin' (Anti-Toxin). I must ask you to forgive me for offering these remarks, but I am glad of the opportunity of offering my thanks to the reader, and I think we may fairly say that, if put in terms of drink, it was not barley water, but a champagne Paper.

PROFESSOR G. G. RAMSAY said: All Scotchmen are lovers of the hills, and are by nature climbers. Some of our English friends unkindly say that we are also climbers in a less worthy sense, always anxious to get on top of something or somebody. Anyhow, as a mountain lover, I have listened with delight to Mr. Godley's Paper. I commend him for having gone to the Classics for his title; though I am bound to say that I never heard a classical phrase more infelicitously applied. To apply the term 'stale cabbage' to a Paper full of freshness and originality, and written with all Mr. Godley's charm of language, is what no one who has listened to it can permit. We are most grateful to Mr. Godley for having given us a paper so out of the common. For myself, I was particularly pleased to hear his championship of passes. Besides the historical associations which they may have, and the charm of variety in passing from one kind of valley to another, there is always a sense of exploration about a pass; it seems to reveal to you in a special way the anatomical structure of a mountain region. Still more was I pleased to hear Mr. Godley's poetical description of the view from the top of the Weissthor. That pass was the first snow pass in the Alps that I ever crossed, and I can never forget the glorious impression which it made on me. I was charmed to hear Mr. Godley so finely illustrating it from Dante, though it is a somewhat novel view that one must first plunge into the 'Inferno' as the sole means of reaching the 'Paradiso' beyond.

Mr. E. A. BROOME said: 'Fools rush in where angels fear to tread'; and as the angels to-night seem to be in a minority I may perhaps venture to make a fool of myself with a criticism or two; not indeed on the Paper itself but on its title. Not 'Crambe Repetita'—certainly not 'Recooked Cabbage'—but an original, interesting, delightful, and witty Paper, which we have all heartily appreciated and for which we are grateful.

I found it such a pleasant contrast to the papers we sometimes have; and not being entirely guiltless myself, I can speak impartially. I mean accounts of new expeditions in outlandish districts, or familiar peaks by wrong sides, and in either case by impossible routes—the sort of climbs that are still best summed

up by Mr. Willink's stanza given to the 'A.J.' thirty years ago :

{ Commodore (? Smith) was a very brave man,
Exceedingly brave, particular ;
He climbed straight up some very steep rocks,
Exceedingly steep, perpendicular ;
And what made his bravery more inexpressible,
Was the fact that these rocks were quite inaccessible.

Mr. Godley has done better than this, and thrown new lights on pleasant climbs in districts we know.

Mr. DOUGLAS FRESHFIELD said : It is with very great pleasure that I have listened to the Paper to-night. For myself I can safely say that though I fully appreciate the pleasure of a peak, I have always felt a special attraction in a pass. To me, this pleasure consists chiefly in the fact that one does not have to come down to the place one started from. One may start from the snow and pines of Switzerland and come down to Italian vineyards. One thus unites the chief charms of travel and mountaineering. I think the Club would lose a great deal if it lost its pleasure in passes, and therefore I am very pleased to hear of any younger members who delight in them.

The REV. GEORGE BROKE said : I hesitate to rise, as it is so long since I was at Zermatt, but hope that Mr. Godley will forgive me. I have crossed all, or all but one, of the passes he has named, but when he spoke of the Col Durand as a mere variation of the Triftjoch, I think he was a little unfair. The Col Durand is far more of a real pass than the Trift could be, and goes down into an entirely separate valley on the Zermatt side. The Mischabel and Alphubel Passes, to which he referred, are far more nearly the same, coalescing as they do at the Täsch Alp. I should be sorry if the Col Durand, which is an old favourite of mine, were dismissed in Mr. Godley's words.

Mr. A. L. MUMM said : With reference to Mr. Godley's classification of expeditions by reference to weather, I, like the majority of climbers, lay out my plans on the assumption that the weather will be uniformly good ; but some of the pleasantest of my Alpine memories are of minor expeditions which have been forced upon me by unfavourable weather conditions and which would never have been made in a fine season.

Mr. H. S. BULLOCK said : I should like to relate an incident that occurred when I was going over quite a small pass with a guide, and with Mr. Walter Weston and his wife. We were within fifty feet of the top of the pass when our guide suddenly turned and asked if he might blindfold the lady. We asked him why he wanted to do this, and he replied that he would very much like the lady to see the view 'augenblicklich,' i.e. in the twinkling of an eye. I thought afterwards that the idea was strikingly suggestive

of the last pass we must all cross blindfold] before we see the eternal vision.

I think my qualification for membership] of the Alpine Club was unusual in that it consisted chiefly of passes.

SIR ALEXANDER KENNEDY said: I suggest to the author that a very good classification for passes is that the one crossed first is emphatically the finest, and all the others come second. I remember that crossing the same ridge as that which Mr. Godley mentions, and having to get down out of a fog, I adopted the same course of following the direction of a stream. But unfortunately the stream ran north-west, instead of straight down, and left us a long grind up the Saas valley when we got to the bottom.

The PRESIDENT said: I must ask you now to give your thanks to Mr. Godley for his very admirable, instructive, and entertaining Paper. I am glad to hear from some of the remarks this evening that passes are coming into their own again. It was not so very long ago that members of this Club would have been rather disgusted to hear of anything but the climbing of first-class peaks, and I am very pleased to learn that others take the same view as I do myself in regard to passes, and that the tide is turning in their favour. I entirely agree with Mr. Broome that we like to hear not only about new peaks and new countries. We do like hearing of them, but we also like to get back to familiar places now and again. As regards his quarrel with the title of the Paper, I don't think any members will mind what title Mr. Godley likes to give to his Papers so long as he will read them to us.

The vote of thanks was carried with acclamation, and Mr. Godley returned thanks and said, in reply to the Rev. G. Broke's remark, that he thought the Col Durand was a most beautiful pass and that it was far from his intention to detract from the merits of that pass.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, W., on Tuesday, May 4, 1915, at 8.30 P.M., the Rt. Hon. Lord Justice Pickford, *President*, in the chair.

Mr. J. B. Colgrove, a former member (1876-1894), was balloted for and re-elected a member of the Club. In announcing his election

The PRESIDENT said: The usual custom is simply to announce that the candidate has been duly elected, but I think with regard to Mr. Colgrove I may say that the Club is delighted to welcome him back again. He became a member in 1876 and was one of the famous three 'C's'—Cust, Cawood, and Colgrove—who made the first guideless ascent of the Matterhorn. Why he left the Club for a time I really do not know, but at the age of seventy-five he has thought fit to come back again, which, at any rate, shows how keen and interested in mountaineering affairs he is, and we are all very delighted to welcome him back.

The PRESIDENT continued: I dare say many of you have seen in the May number of the JOURNAL, which has just been published, a note pointing out that, unfortunately, it is not quite complete, but

that it is not desirable to allow anything to interfere with the punctual appearance of the JOURNAL. I think this is an occasion on which we should all like to congratulate the editor of the JOURNAL, and those who assist him, who have all been untiring in their labours, for having accomplished something which very few of us can remember ever having been previously accomplished, and that is, the appearance of the JOURNAL on the very day on which it is dated.

I have been asked to mention that the son of a very old member of the Club, Mr. Montagu Woodmass, has recently met his death fighting at the Front, and I am sure that the Club will wish to offer to Mr. Woodmass their united condolences and deep sympathies with him in this sad bereavement.

There is now only one other matter which I have to mention before calling upon Dr. Hunter Workman for his Paper.

Many of you were here this afternoon inspecting our Exhibition of Alpine Photographs, and I think everyone will agree that this exhibition maintains to the full the reputation of the Alpine Club for its exhibitions, and also the reputation of Mr. Sydney Spencer who looks after and arranges them. I think the Club would not like to let the occasion pass without passing another very hearty vote of thanks to Mr. Spencer for his work, and congratulating him on the success of the exhibition.

The vote of thanks was carried with acclamation.

Dr. W. HUNTER WORKMAN then read a Paper entitled 'The Mountaineering Aspect of Himalayan Glaciers,' which was illustrated by lantern slides.

The PRESIDENT invited discussion on the Paper.

Mr. A. L. MUMM said: Dr. Workman has given us a Paper of exceptional interest and superbly illustrated. The slides we have seen have given us very vivid impressions of the great Himalayan glaciers and have introduced us to a world which is different in kind from any other Alpine world. I think Dr. Workman has entirely made out his point that these enormous glaciers have a special mountaineering interest of their own.

My experience of Himalayan glaciers lay in another region, but though very large compared with Swiss glaciers, they were small compared with those which Dr. Workman has explored, and did not possess the same sensational character. For the most part they served as highways for travellers, and if the surface was broken, we usual found that between the lateral moraine and the cliffs bounding the valley there was a beautiful little minor green valley where one could get along quite comfortably, and which provided admirable camping grounds. On the other hand, I did encounter glaciers entirely covered for many miles with debris and rocks of all sizes, similar to those Dr. Workman has described. I photographed one of these and I do not think anyone would have recognised it as a glacier, so completely was it smothered with debris and huge blocks of stone.

I was much impressed by one of Dr. Workman's views showing coolies descending an ice-staircase. Their footgear is very ill-adapted to snow and ice, and they are much hampered by their loads. We had very great difficulty in getting our coolies into the Rishi Valley over some steep slopes of hard snow, but when they were going out again, and we proposed to send two of the guides with them, we found they were quite prepared to recross the place without assistance, when unloaded. In any criticism of their powers of travelling on snow and ice, the tremendous handicap of the loads must never be forgotten.

Dr. A. M. KELLAS said : I have not much to add to the remarks of Mr. Mumm. I have had experience of three districts in the Himalayas, those of Sikkim, Garhwal, and Kashmir, but I was never so far north as the Siachen Glacier. The conditions are different in each district that I have visited, and it is sometimes much more difficult to get along the glaciers than at others. I believe Dr. Collie visited the Nanga Parbat Range about twenty years ago, and this is one of the districts where the ice conditions vary greatly. When Dr. Collie's party visited the Diamirai Glacier about 1894, it was apparently fairly easy to cross, but in 1913, when I paid a hurried visit to that glacier, it was troublesome to cross at any point. After crossing to the north bank with difficulty I thought there might be some place where we could recross easily, and consulted some of the natives. They brought one of the chief men who had been with Dr. Collie in 1894 and he tried to lead us across, but after spending three hours in vain attempts he gave it up, declaring that the ice conditions had entirely altered, and that everything was more difficult.

I can confirm all that Dr. Workman has said in regard to the coolies and their preference for travelling on the moraine of a glacier rather than on the ice. I have sometimes tried to get them to go over quite an easy ice glacier, instead of its lateral moraine, but they usually preferred to keep to the more difficult ground.

There is one point I should like to ask Dr. Workman about, namely, whether he noticed that any of the glaciers traversed by his expedition showed any signs of shrinkage, as in Sikkim there is considerable evidence that the glaciers must have been very much larger at some prehistoric date.

I have enjoyed the Paper and the beautiful photographs very much, and can safely say that the collection of Himalayan photographs is among the finest I have ever seen.

The PRESIDENT said : It is now my pleasant duty to propose a very hearty vote of thanks to Dr. Workman for his Paper. We were informed by one of our members at the last meeting that he much preferred to hear about familiar places rather than those places of which a good many of us are ignorant, but I think that we also like to hear about places and countries that we do not know. Some of us like to increase our knowledge, and I, for one, have learned something about Himalayan glaciers that I never knew

before, and I am not so sure that I am not glad to learn about them at a distance rather than through a closer acquaintance with them. It must need an enormous amount of labour to traverse these glaciers, and it seems to me a remarkable thing that travellers not only go over them themselves, but are able to get natives to do so as well, notwithstanding the loads they carry. I was much struck with the portrait of the faithful coolie who has followed Dr. Workman through all his wanderings, and I have no doubt he is an excellent person, but as regards his dress and equipment, he hardly fits our idea of a mountaineer, and I think it is remarkable that he should have done so much.

I don't think I am wrong in saying that we have never seen a finer collection of photographs than we have had thrown on the screen to-night, and I am sorry that not more of our photographic members are here to appreciate them.

I am sure we all thank Dr. Workman for a very pleasant evening, and I now propose a hearty vote of thanks to him.

The vote of thanks was carried with acclamation and Dr. Workman briefly returned thanks.

A GENERAL MEETING of the Club was held in the Hall, 23 Savile Row, on Tuesday, June 1, 1915, at 8.30 P.M., the Rt. Hon. Lord Justice Pickford, *President*, in the chair.

The PRESIDENT said: There are one or two things I want to mention to you before the Paper is read.

I have unfortunately to announce the death of two members, or rather, one member and a former member.

Canon F. M. Beaumont was elected a member in 1877, and died quite recently. He was, as you know, an old member of the Club and climbed actively for many years. For the last forty years or thereabouts he has been associated with Church life in Coventry and was Vicar of one of the churches there. I have had an appreciation of him from one of the Coventry papers put into my hands, and I think in two sentences it sums up his character as well as anything could do. The writer says:

'The charm of Canon Beaumont's personality lay in his unaffected simplicity of temperament, and he was a thorough-going Englishman in his absolute straightforwardness. He represented one of the finest types of cleric, I mean the old-fashioned clergyman, who lived his principles out in daily life and was regarded by his flock as the real friend of the family and the spiritual adviser of the household. There probably never was any Vicar of Coventry to whom people went so readily and so naturally with their private troubles.'

I do not think he would have wished for any greater testimony than that.

He was a man of considerable tact and good feeling, because he managed with the assistance of the Nonconformist Mayor of Coventry to settle the very vexed question of the Vicar's rate, not, however,

without some trouble, but the fact that he did settle it is a tribute to his skill.

The other death I have to announce is that of a former member, Mr. Harold Topham, who was quite recently killed by a fall over the cliffs at Babbacombe. He was elected in 1887 and retired in 1900. He did some first-rate climbing, and I think that his death should not pass without mention, although he had ceased to be a member of the Club for so many years.

He made many first ascents, among which are recorded: The Aiguilles Rouges d'Arolla by the S. arête, and also from the South Gap by the N. arête; the Nadelhorn from the S.E.; the Egginer arête; the Allalinhorn from the Hohlaub Glacier; Monte delle Loccie by the N.E. arête, and the Signalkuppe by the E. arête.

In this latter expedition his party took $1\frac{1}{2}$ hours to the Vigne Glacier, $2\frac{1}{2}$ hours to the arête, and thence 9 hours to the top. These particulars will convey some idea of the difficulty of that first ascent.

He also did a great deal of exploring work in the Selkirks, and made an expedition to Mount St. Elias in Alaska, a long account of which appears in the ALPINE JOURNAL for the year 1889. I believe that the information which he obtained on that expedition, and which he was able to furnish to the Duke of the Abruzzi, contributed substantially to the successful ascent by the latter of Mount St. Elias.

In addition to being a brilliant mountaineer he was one of the finest skaters of his day and was well known on the rinks at St. Moritz. He was equally well known as a distinguished tobogganer, and won the Cresta Run competition on four occasions, and on each occasion broke all existing records. No doubt his records have since been broken by other people, but he created many records himself.

He had a very distinguished career as a climber and as an athlete, and he was recognised as an authority on mountaineering matters in his time.

As you are all aware, H.R.H. the Duke of the Abruzzi is in Chief Command of the Italian Fleet, and I think the Club will appreciate the honour of having one of their ordinary members holding such a high command, and will wish him all success.

I am sorry to say that some of our members have recently lost relatives at the seat of war.

The Rev. Prebendary Heard has lost his son, Lord Desborough has lost his son and heir, and, as you all know, Captain Farrar has lost not only his only son, but shortly afterwards also lost his brother, Sir George Farrar. Everybody knows that Captain Farrar is a very distinguished mountaineer, but probably everybody does not know the amount of work that he does for the Club, and the interest he takes in its affairs. I do not think anybody has the interests of the Club more at heart than he has. His only son was killed while serving with our forces in Flanders, and a short

time afterwards, I think it was the following week, his brother, Sir George Farrar, was killed in South Africa as the result of an accident, but he died in the service of his country just as much as if he had been killed in action. I am sure the heartfelt sympathy of the Club will be with Captain Farrar, Lord Desborough, and the Rev. Prebendary Heard in their great bereavement.

Another matter I have to mention is that Dr. Alexander Seiler informs us that the Hôtels Seiler intend to offer to twenty officers or soldiers convalescing, hospitality in the invigorating air of the Swiss mountains, and that he would be very glad if the Alpine Club would accept this invitation. In a further letter he says that this invitation is intended to apply to officers or soldiers, ill or wounded, who are going through a time of convalescence and who may or may not be returning to the ranks when they are cured. Their attendants are also included in the invitation, and it is thought that possibly some of the ladies who have been devoting their whole time to nursing the sick and wounded might like to avail themselves of this invitation.

Dr. Seiler adds: 'I can assure you that all those who come will be cared for as much as possible by members of my family, and that we will do everything we can to make their time here as agreeable as possible. I have already obtained for them liberal reductions in fares on the railways from Visp and also on the Gornergrat Railway.'

I think the Club ought to be very grateful to Dr. Seiler for his generous offer, and I have no doubt that it will be of very great benefit to a number of people.

Lastly, I have to mention that, unfortunately, during the recent heavy thunderstorm, a portion of the ceiling in one of the Club rooms was brought down owing to the antiquated system of surface water drainage installed in these premises. The Club has, therefore, been involved in some expense in effecting the necessary repairs.

The only matter of business that requires our attention this evening is the approval of the regulations as to the Winter Dinner, as set forth in the circular dated May 18, 1915, a copy of which has been sent to each member.

You have doubtless all noticed that it says, 'The Winter Dinner has been provisionally fixed,' and I am told that some people do not know what is meant by 'provisionally.' What it means is this, that the Winter Dinner will be held on December 14 unless, owing to the state of affairs prevailing at that time, the Committee find it necessary to cancel the arrangements, as was done last year. If it is thought right to hold the Dinner it will take place on December 14. That is what is meant by 'provisionally.'

In regard to the regulations no notice of objection has been received, and they are the same as they have been in previous years. I now put it to the Club to approve the regulations governing the Winter Dinner, and will ask you to signify in the usual way.

This was done, and the regulations as to the Winter Dinner were unanimously approved.

The Rev. WALTER WESTON then read a Paper entitled 'Mountaineering in Japan,' which was illustrated by lantern slides.

The PRESIDENT invited discussion on the Paper.

The Rt. Hon. VISCOUNT BRYCE said: I should rather have suggested that Mr. Freshfield, my predecessor in the Presidential chair of this Club, should have been asked to precede me in saying a few words on the Paper this evening, as he knows much more about Japan than I do, but I am glad to respond in a dutifully obedient spirit to the invitation of the President.

When I went to Japan, I was unfortunately compelled by circumstances over which I had no control to abstain from visiting what Mr. Weston has called the Japanese Alps proper. The season, which was very wet at the time, prohibited any mountaineering, and I was therefore unable then to reach the scene of the climbs which Mr. Weston has so graphically described to us. In this connexion I am in the same position as a friend of ours, who, on being asked where he had spent his summer vacation, said that he had been in Switzerland. We asked him where he had been in Switzerland and he replied that he had not been climbing peaks, and after some hesitation, added that he had, at any rate, been visiting the lower slopes of the Alps. I have myself been only on the lower slopes of the Japanese Alps which have been described by Mr. Weston, and may I say in passing that nothing could give any better idea of the character of the rocks and the scenery of Japan than the beautiful photographs which we have seen to-night.

The things which struck me most in regard to Japanese scenery, which is unlike the scenery of any other country, are these. Mr. Weston has indicated them so happily that I need add only a few words to confirm the fidelity of the impressions he has given you.

In the first place the characteristic forms of volcanic mountains in close proximity to mountains formed of ancient crystalline rocks. This occurs in some other regions also, but it is seldom that these two types of rocks are found so near together (and in places intermixed) as they are in Japan. There is, it is true, a long line of great volcanic mountains in the Andes, and also here and there, as in the Cordillera Real of Bolivia, lofty summits of granitic or gneissose rocks, but these are not met with in such close association as one finds them in Japan.

In the next place I do not think there is any other country that exhibits such an endless variety of natural beauty. Italy is perhaps of all European countries that in which one finds the largest abundance of landscapes, beautiful in line and in colour, especially in the Italian Alps; but in Japan, so far as I could see—I did not traverse the more northern parts of the country—there is a singular profusion of beauty both in the shapes of the mountains and in the rich luxuriance of the trees and grasses. One can hardly wonder that a people dwelling among such exquisite landscapes should

evinced a great appreciation for the natural charms of their country. It is easy to understand the artistic nature of the people in the presence of such scenery. I know of no other country in which the people appear to appreciate the scenery of their country so much as in Japan. They place their houses with the distinct purpose of getting lovely views and show their sense of beauty by endeavouring to make their homes harmonise with their surroundings.

There is one thing lacking, however, for the absence of which the traveller is not prepared. The higher valleys are lonely. One finds none of the life that we see in the Swiss Alps and other mountain regions of Europe. There are no cattle or sheep on the hills, at least, I never saw any. I do not know whether the reason for this is that the grass in Japan, as in China, is not nutritious for cattle, or whether it is that the sharp stems of the grass would be injurious to the insides of the cattle, but, anyhow, though the hills are dressed in vivid green, there is none of the pastoral life which is so pleasing a feature in the mountains of Europe, no chalets as in Switzerland, no sæters as in Norway. I may add that it is extremely difficult to get through the lower slopes of the mountains, on account of the density of the vegetation, up to 6000 and 8000 feet; as there are so few or no cattle, there are no mountain paths running up the hills, except where there is some sacred shrine. One finds nothing like the high chalets of the European Alps, and the only inhabitants of the lower slopes of the mountains are the lonely charcoal-burner and the hunter, so that it is extremely difficult to find sleeping quarters.

The only piece of rock scenery I can speak of from personal knowledge are the crags of Myogi San. I made, in Mr. Weston's company, an attempt to get to the crater of the volcano Osama, but owing to bad weather we were unsuccessful. From where we were stopped we could hear the roar of the volcano, but although we were close enough to hear it, the weather was hopelessly thick and we could not get near enough to the scene of activity to see it.

On Myogi San Mr. Weston led me through the labyrinth of disintegrated rocks and upstanding crags that form this singular mountain. Nothing could be more picturesque, as nothing was more typical of Japan than the solemn temple at its foot, approached by many flights of steps between rows of majestic trees. There is no tree grander than the cryptomeria of Japan.

I should like to say now that the scenery of Japan will well repay the journey out there. From Calais to Vladivostock and Tsuruga by the Siberian Railway, across the Sea of Japan, I think the journey would take about ten days. They are ten extremely interesting days, and the traveller sees a great deal of charming scenery *en route*.

Mr. Weston, who has entered into the life and thought of the Japanese people, has indicated to you with perfect truth that the visitor to Japan will find himself in the world of 1000 or even 2000

years ago, as well as in the world of the present day. In no other country do the new and the old stand in such striking contrast.

We thank Mr. Weston for having given us so much pleasure this evening, but I wish to thank him also personally for the kindness which he showed to me in Japan, to which so much of my enjoyment of the country was due.

Mr. DOUGLAS FRESHFIELD said: I can endorse most cordially everything Lord Bryce has said with regard to Japanese scenery and travel. It is a most delightful country to travel and to climb in. In the first place one has the extraordinary contrast between the still living Japan of 1000 years ago and the Japan of the present day. One can travel through the country in a luxurious train furnished with observation cars, with the latest Oxford University Press publications on the bookshelf, or one can join the worshippers at immemorial shrines or wander among primitive villages or pathless glens. Everywhere an Englishman is sure of the most wholehearted hospitality. The native inns are clean, and with the help of a Japanese courier, the food provided is excellent, while they preserve their local colour and characteristics. The globe-trotter's tale that 'Japan is spoilt' applies only to the Japan of globe-trotters—Tokyo, Yokohama, Osaka. The country towns remain for the most part untouched.

The valleys are densely forested, and even in November the autumn colouring, except near their heads, was still at its best, and quite beyond anything I have seen in other mountain districts. Those who go earlier in the year would, I am sure, find some very fine climbing. But it is not only in the Japanese Alps that you get fine and varied scenery: it is the same all over the country.

I need not mention Nikko and its famous temples. It is a delightful centre for hill-walkers. Ikao is another mountain resort. To get there from Nikko means a long day's journey, but we found it easy to hire a car at the Nikko Hotel and motor the seventy miles. The country we passed through, a silkworm district, was just as it had been for centuries, quite untouched, and nothing could be more fascinating than the wayside villages and gardens.

Finally, I must express my great obligations to Mr. Weston, to whom I owe all that I saw not only of the Japanese Alps (his description of which has given us such peculiar pleasure), but of Japan in general.

The PRESIDENT said: It seems that, in spite of the charms of Japan, not many members of the Club have been there, and I think we have all had the greatest pleasure in listening to Mr. Weston's Paper. In this case it has not been entirely confined to mountaineering. He has given us his observations on the people of Japan, their ways and customs, and I am glad that he recognises that, although the members of the Club are all of them deeply interested in mountaineering, they are also able to appreciate other information. Consequently, he has given us a most delightful discourse on the Japanese and their ways.

I have no doubt that a great many members will want to go to Japan, especially after we have learned from Lord Bryce that it will only take about ten days to get there from Calais, via the Siberian Railway, but I am afraid those members who want to go by this route will have to postpone their visit for some little time.

I will now ask you to pass a very hearty vote of thanks to Mr. Weston for his Paper, and the beautiful slides he has shown us, which we have all enjoyed extremely.

The vote of thanks was carried with acclamation.

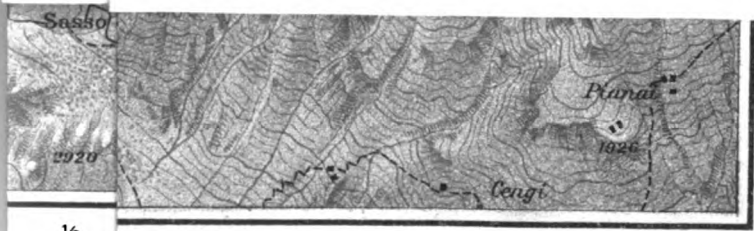
The Valsesía.

Some copies of the Map in the present number and of the plates opposite pages 108 and 128 in the last number are available and can be obtained from the Assistant Secretary, Alpine Club, 23 Savile Row, W. Price for the set (the Map mounted on cloth), 3/-.

The Map of the Valsesia face of Monte Rosa.

To accompany the first article in the May issue (No. 208) of the "Alpine Journal."





Lit. Salussolia - Torino.

THE
ALPINE JOURNAL.

NOVEMBER 1915.

(No. 210.)

THE FOLLOWING MEMBERS SERVING IN HIS MAJESTY'S
FORCES HAVE BEEN KILLED IN ACTION.

BATTYE, Major H. M., 1/5th Gurkha Rifles.

CARFRAE, Capt. C. F. K. 5th (Service) Battalion Oxford and Bucks
Light Infantry.

CORRY, Major J. B., D.S.O., Royal Engineers, 3rd S. & M., Indian
Army.

HEAD, Major BERNARD, 1/5th Royal Welsh Fusiliers.

SQUIRES, Capt. R. D., 9th Battalion Sherwood Foresters.

WALKER, Lt.-Col. HARRY, C.M.G., 4th Battalion Black Watch.

REVISED LIST OF MEMBERS SERVING IN HIS MAJESTY'S
FORCES.

- AMERY, Capt. L. S., M.P., 14th Royal Warwickshire Regiment.
BARTRUM, Lieut. G., 8th Battalion Oxford and Bucks Light Infantry
(Pioneers).
BELL, Capt. J. MACKINTOSH, Officer Commanding 'D' Company,
73rd Battalion Royal Highlanders of Canada, C.E.F.
BIRD, Major L. W., 1st Royal Berkshire Regiment, VI. Infantry
Brigade, 2nd Division, Expeditionary Force. (*Mentioned in
Dispatches. Wounded in action on February 28, and again in
October, when his right arm was fractured and right knee damaged
by gunshot.*)
BLACKDEN, Brig.-Gen. L. S., Jamaica.
BRADLEY, Capt. M. G., 17th Battalion Middlesex Regiment.
BROWN, Lieut. J. W., Army Service Corps.
BRUCE, Lt.-Col. (Brevet Colonel) The Hon. C. G., M.V.O., 6th Gurkha
Rifles. (*Wounded in action. Gazetted Brevet Colonel for
services in the field.*)
CARR-SAUNDERS, Lieut. A. M., Army Service Corps.
CASSEL, Capt. F., K.C., M.P., 19th Battalion London Regiment.
CHUBB, Capt. E., Motor Transports, A.S.C.
CHUTE, Capt. C. L., 16th Battalion Middlesex Regiment.
CLARK, Lieut. C. INGLIS, 71st Motor Transport Company, A.S.C.
2nd Indian Cavalry Division Supply Column.
CLAYTON, Lt.-Col. J. M., 6th Battalion Sherwood Foresters.
COURTAULD, Lieut. S. L., 1/4th Battalion Worcestershire Regiment.
CRAWFORD, G. C., 82nd Punjabis, Indian Army Reserve.
DAVIDSON, Lieut. G., Army Service Corps.
DENNISTOUN, 2nd Lieut. J. R., North Irish Horse, attached to the
54th Division (East Anglian Territorials).
DE WESSELOW, Capt., O. L. V. S., M.B., R.A.M.C.
EATON, Sergeant J. E. C., 28th City of London Regiment (Artists
Rifles).
ECKFORD, Brigade Major P. G., Belfast Garrison.
ETHERTON, Capt. P. T., 39th Garhwal Rifles, Indian Expeditionary
Force, France.
EWEN, Capt. G. T., 3rd Battalion Manchester Regiment.
FLETCHER, Lieut. P. C., 5th Battalion Manchester Regiment.
(*Wounded in action.*)
FURNEAUX, Major, L. R., Rossall School, O.T.C.
GASK, Major G. E., F.R.C.S., R.A.M.C. (T.)
GIBSON, Lieut. H. O. S., 2/11th Battalion London Regiment.
GILLET, Lt.-Col. W. A., 5th Battalion East Surrey Regiment.
GREAVES, ALAN, French Motor Ambulance Service in the Vosges.
HODGSON, Commander J. C., Royal Navy.
HOWARD, Battalion Qrmstr.-Srgnt. G. E., 28th City of London
Regiment (Artists Rifles).

- HOWARD, Lt.-Col. HENRY, Vice-Chairman, Worcestershire Territorial Association.
- JAMES, W. W., F.R.C.S., Honorary Consulting Dental Surgeon to the Military Hospitals in London.
- JARDINE, J. W., Anti-Aircraft Corps.
- JOHNS, Major W. G., 13th Battalion King's Royal Rifles.
- KNOX, Capt. H. V., Oxford and Bucks Light Infantry.
- LISTER, Colonel W. T., M.B., F.R.C.S., Army Medical Service.
- LIVEING, Lt.-Col. C. H., D.S.O., Royal Field Artillery.
- LONGSTAFF, 2nd Lieut. T. G., 7th Battalion Hampshire Regiment (T.F.), India.
- MACROBERT, 2nd Lieut. H., 17th Battalion Highland Light Infantry.
- MAKINS, Col. Sir GEORGE H., K.C.M.G., C.B., F.R.C.S., R.A.M.C. (*Mentioned in Dispatches.*)
- MASON, Capt. A. E. W., 22nd (Service) Battalion Manchester Regiment.
- MASON, Capt. KENNETH, Royal Engineers, Indian Expeditionary Force A.
- MEADE, 2nd Lieut. C. F., Surrey Yeomanry (T.F.).
- MINCHINTON, Lieut. H. D., 1st (K.G.O.) Gurkha Rifles, Indian Expeditionary Force.
- MONRO, Lieut. C. G., M.B., R.A.M.C.
- MONTAGUE, C. E., 2nd Sportsmen's Battalion Royal Fusiliers.
- MORRISON-BELL, Major A. C., M.P., 1st Battalion Scots Guards. (*Prisoner of war.*)
- MOTHERSILL, Major H. J., 2/5th Battalion Cheshire Regiment (T.F.).
- MUIR, Lieut. J. C., Royal Army Medical Corps.
- MURRAY, Flight Lieut. D. G., Royal Flying Corps, Naval Wing. (*Interned in Holland.*)
- MURRAY, 2nd Lieut. E. D., 11th Battalion Black Watch.
- OLIVER, Capt. D. R. G., Indian Army, Expeditionary Force (Persian Gulf).
- OPPENHEIM, Major L. C. F., 4th Battalion Highland Light Infantry. Military Attaché at the Hague. (*Wounded in action.*)
- PICKARD, Lt.-Col. R., Commander, 24th Field Ambulance, 8th Division, Expeditionary Force.
- PILKINGTON, Major E. F., 6th Battalion Manchester Regiment.
- POWELL, Maj.-Gen. C. H., C.B., Indian Army, Commander, Ulster Division.
- RAWLENCE, C. V., Anti-Aircraft Corps.
- REID, Capt. C. J., Royal Warwickshire Regt. (*reported missing at the Dardanelles.*)
- ROLLESTON, Major L. W., M.B., R.A.M.C., Officer Commanding Napsbury War Hospital.
- ROSS, MALCOLM, Overseas Contingent. (Dardanelles.)
- ROWS, Major, R. G., R.A.M.C., Medical Officer in Charge of the Military Hospital, Moss Side, Liverpool.
- RUNGE, HARRY, London Volunteer Rifles.

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- SHADBOLT, 2nd Lieut. L. G., R.N.V.R., 'Hood' Battalion.
(*Wounded in action.*)
- SHARPE, Lieut. W. S., 1st Battalion City of London Regiment
(Royal Fusiliers).
- SHIPLEY, Lt.-Col. R. B., C.M.G. (T.D.) Commanded the Queen
Victoria's Rifles with the British Expeditionary Force from
November 4, 1914, to May 9, 1915, when invalided home.
Now commanding the 102nd Provisional Battalion.
- SLATER, Capt. E. V., 7th Yorkshire Regiment, B.E.F.
- SLINGSBY, Capt. A. M., Indian Army Expeditionary Force.
- SOMERS, Capt. J. P., N.R.A. School of Musketry.
- SPRANGER, Lieut. J. A., Royal Engineers.
- STEELE, L. J., Electrical Engineer, H.M. Dockyard, Portsmouth.
- STONHAM, Lt.-Col. C., C.M.G., F.R.C.S., O.C. Field Ambulance,
London Mounted Brigade. (T.F.)
- STRUTT, Major E. L., 3rd Battalion Royal Scots, General Staff.
(*Wounded in action.*)
- THOMPSON, Lieut. R. E., Hants Carabineers (Yeomanry).
- TODD, Capt. O. E., 5th Gurkha Regiment, India.
- TUBBY, Colonel A. H., M.B., F.R.C.S., Consulting Surgeon, R.A.M.S.,
British Mediterranean Expeditionary Force.
- TYNDALE, Lieut. H. E. G., 8th (Service) Battalion King's Royal
Rifles. (*Wounded in action.*)
- UNNA, Lieut. P. J. H., R.N.V.R.
- WHEELER, Lieut. E. O., 1st (K.G.O.) S. & M. Indian Contingent,
B.E.F. (*Mentioned in Dispatches*)
- WHERRY, Lt.-Col. G. E., M.B., F.R.C.S., R.A.M.C. (T.), 1st Eastern
General Hospital.
- WILLIAMS, Capt. A. F. BASIL, R.F.A. (T.F.)
- WOLLASTON, A. F. R., M.B., Surgeon, Royal Navy.

THE MOUNTAINEERING ASPECT OF HIMALAYAN GLACIERS.

By WILLIAM HUNTER WORKMAN, M.A., M.D.

(Read before the Alpine Club, May 4, 1915.)

HAVING, in the course of eight (seven exploring) expedi-
tions among the lofty uninhabited wastes forming a
vast ice-rampart along the northern frontier of India, become
somewhat intimately acquainted with a considerable number
of glaciers occupying the slopes and valleys of various
portions of the Karakoram and Western Himalayan regions,
and among them with four out of the five largest with lengths
of from thirty to forty-six miles, I venture, without considering
any particular one of them, to call your attention to certain
features they collectively present, that appeal to the spirit



Dr. W. Hunter Workman, photo.

Swan Electric Engraving Co., Ltd.

WHITE NEEDLE PEAK.

About 21,500 ft. One of the snow-peaks enclosing the high Nun Kun plateau. Three of our party seen near the centre of the snow-arête lying in front of the peak. Note profile at right of apex. Photographed in 1906.

of adventure and challenge the technical knowledge and skill of the mountaineer.

In approaching the subject I find the available material far too abundant to be adequately handled within the proper limits of an evening paper. I can therefore on this occasion give only a brief outline of its bearings, and indicate superficially a few of the more important points it involves.

Himalayan and Karakoram glaciers, from the altitude and nature of their environment, take on a character peculiarly their own. Although in the strictest sense of the term valley-glaciers, they originate in vast reservoirs of snow and ice lying at great altitudes, largely inaccessible, occupying elevated plateaus or the upper slopes and cirques of very lofty mountains. The great masses of ice here collected descend in streams, which converge on and fill the valley-heads beneath, where they unite to form large glacier-trunks, which flow downward through the valleys for long distances, till they finally die out through melting.

A marked feature is the complexity of their structure, due to the large number of affluents entering them at various points of their course. These affluents, fed by still other affluents and often nearly as large as the main glaciers, compress the latter strongly, and crowd them over toward the opposite side of their beds at the points of junction, forcing themselves into and occupying the spaces from which the trunks have been dislodged, and contributing substantially to swell their volume. Thus are formed great, complex glaciers, or, as I have called them, glacier-systems, resembling river-systems composed of and draining away ice and snow accumulated over large areas, in the case of the largest, the Siachen or Rose glacier, of approximately 1000 square miles. The arrangement of such glacier-systems is well shown on this map (Chogo Lungma).

These glaciers constitute the only avenues of access to the elevated, ice-crowned labyrinths from which they emerge, and are the only routes by which multitudes of the loftiest mountain-giants upon our planet can be reached. Aside from the fascinating glaciological questions connected with their structure and the development of the various formations they present, which cannot be dwelt upon in this paper, as pathless, often previously unexplored routes involving steep gradients and other obstacles, and as forming in themselves essential portions of mountain-ascents requiring for their accomplishment from one to two weeks or more under favouring

conditions, they can lay claim to an important place in the consideration of mountaineering activities. From my personal experience I think I am justified in saying, that the ascent of one of these great glaciers is a mountaineering feat of no mean order, beset with dangers and difficulties quite as marked and demanding as much mountaineering skill to avoid and overcome as many a rather difficult high mountain.

When one mounts upon the tongue of a large glacier, one is very likely to find oneself confronted by a vast succession of elevations and depressions extending entirely across the tongue and up the glacier for an unknown distance. Both elevations and depressions may be thickly covered with rock-débris of every size, mud, sand, gravel, rock-fragments small and great, up to huge boulders. This view on the Hispar tongue is a mild example of such a surface.

This limestone boulder on the Siachen Glacier, under the protection of which we camped on a moraine at an altitude of 16,400 feet, gives an idea of the size of some of these boulders. Its size may be judged of by comparison with the tents. Boulders a good deal larger than this are met with, some 60 feet or more in diameter. So abundant may the débris-covering be that often over considerable areas no ice is visible.

Many of the elevations, or, as they may, perhaps, more appropriately be called, hillocks, have the forms of symmetrical or oblong cones and mounds with rounded tops. Others with irregular bodies terminate in sharp points or crests of greater or less length, from which the sides slope away to the general level in vertical or steeply inclined precipices.

The ordinary height of the hillocks varies from 30 to over 200 feet. The remarkably large hillock here seen was above 300 feet high. On the Siachen glacier we met with many having an apparent height of 400 to 450 feet above the bases of the depressions beneath.

Glacier-tongues are thus affected for varying distances above their ends, *e.g.* that of the Biafo, according to my observation, for 3 miles, of the Chogo Lungma for 9 miles, of the Bilaphond for about 12 miles, of the Kaberi for 14 miles, and of the Hispar for 15 miles.

This formation is not confined to glacier-tongues. It may extend upward for miles, often to the very sources of a glacier in the form of median moraine-streams surmounted by hillocks, to which I have given the name 'hillock-moraines,' alternating with white ice-streams comparatively free from débris.

This bird's-eye view taken from an altitude of 18,000 feet shows such a moraine in the broad, black, curving band that marks the confluence of the Tarim Shehr affluent with the Siachen. This hillock-moraine, covered with black slate débris, originating far up the Tarim Shehr as a marginal moraine, curves around through an arc of 140° at this point, and enters the Siachen as a median moraine flanked on both sides by white ice-streams. Other moraine-streams are seen descending the higher portion of the Siachen.

The enormous moraine, the largest I have met with, having a width of 1500 feet and covered with hillocks, three and four abreast, rising from 300 to 450 feet above the depressions at their bases, stretches down the centre of the Siachen like a range of large, black hills. Its length is 32 miles.

This slide gives a better idea of its height above the general level, showing its side towering like a mountain-flank above an adjoining séracked white stream.

It is scarcely necessary to describe the difficulty of marching for hours over such surfaces, ascending and descending the endless train of hillocks over splintered rock-fragments with sharp angles and rough edges turned in every direction, which play havoc with one's boots, and often, resting on an insecure foundation, offer an uncertain foothold conducive to sprains and falls.

Nor, in traversing the sharp crêtes surmounting many hillocks, is one wholly free from danger of slipping and sliding down two or three hundred feet of ice-precipice into a lake at its base, with a chance of drowning in the icy water before one could be rescued. I think those members of the Alpine Club who have had experience with such surfaces will agree with me that traversing them, whether they be on level or ascending sections, is fatiguing and disagreeable to a degree that makes one willing to avail oneself of lateral moraines or almost any kind of a side-route to avoid them. The only human beings I know of who do not appear to object to them are coolies, who always prefer moraine-surfaces to even smooth ice and névé.

In some instances, where narrow valleys are enclosed by sharply rising mountains, the glaciers fill the entire space from wall to wall, leaving no side-passages, so that the hillock-areas cannot be avoided. Such is the lower 12 miles of the Bilaphond glacier, which is decidedly difficult to negotiate, but infinitely more difficult did we find the Kaberi, the worst glacier in this respect it has been my fortune to travel over,

shagged for 14 miles with a chaos of immense hillocks of various shapes covered with vast, jagged masses of granite hurled down upon them in promiscuous profusion from steeply descending affluents. Between the obstacles to advance thus offered and the zigzag course necessitated to find a passage, five miles in direct line constituted a good day's march on our first exploration and descent of this glacier.

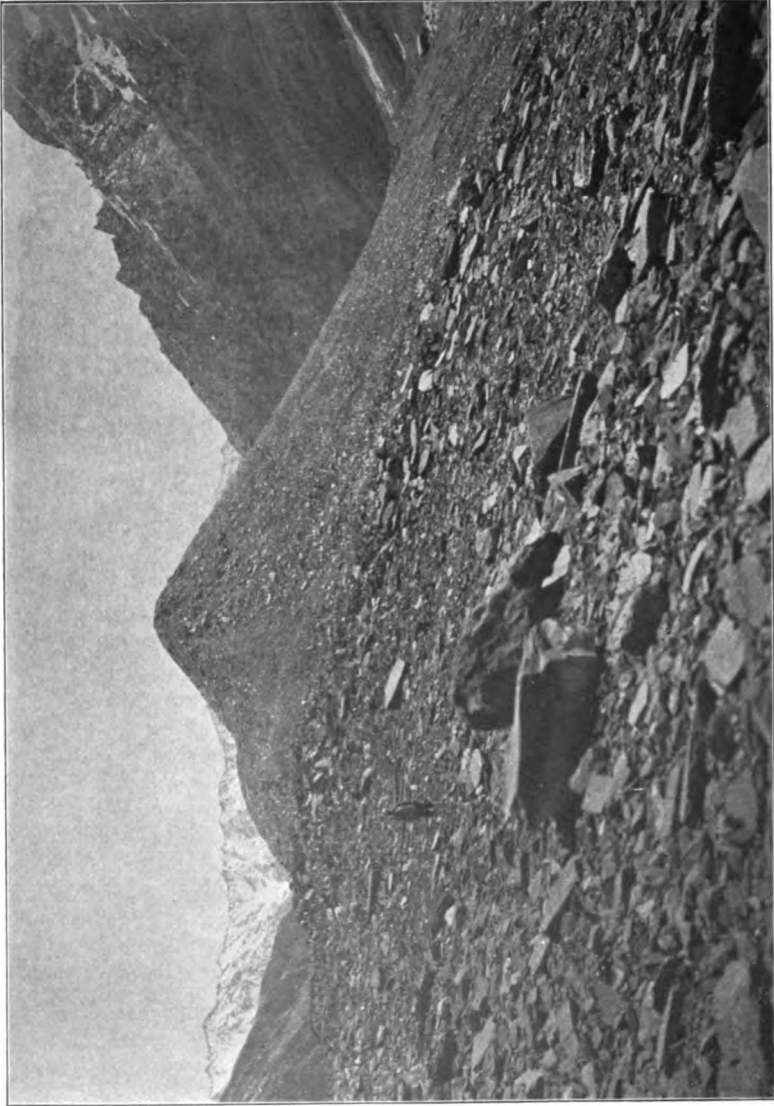
• Moraine-covered portions of glaciers are not the only ones subject to differences of level. The intervening white ice-streams are often crowded up by pressure into high ridges running transverse or oblique to or parallel with the direction of flow of a glacier. The sides of these ridges may be vertical or sharply inclined or may be rounded off by melting, offering greater or less obstacles to advance according to the condition they may be in. Large portions of the surface of the Khondokoro and Sher-pi-gang glaciers were found to be thus ridged in 1911.

Crevasse form another prominent feature of these glaciers. They may occur in any part of a trunk or reservoir, where a change of gradient in the bed induces sufficient tension to cause the ice to split asunder. They vary in width from a crack, that would scarcely attract notice, to gaping fissures too wide to be passed, forming the openings of, seemingly, bottomless abysses. They vary also in length from a few rods to many hundred feet. This slide shows a section of the very steep, greatly crevassed, and inaccessible reservoir of the Sher-pi-gang glacier.

Sometimes crevasses run entirely across a glacier from one edge to the other, in which case they are wide and deep. A pronounced instance of this kind was met with on our ascent of the Biafo in 1899. Shortly after starting out on the morning of the second day we were confronted by a formidable sérac-belt seamed with great crevasses extending from side to side of the glacier, here about a mile and a half wide. The greater part of the day was spent in trying to force a passage through this belt, bridges over the crevasses being few and dangerous, but without success, until it became so late that we were obliged to return to the camp left in the morning. Remaining here the following day, we examined the whole front of the crevassed belt without finding any better crossing-place than the central point where we had already worked.

The third morning we returned to the attack at that point, and, by cutting steps and galleries around the sides of séracs and, in places, unloading the coolies and handing their packs





Dr. W. Hunter Workman, photo.

Swan Electric Engraving Co., Ltd.

Large debris-covered hillock, over 300 ft. high, on Shafat Glacier in Nun Kun, at entrance of steeply descending affluent. Photographed in 1906.

across, we succeeded in bringing the caravan through. This slide shows the kind of work that had to be done. At this point a sheep fell into a crevasse and disappeared. Zurbriggen, being let down into it by a rope, found the sheep standing unharmed on an ice-shelf. After the rescue of the sheep he is seen being helped out of the crevasse by the lambardar. The coolies above, on the outer sides of the opposed séracs, are interested spectators of the scene.

Nine years later, in returning down the Biafo after exploration of the Hispar, we found this area almost free of crevasses and converted into an easily descended ice-fall of moderate gradient. In this slide you see three of our party crossing one of the few remaining abysses upon a narrow ice-column with an ascending edge. This instance affords an excellent example, occurring within the experience of the same observers, of the changes in condition of glaciers and high snow-passes noted at different times by different explorers.

In 1908 we were prevented from reaching the head at 19,000 feet of the highest, west affluent of the Chogo Lungma, by a crevasse 80 to 100 feet wide extending entirely across the glacier, the side-slopes above its ends being so swept by avalanches from overhanging ice-clad summits as to render an attempt to pass by them too risky to consider. Here you see this affluent photographed from the summit of Mt. Lungma, 22,568 feet. The crevasse crossed the glacier just below the upper of the two dark shadows.

Large areas may be cleft by crevasses, especially in the upper portions of glaciers, where gradients are pronounced or where the equilibrium of the ice is disturbed by pressure from affluents. At such places, where a crevasse either exposed or covered is encountered, others may be looked for. On surfaces free from névé, where crevasses can plainly be seen, although they may delay or even stop one's progress, they should not with ordinary care be dangerous to the mountaineer. I have known of three instances of sheep, in their ignorance of the nature of ice, falling into them when attempting to stand on the bevelled edges, when they would have stood secure had the edges been of rock. This crevassed area on the upper portion of the Shafat glacier in the Nun Kun is representative of many existing in similar locations.

On the contrary, when crevasses are covered with snow and névé, as they largely are on the higher reaches of Himalayan glaciers, they render the localities where they exist extremely insecure, and constitute, perhaps, the most serious source of

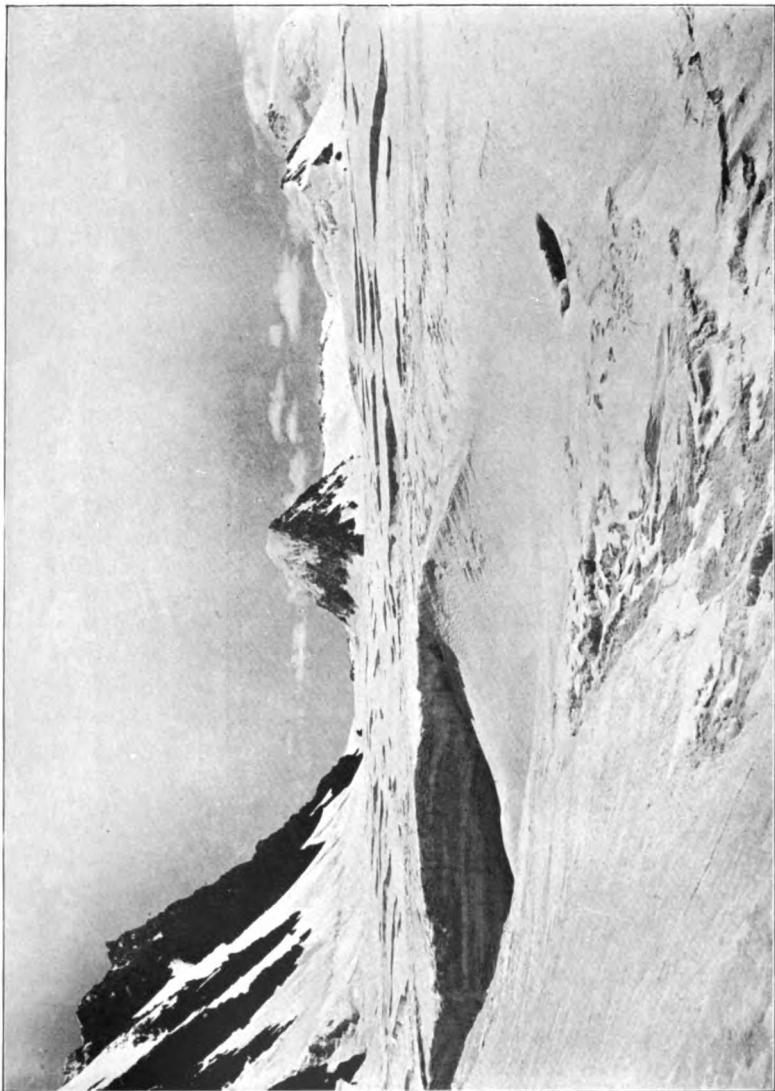
danger to which the explorer is exposed. Above 17,000 feet it is usually advisable to use the cord, and he takes his life in his hand who neglects this precaution. A crevassed area, in reality an ice-fall with great abysses, is seen on the side of this snow-peak of about 21,500 feet, one of seven enclosing the high Nun Kun plateau. At about the centre of the picture, on the edge of the snow-arête lying in front of the peak, three of our European porters are also seen. To the right of the summit you will notice a profile formed by a projecting cornice, the resemblance of which to a person occupying a distinguished and highly honoured place in British annals will probably occur to you.

You see here a section, photographed in 1911, of the upper six miles of the Tarim Shehr, the great eastern affluent of the Siachen glacier, consisting of an extensive ice-plateau two and a half times as wide as the portion here seen. It rises from 18,200 to 19,300 feet beneath the col at the extreme left. This col at the head of the Tarim Shehr watershed probably stands on the ridge dividing the Tarim Shehr (Siachen) basin from that of the Remo, and affords a passage from one to the other. I speak of the probability only of a passage here, since an opportunity of actually proving its existence by reaching the col was not granted us.

We brought our caravan of sixty coolies well into the plateau to the line of the foreground here seen at 18,312 feet, from which onward the plateau was extensively cut up in all directions by large crevasses and abysses. The caravan being left at this point, another hour's advance showed the presence beneath the névé of such a network of smaller crevasses as to render an attempt to take the caravan up toward the col, which would be necessary for further investigation, too hazardous to be justifiable. There was also the added danger of being overtaken at this late season, the middle of September, by a storm, which in this distant, desolate region would render our chances of getting back alive through the labyrinth of crevasses very small. We therefore reluctantly relinquished our endeavour to reach and see what lay beyond the head of the Tarim Shehr.

Three years later, in 1914, Dr. de Filippi visited the Remo glacier. From his observations on that side he also formed the opinion that 'one of the cols to the west' of what he designates as the Northern Remo 'communicates with the Siachen basin.'¹ But he was unable to substantiate this

¹ Vide *Geog. Journal*, vol. xlv. p. 532.



Dr. W. Hunter Workman, photo.

Crevasse upper six miles of plateau at head of Tarim Shehr Glacier. Col at left, at altitude of over 19,300 ft., probably stands on watershed between the Tarim Shehr (Siachen) and Remo basins, and affords a passage between them. Photographed in 1911.

Swin Electric Engraving Co., Ltd.

opinion, being 'prevented,' as he further states, 'by persistent bad weather and the large quantity of newly fallen snow from actually reaching either of these saddles.' If, therefore, a connection, which two expeditions were led to suspect but were unable to establish by actual observation on the spot, really exists, it is very likely to lead over the col here shown.

Where the névé-covering of a glacier is not very deep, the presence of crevasses beneath may be detected, as you all know, by slightly depressed or discoloured streaks visible, though sometimes only faintly, on the surface. Constant watch has to be kept for these, and where they are seen the leader should advance with caution and sound the névé with his axe. An unaccountable neglect of this precaution at an altitude of nearly 18,000 feet on the Bilaphond glacier caused the loss of one of our most valued porters, César Chenoz of Courmayeur, early in our expedition of 1912.

A short distance below the summit of the pass the guides Savoye and Rey were sent ahead over the pass to select a place for a snow-camp at the base of a peak we planned to ascend the following day. Our own route led up a solid ice-slant parallel to the edge of a crevassed and séracked ice-fall. Mrs. Bullock Workman and Chenoz left to visit a large sérac a few hundred feet aside, which they reached safely and on the summit of which I photographed them. Instead of returning the way they went they started off at an angle with it, Chenoz leading, with the apparent intention of regaining the route a little higher up.

As my guide Quaizier and I were putting up my camera we heard a call, and on looking up saw Mrs. Bullock Workman standing alone on the glacier. We hurried to the spot, followed by the servants, and joined her. She had meanwhile descended to safe ice below. She stated that Chenoz was advancing confidently without stopping to sound the ice ahead. She, supposing he was paying due regard to the surface in front, was following closely without herself giving any attention to the ice, when suddenly, without uttering a sound, he disappeared, leaving her alone on the edge of a gaping aperture in thin ice bridging a deep crevasse.

He carried down with him, besides her wraps and marching effects, our extra rope, which he had taken coiled on his shoulder. This was the only rope with us, another one being with the guides, so that we were powerless to render him any assistance. Fortunately for Mrs. Bullock Workman, it had not been used as had been suggested. Otherwise she would have been dragged into the crevasse also.

Quaizier, secured by a coolie-hair-rope, crawled to the opening and called down, asking Chenoz if he was alive. After a few moments the answer came faintly up that he was not much injured and thought he could hold out till the guides could be brought back. Quaizier and two coolies now hastened over the pass to recall the guides, while we, having unpacked blankets and restoratives, waited with anxiety lest Chenoz, clad only in thin walking costume, should die of cold in the icy depths before they could return. After an hour and a half the three guides, having come over the pass on the run, arrived with their rope. When Savoye saw the place, he raised both hands in surprise, exclaiming 'Sapristi! What in the world induced him to venture on such a place as that?'

Rey was immediately lowered into the crevasse, where at a depth of 85 feet he reached Chenoz lying on an ice-shelf. The extra rope being recovered, Rey and Chenoz were drawn up at the same time, one on each rope, by two lines of willing coolies.

Chenoz when rescued, although conscious, was paralysed by cold. Hands and arms to elbows were blue and without sensation. There was no pulse at wrists, and the heart's action was feeble. Everything possible was done to restore him. He was carried down to the camp left a few hours before. He never rallied, but lingering along till evening dropped away while asleep without a movement. No serious injuries were discovered. He died from shock and the paralysing effect of cold.

This is the camp where he died, a cheerless place at 17,000 feet on the ridge of an old moraine. His death cast a gloom upon our party, and rendered us all unusually careful during the remainder of the expedition. This was the first and only time a serious accident occurred to any of our European companions during our eight expeditions.

Vague accounts of this accident carried back by returning coolies gave rise to a report, which in various forms was wired all over the world, that the expedition had met with disaster and that I myself was among the killed. One enterprising and imaginative American journal stated that I was killed by an avalanche while motoring over a high snow-pass. As a result of these reports Mrs. Bullock Workman was inundated with letters of condolence and offers of asylum, and I had the unusual pleasure of reading obituary notices of myself in a large batch of cuttings.

I can assure those who have not been thus favoured that the opportunity to contemplate the naked truth afforded by such notices has a most salutary and mellowing influence

upon one's mental attitude. When, among other encomiums, one finds oneself lauded in the chaste and graphic diction of Western American journalism by such complimentary epithets as X 'the mountain-climber,' one feels, in spite of one's innate modesty, uplifted and raised to the highest pinnacle of fame—a position quite appropriate to a mountaineer—by the honour thus lavishly bestowed upon one's memory.

In the ascent of glaciers, as of mountains, snow is a factor that has to be reckoned with, for not only when deep does it offer a decided mechanical obstacle to progress, but even when shallow, as before stated, it may render crevasses more dangerous by covering and obliterating the often slight evidences of their presence. New snow also supplies a ready material for avalanches, which after storms fall upon glaciers from enclosing mountains.

After the middle of July snow is not found in any quantity below 17,000 feet, but above that height its amount increases the higher one goes. Above 18,000 feet, with the handicap of lassitude and insufficiency of respiration induced by altitude, ascending in snow even ankle-deep, especially if the gradient be more or less sharp, requires considerable exertion and the exercise of will, the difficulty increasing in proportion to increasing altitude, gradient, and depth of snow. After a storm it is advisable to wait a few days for the new snow to melt and settle before attempting high work.

Snow several days fallen usually settles and freezes at night into a crust sufficiently hard to bear the weight of a man, but by nine to ten o'clock in the morning, where it is exposed to the rays of the sun, which at high altitudes often register on the black bulb thermometer 200° to 208° F., or, as I have once noted, 219°, it softens, so that one sinks into it to the knees or even to the waist. It is difficult to induce loaded coolies to continue a march in knee-deep snow.

Remarks here as to the advantage conferred by the use of snow-shoes and skis might be considered by some to be in order, but the drawbacks involved in attempting to equip a large force of coolies with these refinements and to secure their use will readily occur to you. Coolies are nothing if not conservative, and they prefer their own methods of locomotion and transport to any that can be suggested to them. An experiment of ours to relieve them of their burdens on a high, snow-covered glacier by the use of a sledge met with a disastrous result, and nearly caused a mutiny of the whole band.

On several occasions we have been obliged to camp in soft

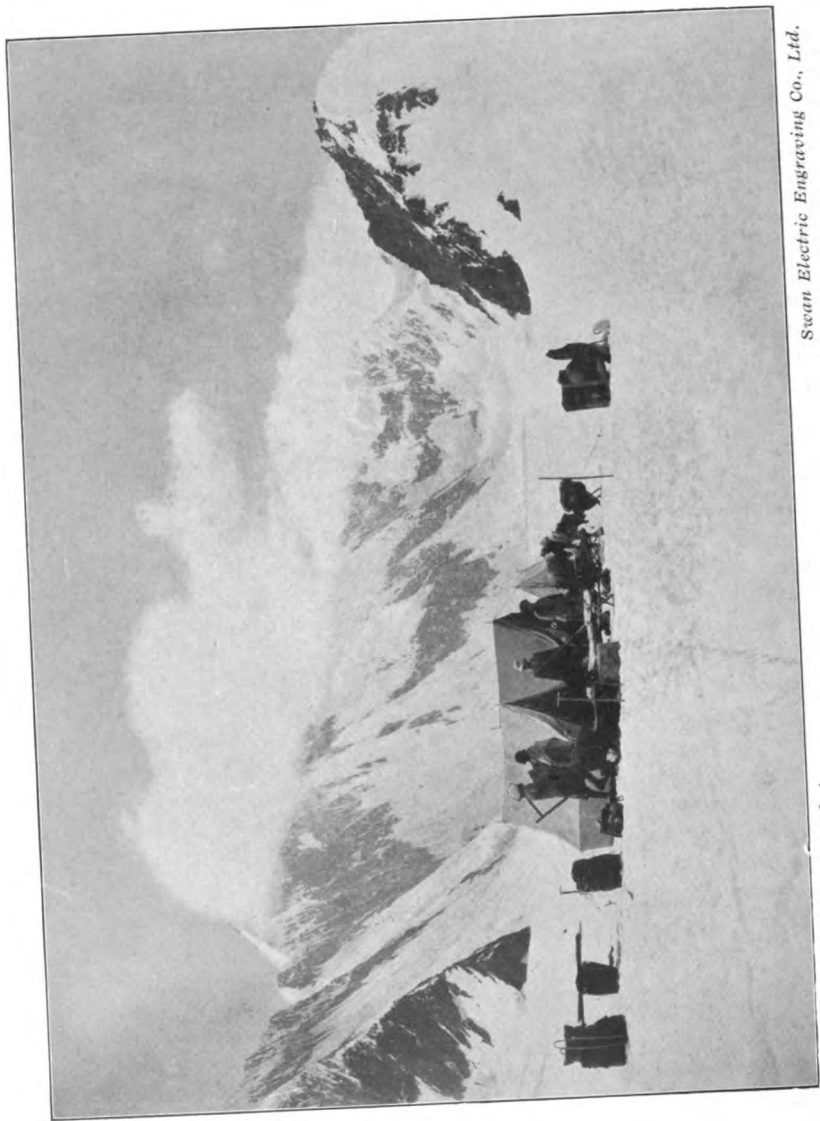
snow at nine to ten o'clock after a two or three hours' march, and thus lose the remainder of the day, a great loss considering how few consecutively fine days one is favoured with in that region, and how absolutely essential fine weather is to the accomplishment of any high work.

The ascent in 1902 to the head of the Haramosh glacier, the largest affluent of the Chogo Lungma, 12 miles long, heavily crevassed for its greater part, and its upper five miles covered with new snow, gave us as fatiguing a day's work as I remember to have experienced. Starting from the Chogo Lungma at six o'clock A.M., we reached a point seven miles up at noon, where snow began to be found. From here the glacier-head appeared quite near. Zurbriggen, who was then with us, estimated that we could reach it in an hour and a half. We set out directly, leaving the caravan behind upon the glacier with orders not to pitch tents till our return. We had to strike over to the west edge of the glacier to avoid crevasses, which rendered all other parts impassable.

At the end of an hour and a half the glacier-head appeared no nearer than when we started. This was one of those occasions, so often met with, where the judgment of distance among these great mountains, even of such experienced mountaineers as Zurbriggen, proves to be at fault. One, two, three hours more passed. The region became weird and inhospitable in the highest degree. The depth of the snow increased, first to above the ankles, then to the knees, and finally to the waist, with occasional places where we sank in to the shoulders. Notwithstanding we struggled on, panting for breath and lifting our feet with difficulty from one deep snow-step to the next, determined to conquer.

At last, when Zurbriggen's hour and a half had lengthened into five, we stood upon the highest point of the glacier, an ice-col at 17,413 feet, directly beneath the frowning ramparts of Haramosh, 24,270 feet, from which a thick mist had descended, cutting off the greater part of the view. To reach this point we had on that day ascended over 4000 feet of glacier.

The return was nearly as arduous as the ascent. Twilight soon enveloped us, which was prevented from deepening into darkness by a young moon in its first quarter, by the insufficient light of which we managed to reach our starting-point without accident at nine o'clock in the evening, after fifteen hours of continuous, trying work. The moon now having disappeared below the horizon, another two hours was occupied in pitching



Dr. W. Hunter Workman. Photo.
Snow Camp at 18,000 ft., towards head of Siachen Glacier, where Expedition was overtaken,
in 1912, by severe storm, in which descent was made to safer position.

Swan Electric Engraving Co., Ltd.

camp by lantern-light, preparing food, and appeasing our appetites, after which we were quite ready to seek the consolation of our sleeping-sacks.

Our last two days' work at the extreme northern head of the Siachen, when we discovered and reached two snow-cols on the watershed between the Indus and Turkestan at altitudes of 20,860 and 19,209 feet, was partly performed in soft snow, knee to waist deep, on steep gradients. The higher of these, which was named the Indira col, affords a view of the east side of the three northern Gasherbrums and their satellites, and overlooks by more than 5000 feet an upper section of the Gasherbrum glacier originating in the Gasherbrum peaks and flowing north-east into Turkestan, here seen in the background. The Gasherbrum peaks lie to the left of the field of view. I think we can claim to be the discoverers of this glacier, at least of its sources and main trunk, though Sir Francis Young-husband may have passed its tongue in the Oprang valley in 1889.

The more easterly of these two cols, named the Turkestan La, is backed by a high, previously unknown group of snow-peaks beyond the frontier in Turkestan.

Another factor frequently encountered is water. On uncrevassed areas of gentle gradient covered with névé, which prevents surface-water from escaping, it may lie in large sheets and prove disagreeable to traverse. On our first ascent of the Biafo we had to wade through such a sheet of water, ankle-deep, extending for three miles, part of which is shown on this slide. On the Kanibasar tributary of the Hispar in 1908, as well as on the Siachen, similar sheets from 300 to 500 feet wide and a quarter of a mile long were met with. In these last two instances the water froze at night into a sodden, slushy ice that, before the sun melted it, would scarcely bear the weight of a man. By creeping on hands and knees and using an axe-handle to spread our weight we could often get over them without a wetting, but everyone preferred to go around them when possible.

Where névé has disappeared, and water can run away unhindered, it usually escapes in rivulets, which coalesce to form what may well be called glacier-rivers, that cut channels in the ice many feet wide and deep. These rivers descend the glacier till they encounter a crevasse or aperture, into which they plunge and disappear, or till they join some still larger river. They are often impassable for considerable distances, and the explorer may be compelled to follow them

up or down to find an ice-bridge or a narrow place where he can jump over, with corresponding delay to his movements. Failing these his progress may be stopped altogether. Here such a river is seen emerging from a tunnel beneath a shattered ice-mass affording a somewhat precarious passage over it.

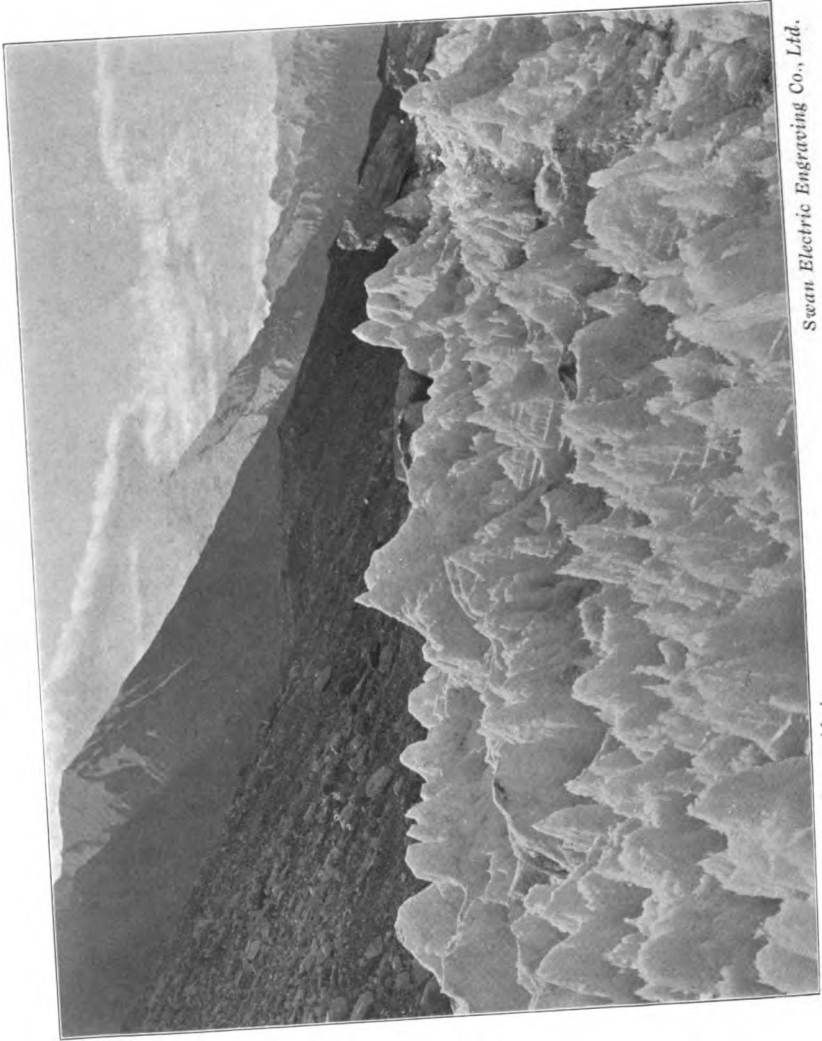
This shows the end of an ice-gorge at the base of a huge sérac through which a river descending from above plunges out of sight. Rivers are often met with on these glaciers. On the Siachen they are especially numerous, flowing in channels cut along the depressed lines of junction of the many longitudinal ice-streams, of which the trunk of that greatest of Asia's glaciers is composed. In traversing the Siachen at almost any point for 25 miles of its course, ten to a dozen more or less formidable rivers have to be crossed, some of them seething, roaring torrents of large size, from which, were one to fall into them, there would be no escape. Even from some with gentle currents the chance of escape would be small, since the water in them is often more than six feet deep, and the smooth ice-walls of their gullied channels, 20 to 30 feet high, are vertical or undercut. The channel-edges have to be approached with caution, being rounded or bevelled back by melting.

The steeper portions of glaciers, especially near their heads, are more or less broken into ice-falls and séracs, the individual ice-masses composing these being separated by large and deep crevasses. Some ice-falls can be ascended, others cannot. This one belongs to the latter class. Its face is studded with large séracs.

In 1906 we ascended a large portion of the ice-fall here seen on a feeder of the Shafat glacier in the Nun Kun as a practice-effort. It furnished an excellent test for one's climbing powers, being covered with a profusion of séracs of great size, near the summit of one of which you see us climbing. The edge of the main glacier appears far below at the left-hand lower corner.

It is needless to attempt to describe to this audience the nature of the work involved in such ascents. Suffice it to say that, where they are practicable, the work partakes somewhat of a gymnastic character and may be compared with that of rather stiff rock-climbing, with the added element of the slippery, insecure nature of the substance one is climbing on. We have more than once negotiated ice-falls and sérac-areas, in comparison with which those of the Glacier du Géant are but child's play.





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Dr. W. Hunter Workman, photo.

Ice-Pinnacles, a form of ice-penitente, developed from glacier-ice, each pinnacle having a water-pocket at its base. Photographed in Siachen Glacier in 1912.
Great hillock-moraine behind pinnacles.

Sérac-areas, in particular, with knife-edge-arêtes of brittle ice sloping into abysses on each side, have provided the most risky traverses it has been my fortune to make. Such a one occurred in 1903 on the Chogo Lungma, when we crossed an extremely broken section, of the nature of which this large blackened sérac and those in front of it afford an example. In ascending the Chogo Lungma in 1902 we traversed a snow-covered mountain-side behind, where our track is seen. Here is the face of an ice-fall some 500 feet high, the top of which is just being reached. This shows the descent by our coolie-caravan of a projecting ice-front in the centre of the chief sérac-belt of the Chogo Lungma. The coolies are using the steps that had been cut for them down the steep surface. This descent represents the result of more than an hour's argument with them to induce them to undertake it, finally clinched by the promise of a good bakhshish.

You are all familiar with the pocket-holes filled with water seen in glacier-ice formed by the melting in of thin patches of mud, sand, gravel, or shale-splinters heated by the sun. On Himalayan glaciers these pockets occur in vast numbers very near together over large areas, and bear a direct causative relation, which I cannot now consider in detail, to ice-pinnacles from six inches to more than twelve feet high, that develop between them.

The feature of them that concerns us this evening is that the pinnacles, at the base of each of which is a pocket from one to more than six feet in diameter, containing water from six inches to over two feet deep, often dot the glacier-surface as thickly as wavelets on a water-surface ruffled by wind, as may be seen in this view. The result is that locomotion on such areas is rendered difficult, even when the gradient is nearly level and the ice otherwise unencumbered. One is obliged to give heed to every step to avoid falling and being impaled on the sharp ice-points or stepping into water-pools up to one's knees. On the Siachen, where this picture was taken, it was almost impossible to place a theodolite or camera-stand level.

Here you see the same formation from a nearer point of view, which shows the individual pinnacles to better advantage. You notice the horizontal, glistening lines across the faces of the pinnacles. These are projecting ridgelets of ice, the remains of ice-layers that formed on the surface of the water in the pools at night as they day by day pushed their way deeper into the ice. I have counted as many as ten of these

ridgelets on a single pinnacle. As here seen they are a photographic curiosity, being only rendered visible by the angle at which they were illuminated by the early morning sun.

I also show this glacier-table rather as a curiosity than as a feature of mountaineering importance, although on two occasions I have seen them so abundantly in evidence as to necessitate considerable attention to find a passage between them. This is the largest complete one among thousands I have seen. It was found on the Biafo in 1908. Ordinarily the ice-pedestal is only two to three feet high. In this case it was more than twelve feet, the height of the whole being some twenty feet, and the length of the boulder-top about the same.

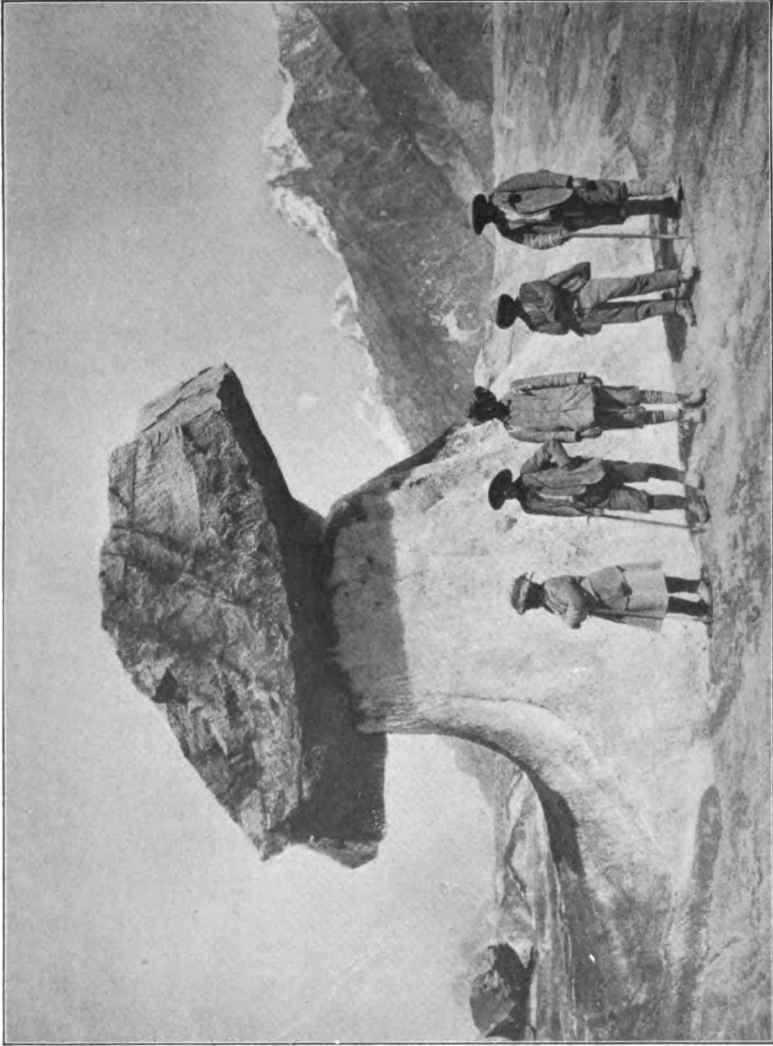
After a table is formed, the southern section of the upper end of the pedestal becomes bevelled off by reflected heat. This disturbs the equilibrium of support of the boulder, which finally slides off, invariably, so far as I have observed, in the southern half of the circle, leaving the pedestal standing as an ice-column, which is soon sharpened off by melting into a pointed ice-pinnacle as seen in this view. The boulder lies to the left of its base.

This ice-column, which formed the pedestal of a glacier-table, was photographed on the Bilaphond glacier in August 1911. It was over 30 feet high. The flattened boulder lying near its base, its former top, was of about the same length. The column was much more massive than it here appears, and its diameter, as well as its height, was undoubtedly greater at the time the boulder slid off.

This is the same column photographed again from a slightly different angle in July 1912, although it might not be recognised as such in its altered form. Its height had been reduced by melting to about 16 feet, and its substance sculptured into this beautiful group of ice-pinnacles. The same boulder lies near its base. The coolie-caravan is marching up a high median moraine behind.

Here is a row of pinnacles developed in a still different manner. The highest are 38 to 40 feet high. Portions of the Siachen, Tarim Shehr, Gasherbrum, and Kaberi glaciers were covered with great numbers of such pinnacles.

Large areas of the Siachen were difficult to cross on account of the upper ice-layers being split up into immense sérac-masses over a hundred feet high in consequence of lateral pressure. Here you see the opposed faces of two such masses, and part of our caravan finding its way through the interval



Dr. W. Hunter Workman, photo.
Seven Electric Engraving Co., Ltd.
Glacier-Table met with on Biafo Glacier, in 1908. Height of pedestal, 12 ft. Height of upper edge of boulder-top, about 20 ft.

between them. At many places we had to climb over them instead of between them.

Glaciers are not immune to avalanches any more than mountains are. Indeed they are more exposed to them than the flanks of such mountains as would be selected for ascent, and especially those portions that are overhung by high and steeply rising peaks and walls. In such instances regard for safety demands that the glacier-edges on the sides dominated by mountains should be avoided, and a passage sought along the glacier-centre, or even better toward the opposite side. Avalanches falling from high mountains often strike across glaciers for long distances. I think I referred in a former paper before this Club to a gigantic avalanche with a front of half a mile and falling some 7000 feet, the edge of which missed our caravan by a bare ten minutes, that raced for a mile across an upper section of the Chogo Lungma glacier with a terrific roar, attended by a vast rolling cloud of snow-dust. Anyone who has crossed the course of one of these great avalanches knows the kind of labour entailed by the torn, gullied and excavated chaos striated with shaggy ridges and piled high with blocks of ice left behind it.

This slide shows the very remarkable, and, so far as I know, unique of its kind, south wall of the upper portion of the Hispar glacier. This wall, as here seen, extends for 21 miles without a break. It is heavily ice-clad throughout its whole extent, and acts everywhere as a feeding reservoir of the Hispar, pouring down upon it a constant succession of glaciers and avalanches, which form such intimate connection with the Hispar that no interval between the glacier and the wall is visible. Avalanche-beds score the glacier-edge beneath the whole length of the wall. We approached it at one point to study some ice-formations, but what we saw there inclined us to take no further risks and to keep afterwards at a safe distance.

In this connection might be mentioned the danger incurred at the beds of ice-gullies, or at the bases of ice-precipices or ice-fronts, from stones falling either singly or in showers, loosed from the ice above by melting. A coolie on the Chogo Lungma, who persisted in approaching our base camp through an ice-gully instead of over the more difficult hillock-surface above, as directed, was knocked senseless by a falling stone. Such places can usually but not always be avoided. In ascending the Shafat glacier in the Nun Kun we were obliged, as no other path existed, to run the gauntlet of showers of

stones bounding down a steep ice-front some 300 feet high. About midway beneath its base a stone the size of a fist whizzed like a cannon-shot between myself and a porter behind, within two feet of our heads.

This Balti coolie from one of the Saltoro villages acted as my personal attendant and carrier of instruments during the exploration of eight glaciers in 1911. When we reached Goma, the last village, on our return to finish the exploration of the Siachen in 1912, he presented himself and asked to accompany the expedition again in the same capacity. As he was one of the most faithful and efficient coolies I have known, I was very glad to take him on again, and he went with me to every point reached during that summer's work.

On our return from the Siachen in 1911, during our last day on ice, as we were about to leave the Bilaphond glacier, we were favoured with a parting salute from an avalanche, which came down between two granite peaks just ahead to meet us and shot across the surface we were on the point of traversing. The effect of its reverberating thunder of farewell was accentuated by a majestic cloud, which rolled away over the devastation left in its track.

In conclusion may I express the hope that the foregoing statement of personal observations and experiences may serve to justify, in your opinion, the inference implied in the title, that Himalayan glaciers have a mountaineering aspect, and afford a field for effort worthy of the attention of the mountaineer ?

THROUGH THE MARITIME ALPS.

By J. J. BRIGG.

OFTEN from some peak of the Pennines had we looked south and west across the sea of clouds that hid the Italian plain to the mountains that encircle it like a coast-range, with Monte Viso standing out like a giant lighthouse; and from the Viso itself in 1903 we had marked the blue outline of the Maritimes and made plans for traversing their ranges from where Alps and Apennines meet at the Col di Tenda to Castel Delfino, where twelve years ago our trip had ended. It was not until July 1914 that we were able to carry out part of these plans.

I should not have ventured to inflict on my fellow members

the story of our trip had not the Maritimes been so long neglected in the pages of the JOURNAL. The district is so clearly marked out as a happy hunting ground for the middle, or more than middle, age of a mountaineer and is so accessible, while many parts of the Alps are and will be for a long time closed to us, that I may hope to be forgiven.

Thirty-five years ago Mr. Coolidge described in the JOURNAL (vol. ix. page 336) his important tour of the district, made in the summer of 1879. He has amplified his story in his recently-published 'Alpine Studies,' and has also embodied his notes in the always invaluable 'Ball.' Mr. Douglas Freshfield, in the JOURNAL (vols. ix. page 385, and xi. page 228), has described in his happiest manner the coast ranges, the seaward valleys, and some part of the mountains, and in his recently-published book, 'Joy in High Places,' my friend Mr. Reginald Farrer has written some vivacious chapters on the Baths of Valdieri, Ciriogia, and other parts of the district. Further than this hardly anything has appeared in English climbing literature, but our Italian friends have thoroughly worked out the whole district and their labours are summarised in G. Bobba's 'Guida delle Alpi Maritime,' a model of what a climbing guide-book should be.

Cuneo, our starting-place, is an important provincial capital lying at the head of the S.W. bay of the great plain of Lombardy and Piedmont, about forty-five miles S. of Turin and overshadowed by the Maritime Alps, which, starting from the Col di Tenda, run in a curve north-westwards to the Col de l'Argentière, where they meet the Cottian Alps. From Cuneo three routes, following as many valleys, lead into the mountains. First, the Col di Tenda carriage-road runs S. up the Val Vermegnana past Limone, and, avoiding by means of a tunnel the highest ridge of the Col di Tenda, descends by the Val della Roja past San Dalmazzo di Tenda to Ventimiglia on the Riviera. The railway follows the same route and is now open as far as Tenda on the S. side of the col. The Col di Tenda itself is strongly fortified, and all access to it forbidden.

The second route, also a carriage-road, diverges from the last one at Borgo San Dalmazzo (8 miles from Cuneo) and runs up the valley of the Gesso to Valdieri and the Baths of Valdieri under the Cima dell' Argentera.

The third route is the great carriage-road over the Col de l'Argentière from Italy into France, running up the valley of the Stura past Vinadio. Some writers hold that it was the pass used by Hannibal when he invaded Italy.

The political frontier does not follow the physical, for when Victor Emmanuel bought the assistance of Napoleon III. by the cession of the county of Nice he stipulated for the retention of many of the valley-heads for the sake of the sporting rights.

We—that is, Eric Greenwood, my brother W. A. Brigg, and I—began our trip last year in the Val di Pesio, a mountain glen lying to the E. of the valley of Limone, and we zigzagged across the heads of the valleys to Vinadio on the Argentière road.

We left Turin on July 12 for Cuneo. The plain was gasping in the summer heat, but the mountains were half-hidden in storm clouds. After dining in Cuneo at the *Albergo Reale Superga* (not *quite* so overpoweringly grand as its name) we sent off our luggage by the motor service to the Baths of Valdieri and drove out south-eastwards between fields of maize and corn and orchards of mulberry trees, most of which had given up their leaves for the silkworms to turn into silk, while the villages on the way were full of peasants in their Sunday best. The great feature of the Italian side of the Alps is the sudden spring of the mountains from the almost level plain, and thus after a few miles we left the sun-scorched fields and at Chiusa di Pesio entered the glen that leads up into the hills. The valley is narrow and thickly wooded with walnut and chestnut trees, and its meadows are watered by a clear-flowing trout-stream. In the very heart of it we came to the Certosa di Pesio, a secularised Carthusian monastery, now used as an hotel. Mr. Coolidge, in *Ball's Guide*, sums up his own and Mr. Freshfield's impressions of its situation in the phrase 'one of the loveliest in the Alps.' All Carthusian monasteries—the Grande Chartreuse, our London Charterhouse, Mount Grace in Yorkshire, Karthaus in the Schnalsenthal, Tirol—seem to have a distinctive charm, and the Certosa at Pesio is not behind the others, although its builders seem to have abandoned the earlier austerity of their order for some of the magnificence of the late Renaissance. We were lodged in fine vaulted bed-chambers, and supped in the open cloister off trout lifted from the aquarium (if that is the right word) in the orchard. There are said to be 130 rooms and half a kilomètre of corridors, and the cloisters enclose three sides of a garden with a fountain where we had our morning swim, while after dark the fire-flies wandered like errant jewels among the bushes. Such a resting-place should come *after* a week's climbing, not before it. It was here, according to a wall-tablet, that Cavour used to come to 'mature his mighty projects and to repose his wearied mind.'

Next day we had a training walk on to the ridge which ends

in the view-point of the Besimaua, but there was mist on the hills, so we did not reach it. We were surprised as we descended to be saluted by rocks rolled down the slopes by some cowherds on the alp above us. They may have thought we were spies, or it may have been their idea of 'eaving 'arf a brick' at strangers, but it was as unpleasant as it was unusual.

We started next day intending to cross by the pass of the Croce di Malaberga to Tenda. The path runs up the valley from the Certosa, and we made the mistake of taking the west instead of the east side of the stream. All this valley is full of coppice-wood, and many a promising path ends in an abandoned charcoal-burner's platform on the steep hillside. We had some lamentable struggles up steep slopes of scrub until we found ourselves on a lovely grassy col, vivid with sheets of Alpine rose in bloom.

As the mist drifted about we had, in the valley to the West, glimpses of a little town which was certainly not Tenda and could only be Limone, so down the limestone terraces we went and very soon were at the town, and as we found out later that the Malaberga is forbidden ground we had really lost nothing. The Italian frontier here is strongly fortified, and anywhere near a fort is *tabu*; but we had no trouble here or at any part of our trip, and indeed scarcely saw a soldier or a gendarme. But of course we crossed the heads of the valleys, while the frontier was generally much lower down.

Victor Emmanuel in 1860, when Nice was ceded to France, arranged to retain the heads of the valleys in Italy for the shooting, as he said, but the arrangements suited big gun shooting and fortifications quite as well as chamois hunting.

The driving-road over the Col de Tenda is also '*vietato*', while the railway dives under the col in a tunnel. We rode with an Italian deputy visiting his constituents at Tenda, but he had been a climber before taking to politics and gave us a good deal of useful information about our route. The service at present stops at Tenda, but the line is being carried forward to Ventimiglia in zigzags along the line of the valley, each angle of the zigzag being a curved tunnel in the mountain. Tenda hangs to its cliff like a row of swallows' nests, and beyond it the road descends rapidly. Motor 'buses were running to Ventimiglia, but we took our seats in a superannuated horse omnibus for the few miles to San Dalmazzo di Tenda. We had hoped to stay at the monastery here, but they no longer take in passing guests, and we had to be content with a modern up-to-date hotel. San Dalmazzo is or has been a lovely place, at the junction

of two side valleys with the main stream, but a huge railway embankment now crosses the valley and the charm is gone.

It was intensely hot next day, and we felt we had done a good day's work when we had walked up a road deep in white dust to Briga Marittima, about two miles up a lateral valley, a dim little town built on the old Southern plan of keeping all the sunshine outside, and all the smells inside its narrow alleys. We lunched at a pleasant little hotel outside the town and opposite the new railway station.

From San Dalmazzo we struck westwards up the Valle della Miniera ('the Valley of the Lead Mine'). A good path took us from the zone of chestnuts to the bare grassy uplands. The mine is a huge undertaking, which 'Ball' says 'has been known for many centuries and alternately worked or abandoned, as circumstances rendered it profitable.' At present it is closed, but work is going on about the dams on the stream, probably for an electric light installation. Near the head of the valley we came upon the Italian navy's dinner hour and found pot-luck in some excellent hot macaroni. With a little more enterprise we might have crossed the Monte Bego (9426 ft.), the great belvedere of these parts, which overhung our path on the right, and appears to have been a sort of sacred mountain or gathering-place of the prehistoric clans. We did diverge round its W. flank to see the Laghi delle Meraviglie, clear icy tarns, deriving their name from the figures chipped on the surrounding rocks, about which much has been written. Mr. Coolidge dismisses them as the work of idle shepherds, and some of them may be only that, but there are other theories about them. I have been allowed to read the MS. of a paper by Mr. Bicknell, an Englishman living at San Remo, who has spent several seasons in copying them and believes them to be of high antiquity. Their number in this and neighbouring valleys, running into thousands, makes the shepherd theory doubtful, unless the ancient shepherds were a good deal more industrious than those of to-day. To judge only from the very small bit of ground we visited, the origin of the inscriptions must be sought in the fact that the glaciation of the rocks has here left large polished surfaces with a bright *patina* upon them, on which, with a stone or a hammer, it is very easy to *punch* rather than *chip* figures which are permanent.

In the Sinai Peninsula similar effects were produced on the glassy surface of the granite by the wayfarers who hammered out the famous 'Sinaitic inscriptions' of 1500 years ago. Mr. Bicknell considers the Monte Bego markings to be prehistoric,



CIMA DEI GELAS,
from the Passo di Fenestrelle.



PUNTA DELL' ARGENTERA
(E. face), from the Genova Hut.

but there is one rock-face, called the 'Visitors' Book,' where the date 1829 has assumed already a quite respectable appearance of antiquity. Personally we only found two or three very meagre markings, and the archæologist of the party gained very little credit from the divergence.

Climbing a grassy col—the 'Passo d'Arpetto'—into a stony glen, the home of many marmots, we descended along slopes of pine-woods into Val Gordolasca and reached the Mountain Inn of St. Grat about 7 P.M., a quite sufficient shelter for the night, with good beds, and a bathing pool a stone's-throw away. Although it is in Italy, the people keep Greenwich time and speak French.

The pass—Passo di Prals,—which we traversed next day, is a pleasant grassy ridge rather than a pass. It runs up to the Cima di Valletta on the frontier, where there is a boundary-stone and a wide view over the foothills to the sea. Our route led us down a pine-clad valley and across the main torrent to the Sanctuary and inn of Madonna delle Finestre.

The chapel here has long been a famous place of pilgrimage, and the hotel has grown up to accommodate the pilgrims. Here, at a little over 6000 ft. above the sea, we had left behind us the heat of the valleys and were even above the forest-line. The Sanctuary lies rather bleakly on the slope of a hill, with jagged peaks towering above it, across the valley. A 'window' formed by the rocks on the Caire della Madonna gives its name to the place. A few men were playing a strenuous game of 'road-bowls' on the level space in front of the chapel, with a plank to keep the 'woods' from invading the interior and a sturdy, cheerful *curé* tried to fill up his idle moments (and they were many) by selling picture-postcards and souvenirs.

At the head of the valley towers a peak with two summits divided by a steep glacier—the Cima dei Gelas (10,286 ft.), which we climbed next day in four hours.

The route leads over winter snow and easy glacier, and then up a couloir of easy snow on the side of the mountain, not seen from the hotel, and we were soon on the N. summit. The air was calm and clear as crystal, and the view of marvellous beauty. Far across the plains of Piedmont and Lombardy we could see Monte Rosa and a snow peak still further away just peering over the foothills. Westward the whole range of the Pennines (with the Mont Blanc group only hidden by the great mass of the Viso), then the peaks of the Tarentaise, the Cottians, and our neighbours the Maritimes. But the distinction of these Maritime panoramas is that to the S. the



eye follows the coastline of the Riviera, with, far away across the sea, a vision of Corsica.

The Cima dei Gelas (Gelas is the local dialect, meaning a glacier or glacier-covered region) has a place in the country legends. It was once covered with rich green pastures where dwelt three beautiful maiden sisters. To protect them from the attacks of the men of Entraque the mountain covered itself suddenly with snow and ice (this story was apparently not invented at Entraque).

An easy descent, with many glissades, brought us down in time for a late lunch and an afternoon of idleness.

The track over to Ciriegia, which we took next day, leaves the head of the valley before reaching the foot of the Cima dei Gelas and crosses the Col di Ladro into the valley of the Boréon. Down this valley we descended through a fine forest of pine-trees, and as we reached more level ground we followed a well-constructed timber-shoot, carefully built of large trunks of trees. When we reached the little hotel at Ciriegia our hearts fell—it was a burnt-out ruin, like those only too familiar in the war pictures of to-day. However, we found that business was 'carried on as usual' in a few remaining chambers, and there was just room for us. The hotel lies high above a fork of the main valley, down which runs the road to St. Martin Vésubie (formerly called St. Martin Lantosque) and Nice. A few Niçois tradespeople, freed from duty in this their dull season, drove up during the afternoon and organised an informal Tango-tea in the *salle à manger*. The fall of the Boréon torrent over the waterfall of the Cascade de la Ciriegia, close to the hotel, is quite worth the journey up the valley—a gloomy dungeon-fall hung with trees and ferns, and a torrent of crystal-line clearness. Let me say here that one of the charms of the Maritimes and a compensation for the lack of glaciers is the abundance on every route of clear running streams and flashing springs. Leaving Ciriegia next day, we struck westwards up through the pine-woods to a stony waste with patches of winter snow and crossed the Col de la Ciriegia under the W. cliffs of the Cima Mercantour. On the other side the snow afforded good running and glissading down slopes and gullies into the Val della Valletta.

This is part of the hunting ground of the King of Italy, and we saw several chamois as we descended. The valley runs fairly level for a time, and we had glimpses of the Argentera, the highest summit of the Maritimes. The peak does not look very inviting from this side, but many climbs and variations

on this face are noted in Bobba's Guide. In the afternoon we came to the 'Terme' or 'Hot Springs' of Valdieri. The 'Stabilimento' is in the grandiose Italian style, 'as big as a mill,' as we should say in the North. The piazza, with a noble colonnade of arches, is 300 ft. long, though part of it is closed in by a glazed partition. In the vast corridor upstairs two coaches could drive abreast. The bath-house is more modest, and some of the older masonry baths are a little suggestive of rock-hewn tombs. The hot springs (145° F.) issue from the hillside on the other side of the torrent and run down a rocky slope. The speciality of the place is a kind of fungus (*Uva labyrinthiformis*) which is quite as ugly as its name, and grows on pieces of wood placed in the flow of the hot water. It is said to be good for obstinate old wounds &c.—they must be obstinate if they can resist it. A little distance away is a fine spout of clear cold water, which from the inscription on the fountain seems to act as a sort of 'after-cure' for those who survive the hot-water treatment. Some Italian Senior Classic has had carved above it the verse :—

' CANICULÆ FLAGRANTIS TEMPERO SITIM,
VIRTUTEMQUE FIRMO THERMARUM ;
DONA MIHI HÆDUM, BANDUSIÆ ERO.
MDCCCXXX.'¹

Here we had our bad weather and spent two days in the piazza, waiting each day for the Italian papers which came by the motor car from Cuneo. At the Terme our track crossed that of Farrar and Gask, though unluckily we failed to meet them. The Stabilimento of Valdieri is a good starting-place for the Cima dell' Argentera (10,883 ft.), the 'Queen of the Maritimes,' first ascended by Mr. Coolidge in 1879. There are only two acting guides in the district, and we were fortunate in securing one of them. Bartolomeo Castellano of Entraque was his name, and he brought small baggage beyond the family umbrella and a nice little yellow dog. After mid-day *pranzo* we walked up the many zigzags that lead out of the main valley to the Lourousa glen, which descends from the Col de Chiapous (8268 ft.). There is a well-made track all the way, occasionally interrupted by winter snow. We passed the foot of the long

¹ The Dog-star's raging thirst I quench,
The hot springs' virtues seal ;
Give me as fee Bandusia's kid,
Like her your ills I'll heal.

snow-slope up which Mr. Coolidge made the first ascent of the Argentera and came to the Genova Club hut, 2000 ft., below the col on the other side. It lies very low for an Alpine hut (6468 ft.) in a grassy basin near the chalets, with the Argentera in face. We were a little crowded—six young Italians and a German botanist—but it was a perfect evening, and we watched the stars come out above the peaks before turning in to our mattresses. In the Maritimes one has time to enjoy the dawn and even the sunrise in peace. We left at 5, Castellano led the way, and, in the words of the Apocrypha, 'the young man's dog went with them.' 'Parisi' was his name, and our humorist suggested that he went in front and said to his party 'Par ici, Messieurs.' He went with us up the steep scramble out of the valley and across the slope above to the edge of the small glacier at the 9000 ft. line, where we left him to guard the sacks and the umbrella, but I think we could have taken him to the summit. Our guide's local knowledge shortened the time, but there was nothing beyond an easy scramble—indeed we did not put on the rope. Again we had the same glorious view as from the Cima dei Gelas—two perfect days that of themselves were worth all the journey from home. In descending we walked across a shoulder of the mountain to the Col de Chiapous without descending to the hut. The track follows a depression—the Passo del Porco ('Pig Pass': 'Phœbus, what a name!') 'Perchè porco, Michele?' 'Non capisco, Signor.' After a lazy walk down the glen we came to the Stabilimento again at 3.45. It would be quite possible to do the whole climb from the Baths.²

Next day we started for Vinadio. An hour's walk up a well-graded cart track, by a clear foaming torrent, brought us to the beautiful level upland valley, Val Valasco, where is the King's hunting-lodge. The mule-track leaves the road just before reaching the level valley, and mounts by zigzags up the slopes of the peak called on the French map Punta Giaveiretta. In two hours we found that our path divided, and we took the left-hand branch, making the same mistake that Sir Martin Conway's party made (see 'The Alps from End to End'). Very soon we found ourselves looking down into a branch of the valley we had just left. I cannot agree with Sir Martin that it would have paid to cross the ridge on the right-hand sky-line, as I have had the advantage of seeing the other side, where the rocks

² Bobba, p. 135, calls it 'Passaggio del Porco imtempo frequentato dei pastori e dal bestiame.' Perhaps some semi-mythical pig once traversed it and gave it its name.

rise steeply from an icy lake. Sir Martin, for lack of time, had to return to the Baths, and by the rules of the game as laid down by himself he could not have a second shot. We could, and, after deep thought, we concluded to go back and try the other branch. This we did, and after losing $1\frac{1}{2}$ hours of time we began to mount again. We crossed what I believe is called a pass, where there is a stone hut, but the track very nearly reached the top of the peak (Rochers Val Miana) at 9500 ft. We had a very fine view of the Viso and Chambeyron groups, but it was 3 P.M. and we had not much food, so we hurried on. Our descent was helped very much by long slopes of snow, and we were soon at the mountain lake Lago Soperiore della Sella. The path runs along a ridge to the E. of the lake, returning to it at its N. end. The lake was still half frozen and blocks of ice floated in it, while to the right were 'the dark rocks that gird the dark lake round.' Over these must have run the alternative route that we had considered on the way up, and we agreed we had done well to avoid it. The path led easily up to the Col Valletta, and we looked down the glen that led to our destination—Aisone and Vinadio. There are good paths on all the hills for the use of Alpine troops, and we could see several forts perched on the hilltops and commanding the main roads. Beyond this the way became very rough and stony, and I think that after winding down the steep cliffs to the valley-head the best route probably lies along the true left of the glen all the way, and over the shoulder of the hill into the main valley, but following this route the footpath and a promising 'Wasserleitung' became a good deal confused, and the only human being we found was a poor *crétin* scraping out a bowl of polenta in a dirty cow chalet. So, after having descended for nearly two hours from the col on the (true) left side of the glen, we crossed the torrent to the other side and soon found an intelligent peasant who put us right. A drink of warm milk at a chalet came at a very good time, for we had had very little food and had been out twelve hours. Some of us were indeed quite reconciled to a night under the stars, such as we had spent once before after coming down from Monte Viso, but it seemed just worth while to push on a little further. The summer dusk had come upon the hayfields and the hedges, and when we had rounded the shoulder that guards the glen on the left (for we had recrossed the torrent), and picked our way through a dark hamlet and down a stony road into the main valley of the Stura, it was quite dark. Before us were the lights of Aisone, terraced above the valley, and as we wound under its suburbs the dim buildings

above us looked like some old town of magic, while constellations of fire-flies flitted between the poplars and made a lacework of glowing light on the meadows below. The great road from France into Italy over the Col de l'Argentière runs through Aisone, and the wind and dust of the highway sweep down its narrow streets. Things looked unpromising, but very soon we found a grocer's shop with a cavernous wine-shop at the back. We asked for soup, and in ten minutes the hostess brought us a lordly tureen of good Scotch broth ('*minestra*' is too feeble a word for it). Never was soup so good as then, after thirteen hours' high walking and very plain living. After some delay we started in a ramshackle cart for Vinadio, half an hour's drive up the dusty Argentière road. Vinadio is quite an important little military town, astride of the great road, but its inns are of other days. We went to the best and found it built round a coach-yard, with galleries to the bedrooms and the better sort of guest-rooms. It was the patronal feast of St. Anne and we felt a touch of home, for our own 'parish feast' falls about St. Anne's day. Our inn, like the inns in 'Don Quixote,' was full of people eating and drinking inside or stabling their mules outside in the busy yard, though it was already eleven of the clock. We thought ourselves lucky to get even one bedroom for the three of us. I should have said it is called the 'Albergo della Italia.'

But 'Vinadio' is not the 'Baths of Vinadio,' whither we drove the next morning. The sun shone gaily on the people of the valley coming in to the feast, and we were content to sit and watch the Sabbath along the country-side. The road goes along the (true) left bank of the Stura, and to reach the baths we crossed the river at the picturesque hamlet of Pianche and wound up into the upland side valley where is the hotel at the Baths or Terme di Vinadio (4188 ft.). Ball's Guide describes its situation as 'situated in a narrow glen, cold and comfortless except in the finest weather.' We were lucky in having that kind of weather, and we found the place all that we could wish. The situation in July, at any rate, is sunny enough, and the hotel excellent. Bradshaw's 'Dictionary of Bathing-places' says 'the accommodation is excellent, the society very select,' and we were only sorry that our Italian was too limited to allow us to make better acquaintance with our fellow guests.

The Baths themselves are interesting. The hot water (143° F.) runs down the face of the rock, and various cavern-like Turkish and vapour baths are built against it. With such natural

advantages as hot water laid on free a good deal more might be done. We had a pleasant walk next day up the side valley opposite the hotel and over into the valley of Santa Anna, a rather bare open valley in which is the large pilgrimage church of Santa Anna di Vinadio. The wooden floor slopes in a very unusual way from the door up to the high altar, and the 'accidents column' of the local press for many years is illustrated in the votive pictures hung on the walls by thankful supplicants.

A battery of mountain artillery was exercising in the valley, and the officers' mess was in the modest inn at the church. On returning to our hotel at the Baths we read of the Caillaux trial and of the Austrian ultimatum to Serbia, but that 'cloud no bigger than a man's hand' seemed of less importance than the question whether the railway at Modane had been repaired after the floods.

Our walks among the hills were at an end, and we finished our trip by riding in the public automobile down to Cuneo. Main roads like this one are now intolerable in any other fashion, and even as it is one has to swallow a good deal of other people's dust. We drove through the fortifications and town of Vinadio, and through Demonte and Borgo San Dalmazzo in the hot and fruitful plain, and came into Cuneo in the forenoon of a market day. The principal street has long, cool, vaulted arcades on both sides, and the shops are distinctly good. The hotel Barra di Ferro, where we lunched, is famous for its *cuisine*, and has a pleasant inner court trellised with creepers.

We left by the noon train, and in Turin stayed in comfort at the Hôtel Suisse Terminus opposite the station (on our way out we had paid 9 lire to be driven in the hotel motor 'bus to a more fashionable place, and it rather rankled), and came home by the Mt. Cenis. The block at Modane necessitated a change of trains and some delay, and we had three hours at Chambéry, a pleasant old French town, with some savour still of the old Counts of Savoy in its narrow courts, its château, and its church. A French regiment marched in while we were there, but that was all we saw of war's alarms, and on Thursday, July 30, we had even more room than usual on the train from Paris to Boulogne.

NIGHTS OUT IN THE ALPS.

BY WM. T. KIRKPATRICK.

IN the early days of mountain-climbing, before the time of Alpine huts, the pioneers usually had to bivouac the night before a long expedition. They were able to choose their shelter, often under a big rock, sometimes supplemented by a wall of loose stones. They could provide themselves with blankets and a good supper, and we have many pleasant accounts of the cheery evenings spent with their guides over the camp fires before they turned in to rest.

Nowadays, when a night is spent in the open it is usually an involuntary incident, and takes place at the end of an expedition, instead of at the beginning. The benighted party must take what shelter they can get—if, indeed, they are lucky enough to find any at all. They have no extra clothing except what they have carried for the climb, and their stock of food has probably run all too low.

Though most mountaineers—even those who climb with good guides—have probably been benighted at some time or other, it is natural that those who climb without guides should more often suffer this inconvenience. They may have started later than they would have been allowed to do by guides; they may have lost time in finding the way, or have lost the way altogether; they may have spent too long on their halts; and, generally speaking, they probably go slower than a party led by guides who know every foot of the way, and the time that should be allowed for each portion of the expedition. In fact a night out is one of the penalties that guideless climbers must expect to pay. It is one that Hope and I have paid fairly often; and in the course of twenty years' climbing without guides we have been benighted on no less than fourteen different occasions. In ten of these expeditions we were traversing either a mountain or pass, so that our descent was over unknown ground, and in one of the remaining four instances we should have avoided the night out if we had not made a variation of our morning's route on the way back. But in our case the principal cause appears to have been general casualness—*i.e.* starting late, long halts, and deliberately going on to complete the expedition instead of turning back to save being benighted. On several occasions we might have pushed on and perhaps avoided a whole night out, but after

about twenty hours the desire for sleep usually impelled us to curl up, if it was possible to do so.

We had our first night out in our first season, 1895. Having left Cortina much too late for traversing the Cristallo, we then dallied over the attractions of Tre Croci, and I well remember toiling up the long scree slopes leading to the col, with the sun due south and our faces due north. When we reached the summit we did not do much more than stamp and turn round, notwithstanding the fine effect of the evening sun on the red rocks. At 7 P.M. we regained the col, and in half an hour could have reached the Hotel at Tre Croci; but though an unknown glacier, with an awkward way off it, and then a long valley lay between us and friends who might have been anxious at our non-appearance, we decided to take the risk.

We got down the glacier all right; but when we reached the end of it in the dusk, and found ourselves on a debris slope, we realised that we were above a steep wall which stretched right across the valley. We had no lantern, but made casts in different directions in the hope of finding a way down, and each time were brought up on the edge of a chasm, whence the sound of the stones which we threw down indicated a drop too steep to negotiate in the dark. This was the first time we employed this very useful method of ascertaining the inclination of the rocks below us. Provided the stone continues to hit the rock at short intervals, ending up with a rattle indicative of screes at the bottom, it shows that one may safely try the descent; but if it falls with a thud after a long interval, it means a steep wall. On this occasion we got no encouragement from the falling stones, and finally decided that we must stay where we were. Save for a little chocolate our provisions were exhausted, and we lay down supperless in the open. The weather being warm I was lightly clad, and, in my inexperience, had no extra clothing, and wound some of the rope round me for warmth. At daylight we found ourselves about twenty yards from the wooden ladder which led off the rocks, and having reached Schluderbach astonished the hotel by our consumption of omelettes. This expedition taught us always to carry a lantern, some extra clothing, and extra food for emergencies. With regard to the lantern it is a golden rule never to part with it, however certainly you think that it will not be wanted. To leave it under a rock to be picked up on the return journey is to invite disaster. If a night out looms ahead, it is best to push on

as fast as you can till you are pulled up by darkness. Then light the lantern and rest, and eat at leisure. A good meal may convert what would have been a miserable trudge into a comparatively pleasant after-dinner walk.

Our next season in the Alps taught us that it is not wise to attack a mountain straight out from home, without any preliminary training, and my experience during our first climb that year, and since, leads me to subscribe to the opinion that, in the Alps at least, if one could always start from a comfortable hotel, and in proper training, one would never suffer from mountain sickness. On that occasion we started from Cantine de Proz, which is, or was, anything but a comfortable hotel, from which to traverse the Vélán. When we had reached a height of about 10,000 feet, we both began to go badly, felt slack and faint, and had to stop constantly and take a bit of chocolate or a mouthful of brandy; but by dint of perseverance we reached the top at one o'clock. We began the descent by the glacier de Valsorey, on the N. side of the mountain. This was the first glacier we had crossed two on a rope, and we consequently treated it with some respect, if not awe; and in order to avoid descending as far as the Col de Valsorey, we struck off to the E. and came down a long and very steep snow couloir to scree slopes below, reaching the bottom at 8 p.m., and then started for Ollomont. We had much wandering in the dark, crossing numberless streams, and finally reached some nice dry ground among the fir-trees, where Hope suggested resting for a few minutes. I weakly gave in, and found that hardly had we sat down, when he settled himself to sleep, which was his object in stopping, and there was nothing for me but to do likewise. At 2 a.m. we shook ourselves up, and went on again, finally reaching Ollomont at 5.30 a.m., where we slept at a very primitive inn on rush mattresses. That evening there was a great thunderstorm, which destroyed considerable portions of the path we had come down, and did much damage to crops; so it was fortunate, at least, that we had not been a day later.

In 1899 we left Stein one afternoon for the Trift hut with a porter named Lucks, who did not bring us the good fortune that might have been expected. As he said he knew the way, we left the route to him, and after crossing the Steinlimmi he brought us high up on to the ridge between the Drosi and Thierberg glaciers, when he said he could not get down, so we had to return the way we had come up. After several attempts, we managed to hit off a good route, except for one

awkward corner, which brought us round by an easy terrace to some rocks above the Thierberg glacier. We had lost so much time that it was now dark. Having lit the lantern, we climbed down some very slabby, wet rocks; but, as they became too steep to continue the descent in the dark, we scrambled up again and bivouacked under a large rock, which did not afford a very complete shelter from the wind and fine rain which fell intermittently through the night. Notwithstanding this, we were rather in want of water; whenever there seems any danger of being benighted it is always wise to make sure of water, if possible, and to fill one's flask at the first available place. In the morning however we discovered a regular rivulet, caused by the rain, running almost actually underneath us. At daybreak we had a brew of hot cocoa, the apparatus for which had become, and has ever since remained, an essential portion of our equipment, and, having reached the hut, dismissed our porter, who admitted that he had never been that way before. Twelve years later, we tried again to follow what is certainly a good short cut to the Trift hut, as it saves a descent of nearly 1000 feet to the Trift glacier, but completely failed to find it.

Early in the following season we started from the Saleinaz hut, intending to climb the Aiguille d'Argentière from the Col de Chardonnet; and after a meal at the col, which lasted $1\frac{1}{4}$ hours, we started up at 9.50. The mountain was in bad condition—there was much step-cutting; and, having got up about two-thirds of the way, we turned back on a slope, which was in an avalanchy state. If we had got up this slope, we should soon have joined the ordinary route from Lognan; but the last slope on that route would certainly have been in an impossible condition. Our descent was delayed by driving wind and snow-storms; and by the time we reached the Jardin d'Argentière, it was dark. We were already wet through, and directly after we had taken shelter under an overhanging rock, a desperate storm of wind and rain, thunder and lightning came on. The rock was a slanting one, and we had to sit crouching forward, while some rain found its way in, and a regular drip established itself on to our backs. No sooner was our lantern lit than it was blown out, and being Hope's lightest pattern, weighing $1\frac{1}{4}$ ozs., it is not surprising that the whole thing was whirled away. It was impossible to have a proper meal in total darkness, and we were only able to eat such things as prunes and chocolate, which we could get at by rummaging in our sacks, and as

we kept on chewing them intermittently for some hours, it was several days before we regained our usual appetites for these delicacies. We dozed off occasionally, and at 4 A.M. began to move our stiffened joints. When the sun came out, we had a hot breakfast on the moraine at the other side of the Argentière glacier, and reached Argentière none the worse. This was the most unpleasant night out we have experienced; but it was to a large extent atoned for by our witnessing the finest thunderstorm I have ever seen in the Alps; and as we sat crouching under our stone, we saw the magnificent cliffs of the Aiguille Verte and Les Droites lit up again and again with the most brilliant flashes of lightning.

In 1901 we reached the Schwarzegg hut intending to climb the Schreckhorn by the ordinary route, and were told by a well-known member of the Club, who had been up the mountain two years before with a guide, that we must make for the lowest gap in the Schreckhorn-Lauteraarhorn arête. The mountain was in very bad condition, and in trying to reach this point—which was of course quite off the route—we crossed endless icy and snow-covered couloirs, and some of them twice, as we finally abandoned the point we had been making for, and reached the arête farther to our left, but still some way from the Schrecksattel, where we ought to have been. It was now 5 P.M.—too late to retrieve our error and too early to descend, as stones were rattling all over the face of the mountain below us. So we waited till 7 P.M., and started down, but were brought up by another shower of stones, and it was not till 8.15 that we got into a long couloir that seemed likely to lead us down. It was icy, with a layer of rather rotten snow, and we had to go down backwards, kicking steps all the way, and moving only one at a time, for about 2000 feet, so that it was nearly midnight when we got over the bergschrund, dug a hole in the snow, and went to sleep. This was the only night we have slept in the snow. I cannot say that we slept comfortably, as we were sitting on the shafts of our ice-axes, which were stretched across the bottom of our hole. Luckily the weather was fine; and, though the height was about 11,000 feet and it was decidedly chilly, we did not suffer very much from cold, and after two hours were sufficiently rested to continue the descent, and capable of cutting down some icy patches by lantern light. As we reached the corner where one turns off to enter the big couloir, there suddenly appeared the head of our misguiding friend,

who was not in the least anxious about us. It was some consolation to us that he returned unsuccessful, while a guided party the same day succeeded, but slept on the Strahlegg.

The following year, after climbing the southern Aiguille d'Arves, we slept in a hay-barn in the valley, on our way to Valloire, these quarters being a decided contrast to our hole in the snow on the Schreckhorn. This mischance was caused by bad weather in the morning, which delayed our start till 8 A.M., and the fact that we deliberately chose a very difficult route up the rocks; but we could have got on to Valloire had not our supply of candle run short, as we were on a fairly good path when we turned in. We have ever since been careful to carry enough for all emergencies.

In 1903, on the way up the Charmoz, which was in very bad condition after fresh snow, we kept on the Nantillons glacier the whole way to the foot of the Charmoz-Grépon couloir, as we did not like the look of the snow-bridge leading on to the Rognon. In descending, however, we took to the Rognon; but as the bridge leading off it looked no more inviting from that side than it had from the glacier on the way up, we went on down the rocks, and finally found that we could not get off them. As it was just dark we thought it safer not to try climbing up again, and luckily found a large overhanging rock, with a water-supply close by, where we had a hot supper; and then scrambled under a fallen rock where we were well sheltered from the rain, but not entirely from the cold gusts of wind, which made their way through. The moral of this misadventure was that the difficulties of the ascending route must have been very bad and the alternative descent be very certain, before you forsake the known for the unknown.

Our first expedition in 1905 was a new route up the Nesthorn by the N.W. arête. It was a hard climb, the rocks were plastered with fresh snow, and we ourselves were in bad condition; the result being that, having left the Ober-Aletsch hut at 4.30 A.M., we reached the top of the mountain at 9.10 P.M.; began the descent by the ordinary route at 10.30 P.M., in bright moonlight, and regained the hut at 5 A.M. next morning. It cannot be said that we were benighted on this occasion, as an hour's halt just below the top, while waiting for the moon to rise, just gave us comfortable time for a hot supper, and except for this we were scarcely delayed at all by want of

light. A detailed account of this expedition has already appeared in the JOURNAL.¹

Early in the following season we started for the Grosse Zinne, and this expedition exemplified the difficulty of following written instructions on a Dolomite mountain. Having emerged from the gully which leads on to the S. face, we followed the terrace too far along, and after some fairly easy rocks tried the very last chimney leading up. It proved a difficult one, and so narrow that at last Hope's head nearly stuck, and though one must use one's head in climbing rocks, it should be the inside portion of it only. As he was unable to make farther progress, I came up and tried to climb up outside the chimney, but found it very exposed and wet, and we turned, feeling sure that, as this is a boot and not a Kletterschuh mountain, it could not be the right way. So we gave it up and started homewards; but just before leaving the face we caught sight of a small cairn above us, and, in spite of the late hour, climbed up the right route and reached the top. As we had during the day wandered over nearly the whole face of the mountain, we had got rather confused, so that when, just at dusk on the descent, enveloped in mist and rain, we reached a well-marked terrace path, and, walking along to its end, looked down a gully into the depths of the big chasm between the Grosse and Kleine Zinne, it seemed steeper than the one we had come up twelve hours previously. We knew that if it were the right chimney we could descend it in the dark, but, if wrong, not a pleasant place to pass the night in, so we returned to the shelf and sat down with our backs to the wall. We had, unfortunately, lightened our rucksacks before leaving the scree, and, having exhausted our provisions during the day, had nothing for supper and breakfast but our emergency ration of kola chocolate, served hot. As we sat crouching on the shelf, pretty well wet through, we longingly watched the lights of the Misurina hotel, occasionally dozing off, and then walking about for a bit to try to keep warm. In the morning we found, rather to our disgust, that the chimney we had looked down was the right one, and, having descended it, met Sepp Innerkofler and two German ladies, who seemed relieved to meet us, and exclaimed with much emphasis that we must never climb without guides again!

Later in the same season we did our first climbing in the

¹ 'A Day and Night on the Nesthorn.' *Alpine Journal*, vol. xxiii. p. 470.

Bernina group. Bad weather on the Swiss side drove us over to the Italian, by a long but easy day from the Roseg glacier restaurant over Fuorcla Chapütschin and Passo Tremoggia to Chiareggio, where we found what was, I think, the most primitive inn we have met with in the Alps. The front door opened into a cavernous kitchen and living-room, where we fed as best we could. We had been shown a double-bedded room, but when we retired for the night we discovered that only one bed had been allotted to us, the other being reserved for the peasant landlord. The usual struggle for fresh air ensued, but as the landlord occupied the strategic position immediately under the window, he got the best of it, until he began to sleep noisily; and when he awoke in the morning he was unpleasantly surprised to find that he had been breathing fresh air without knowing it, and blamed the window-catch. We thought it too far to climb the Disgrazia from here, so made an easy stage next day to a shepherd's hut on Alp Sissone, which we were glad to find empty, but well supplied with hay, so that we scarcely felt the absence of blankets.

I cannot say why we were so late in starting next morning for the Disgrazia, but my diary shows that it was 5.40 A.M. when we left the hut. We knew nothing of the route which we proposed to take, or its difficulties, except what we could see from the hut of the long ridge which we had to gain at the Passo di Mello, and follow to the top over the Pizzo Pioda. This was the only occasion on which, at so early an hour as 5 A.M., we thought a night out was not improbable. Though the way was long, there was no particular difficulty till we joined the route from the Cecilia hut, when we had some trouble from fresh snow. The 'Climbers' Guide' gives the time by our route from the hut to the top as 8½ hours. We took 9 hours, including halts, reaching the top at 2.45, where we enjoyed ourselves so much that we did not leave it till 4.35, which did not improve our chances of sleeping between sheets. On our way down, we could have diverged to the Cecilia hut for the night; but one is apt to assume that there ought to be a good path down every valley, and we counted on finding one down Val Torreggio, while we knew that there was a first-class hotel at the end of it. When we reached the Corna Rossa Pass it was dusk, and we could see that the upper part of the descent was bad going, but the roofless Capanna Corna Rossa was not inviting, and we dropped down into a wilderness of boulders. The map indicated a path

through them, and there may be one, but we lit our lantern and climbed up and down, under and round a succession of most prodigious boulders—the worst boulder field we have seen or felt—and we were agreeably surprised to get clear of them by 11 P.M. As there was obviously no chance of reaching shelter, we made ourselves comfortable, Hope choosing a large flat rock in the open, till the morning breeze drove him into a less exposed spot. The walk down to Chiesa next morning was long, and the sun, pleasant at first after our rocky bed, soon reminded us that we were on the S. side of the Alps, and descending to an altitude of only 9000 feet.

Later in the season we seriously risked another night out by starting very late from the Mountet hut for the Grand Cornier after a night's heavy snowfall, which made the going slow, and we witnessed a very fine sunset from the top, but were in bed at Alp Bricolla soon after midnight. It would seem hard to get benighted after crossing the easy Windjoch, but we managed it in 1908. We got off the Südlenspitz arête at 6 P.M., and in half an hour could have been at the Mischabel hut; but, owing to the state of our larder, it would have meant a light supper and breakfast, followed by a descent to Saas, and a dull valley journey to our objective, S. Niklaus, whereas we expected to reach the same place before midnight by going over the Windjoch, and so save a day. We reached the col at 6.50 on a splendid evening, and by the time we had descended the snow-slopes and crossed the glacier were tired and hungry, and our supper halt lengthened out to an hour and a half. About 11 P.M. we were glad to reach a cow chalet, but both it and its human occupants were so filthy that we pursued our way, and about an hour later chose a good sleeping ground, as we knew that the rest of the way to S. Niklaus lay through an almost pathless wood. We did not save a day.

Having reached the primitive accommodation of Fornet in Val Grisanche at 10.30 P.M. one night in the following year, we started at 10 A.M. next morning without either map or guide-book, and with very vague ideas as to where our peak, the Rutor, lay. We toiled slowly up in the heat of the day, and milk at the first cool alp delayed us still further. We finally reached the ridge at 5 P.M., and, late though it was, spent another hour in bagging the peak, an hour which just cost us our night's rest. We raced down the Rutor glacier, only pausing to take breath and admire a wonderful sunset on the Mt. Blanc range, and expected to find a hut near a

small lake. We found the lake, but not until we had walked right into it, which reminded us that it was time to light up. We had missed the hut in the dark, and went on down slabby rocks to a second lake and a third, and then, giving up all hope of the hut, had supper on an old moraine, and lay down in a fairly sheltered hollow. It was a hot walk next morning down to La Thuille, but we had enough energy left to diverge from the path and admire the fine waterfalls of this valley.

When we have failed to do a mountain we always put it on our waiting list, and try to complete it as soon as may be. The Fleckistock's claim to a position on this list was very slight, as our previous attempt to climb it consisted in leaving the inn at Färnigen in broad daylight, walking half a mile up the Meienthal, sheltering for an hour in a hay-barn, and then walking down to Wassen. In 1911 we travelled out to Göschenen, and went straight to the Voralp hut. We got up the Fleckistock all right, but were slack and slow. We did not know much about the other side of the mountain, and, though we wanted to get down to the Meienthal, did not attempt to traverse, and after descending on the same side, had to climb up a terrible 1000 feet of snow couloir to the Fluh-Lücke. The descent on the other side was perfectly easy, and there seemed no reason why we should not sleep in a bed. However, at dusk the usual wall intervened between us and the valley, and we slept on the wrong side of it. In the morning we found that the way down, which we had missed, was not even a goat path, but only a few steps cut in the turf leading round an awkward corner, and quite impossible to find in the dark.

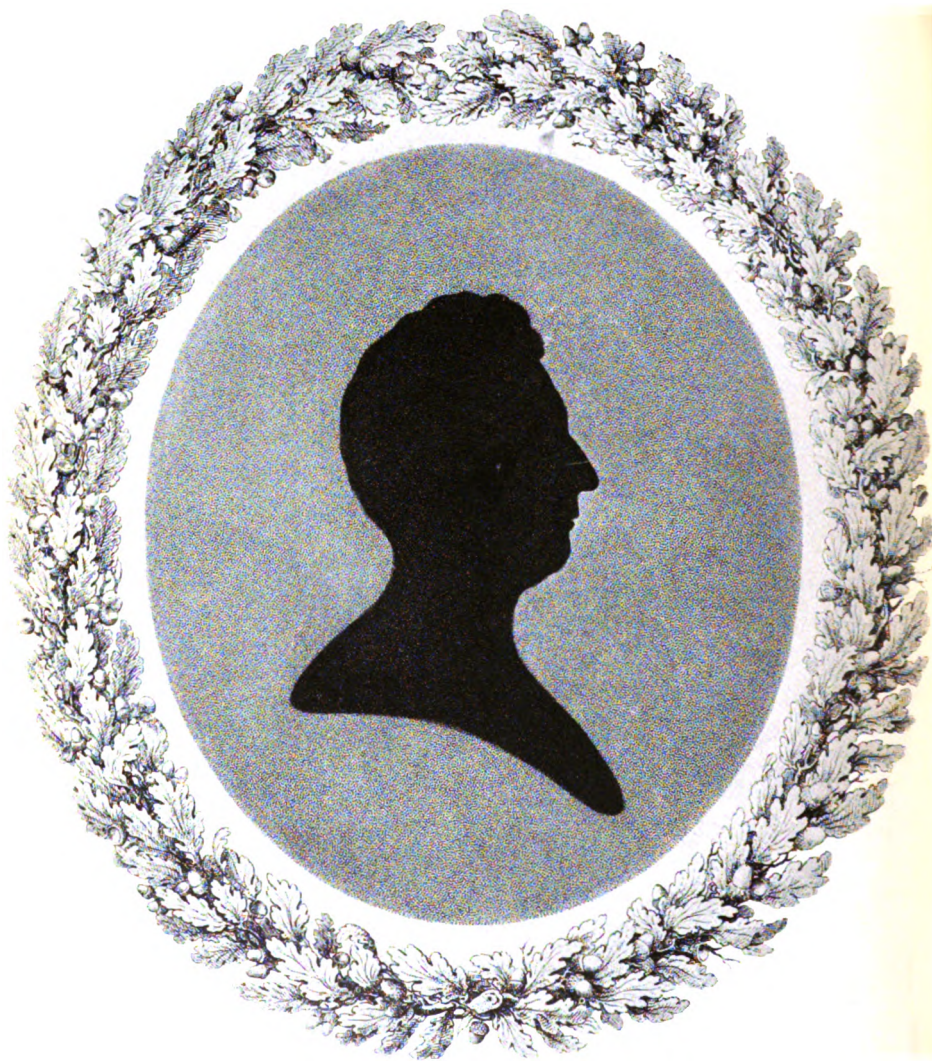
Our last night out at the head of the Forciolline glen, after an ascent of Monte Viso in 1913, was described in a recent paper.² The cause of this night out was exceptional—*astispumante*—at the well-provisioned Quintino Sella hut.

Later on in that season a hut walk from Cogne to the Herbetet chalets nearly ended in a night out, and lest the Editor, who was, as usual, making new expeditions at Cogne, should some day tell the story against us, perhaps I had better tell it myself. We despatched a porter early in the afternoon with a sack of provisions and the key of the hut, which we had obtained from the King's Garde-Chasse, and told him that he could give it to us when we met him on his way back, as we did not like to leave the hut unlocked. The path leading

² *Alpine Journal*, vol. xxviii. p. 269.

from the valley to the Herbetet glen, which is plainly marked on the map, we found in bad repair and broken away in places, and we reached some huts at 7 P.M., but they were locked, and as we knew there were lower huts and had not met the porter, we pushed on for the higher ones, but—there weren't any, though we reached the moraine before we were convinced. We were by this time extremely hungry, the only solid food we could produce between us being six macaroons and a little chocolate, which we devoured. Though we had sent everything on by the porter, Hope, from some inward premonition of impending trouble, had luckily refused to part with the lantern, and it was now badly wanted, as the going was unpleasantly rough in the dark, and it was 10 P.M. when we regained the chalets, and looking through a back window in one of them, which we had foolishly not discovered before, saw our well-stocked rucksack—so near and yet so far! We had heard that a key was kept hidden somewhere near the door, and we spent half an hour searching every nook and cranny, but without result. We did not like to commit the crime of *lèse-Majesté* by breaking into a royal residence, however humble, even if we could have done so, which was doubtful, so there was nothing for it but to turn tail. The descent by the damaged path was bad, and we reached the valley soon after midnight. Shortly after leaving Cogne we had by chance bought three fresh eggs as an addition to our store. I felt that I could not face an egg without bread or biscuit, so I beat one up, added some brandy, and found it good. Hope did not fancy this, and lit a fire in order to cook his egg in the embers. We had never cooked an egg in this way before, and while he was blowing his best to keep the embers going, the egg suddenly exploded with a loud report, but I believe he secured most of it. There was an egg and a half each. We could each do as we liked with one egg, but after the explosion I refused to risk my remaining half egg, and insisted on my safer method of consuming it. We were so refreshed that we almost enjoyed the moonlight walk down the valley, and reached the hotel at 2.30 A.M. All the way back we were quite mystified as to the porter's fate. Was he dead? or had he drunk too much of our methylated spirit before he began the descent? Was he still wandering somewhere about the hillside looking for us? In any case we decided that he was a born idiot, and the heat of our anger would have kept us warm on the coldest night. Next day we found that it was we who had taken the wrong path, and





COLONEL MARK BEAUFOY, F.R.S., &c.

"UTILITER SPES ULTIMA VIXISSE."

the porter the right one, which is a goat path, much more direct and now invariably used but not marked on the map. We lost nothing in the way of climbing, as the weather that morning was bad, and we joined the Editor, who, in his holiday mood, was engaged in shying stones at a peculiarly aggressive cock which disturbed the hotel at all hours of the day and night with a most discordant note. In the afternoon we returned to the Herbetet chalets, and had a successful expedition next day.

In looking back over the tale of our nights out, we are reminded that on most of them we suffered more or less from cold and discomfort. On some of them, such as those spent on the Schreckhorn and below the Chardonnet glacier, we suffered considerable hardship. But they have all formed part of our experiences in the Alps, and there are few of us who can wish that any of those experiences had not been undergone.

NARRATIVE OF A JOURNEY FROM THE VILLAGE OF CHAMOUNI,
IN SWITZERLAND, TO THE SUMMIT OF MOUNT BLANC,
UNDERTAKEN ON THE 8TH OF AUGUST, 1787.

By MARK BEAUFOY, Esq.

(Read to the Royal Society on December 13, 1787.)

WITH A NOTE BY DOUGLAS W. FRESHFIELD.

THE desire of ascending to the highest part of remarkably elevated land, is so natural to every man; and the hope of repeating various experiments in the upper regions of the air, is so inviting to those who wish well to the interests of Science, that being lately in Switzerland, I could not resist the inclination which I felt to reach the summit of mount Blanc.

One of the motives, however, which prompted the attempt, was much weakened by the consideration, that I did not possess, and in that Country could not obtain, the Instruments that were requisite for many of the experiments which I was anxious to make: and the ardour of common curiosity was diminished when I learned that Dr. Paccard and his guide, who, in the year 1786 had reached the supposed inaccessible Summit of the hill, were not the only persons who succeeded in the attempt; for that five days before my arrival at the

foot of the Mountain, Me. de Saussure, a Professor in the University of Geneva, had gained the top of the Ascent.

But while I was informed of the Success which had attended the efforts of M. de Saussure, I was told of the difficulties and dangers that accompanied the undertaking; and was often assured with much laborious dissuasion that to all the usual obstacles, the lateness of the Season would add the perils of those stupendous masses of snow which are often dislodged from the steeps of the Mountain; together with the hazards of those frightful Chasms which present immeasurable Gulfs to the steps of the Traveller, and the width of which was hourly increasing.

M. de Bourrit, whose name has often been announced to the world by a variety of Tracts, and by many excellent drawings, confirmed the account, and assured me that he himself had made the attempt on the next day to that on which M. de Saussure had descended, but was obliged, as on many former occasions, to abandon the enterprise.

Having formed my resolution, I sent to the different Cottagers of the Vale of Chamouni, from the skirts of which the mountain takes its rise, to enquire if any of them were willing to go with me as my assistants and my Guides; and had soon the satisfaction to find that ten were ready to accept the proposal. I engaged them all, and having announced to them my intention of setting out the next Morning, I divided among them provisions for three days, together with a Kettle, a Chafing Dish, a quantity of Charcoal, a pair of Bellows, a couple of Blankets, a long Rope, a Hatchet and a Ladder, which formed the stores that were requisite for the Journey.

After a night of much solicitude lest the Summit of Mount Blanc should be covered with clouds, in which case the guides would have refused the undertaking as impracticable, I rose at five in the Morning, and saw with great satisfaction that the mountain was free from vapour, and that the Sky was everywhere Serene.

My Dress was a white flannel jacket without any shirt beneath, and white linen Trowsers without Drawers. The Dress was white, that the Sun Beams might be thrown off; and it was loose that the limbs might be unconfined. Besides a Pole for walking, I carried with me Cramp Irons for the heels of my Shoes, by means of which the hold of the frozen Snow is firm, and in steep Ascents the poize of the body is preserved.

My Guides being at length assembled, each with his allotted burthen; and one of them a fellow of great bodily strength,





JEAN-MICHEL. CACHAT, DIT "LE GÉANT."

and great vigour of mind, Michael Cachat by name, (who had accompanied M. de Saussure) having desired to take the lead, we ranged ourselves in a line ; and at 7 o'Clock, in the midst of the Wives and Children and Friends of my Companions, and indeed of the whole Village of Chamouni, we began our March.

The End of the first Hour brought us to the Glaciere de Boissons, at which place the rapid ascent of the Mountain first begins. From thence, pursuing our course along the edge of the rocks that form the Eastern side of this frozen lake, we arrived in four hours more at the second Glaciere, called the Glaciere de la Cote ; where, by the side of a stream of water, which the melting of the snow had formed, we sat down to a short Repast.

To this place the Journey is neither remarkably laborious nor exposed to danger, unless that name should be given to the trifling hazard that arises from the stones and loose pieces of broken Rock, which the Goats, in leaping from one projection to another, occasionally throw down.

Our Dinner being finished, we fixed our Cramp Irons to our Shoes, and began to cross the Glaciere ; but we had not proceeded far when we discovered that the frozen snow, which lay in the Ridges between the waves of Ice, often concealed, with a covering of uncertain strength, the fathomless Chasms, which traverse this solid Sea : yet the danger was soon, in a great degree, removed by the expedient of tying ourselves together with our long Rope, which being fastened, at proper distances, to our Wastes, secured, from the principal hazard, such as might fall within the openings of the Gulfs. Trusting to the same precaution we also crossed upon our ladder, without apprehension, such of the Chasms as were exposed to view ; and sometimes, stopping in the middle of the ladder, looked down, in safety, upon an Abyss, which baffled the reach of vision, and from the bottom of which, the sound of the masses of Ice, that we repeatedly let fall, in no instance ascended to the Ear. In some places we were obliged to cut footsteps with our Hatchets ; yet, on the whole, the difficulties were far from being great, for in two hours and a half we had passed the Glaciere.

We now, with more ease and much more expedition, pursued our way, having only snow to cross ; and in two hours arrived at a Hut which had been erected in the year 1786, by the order, and at the expense of Monsr. de Saussure. The Hut was situated on the Eastern [? Western] side of a Rock, which had all the appearance of being rotten with age, and which,



in fact, was in a state of such compleat decay, that on my return the next evening, I saw, scattered on the snow, many Tons of its Fragments which had fallen in my absence; but the ruin was not on the side on which the hut was built.

Immediately on our arrival, which was about five in the afternoon, the Guides began to empty the Hut of its snow; and at seven we sat down to eat; but our stomachs had little relish for food, and felt a particular distaste for Wine and Spirits. Water, which we obtained by melting snow in our Kettle, was the only drink that we could bear. Some of the Guides complained of a heavy disheartening sickness, and my Swiss Servant, who had accompanied me at his own request, was seized with excessive vomiting, and the pains of the severest Head Ache. But from these Complaints, which apparently arose from the extreme lightness of the Air in these elevated regions, I myself and some of the Guides were free, except, as before observed, that we had little appetite for Food, and a strong aversion to the taste of spirituous Liquors. We now prepared for rest, on which two of the Guides, preferring the open Air, threw themselves down at the entrance of the Hut, and slept upon the Rock. I too was desirous of sleep, but my thoughts were troubled with the Apprehension, that, altho' I had now compleated one half of the Road, the vapours might collect on the summit of the Mountain and frustrate all my hopes. Or if, at any time, the rest I wished for came, my repose was soon disturbed, by the noise of those masses of Snow which were loosened by the wind from the heights around me, and which, accumulating in bulk as they rolled, tumbled at length from the Precipices into the Vales below, and produced upon the Ear, the effect of redoubled bursts of Thunder.

At 2 o'clock I threw aside my Blankets, and went out of the Hut to observe the appearance of the heavens. The Stars shone with a lustre that far exceeded the brightness which they exhibit when seen from the usual level; and had so little tremour in their light, as to leave no doubt in my Mind, that if viewed from the summit of the Mountain they would have appeared as fixed points. How improved in these altitudes would be the aids which the Telescope gives to vision! indeed the clearness of the air was such as led me to think that Saturn's Ring might be distinguished by the naked Eye; and had he not been in the neighbourhood of the Moon I might possibly have succeeded. He continued distinctly visible after the sun was risen; and did not wholly disappear till

almost eight in the Morning. At the time I rose, my Thermometer, which was on Fahrenheit's scale, and which I had hung on the side of the Rock without the Hut, was eight degrees below the freezing point. Impatient to proceed and having ordered a large quantity of snow to be melted, I filled a small Cask with water for my own use, and at 3 o'Clock we left the Hut. Our Rout was across the snow; but the Chasms which the Ice beneath had formed, tho' less numerous than those we had passed the preceding day, embarrassed our ascent. One in particular had opened so much in the few days that intervened between M. de Saussure's expedition, and our own, as for a time, to bar the hope of any further progress; but at length, after having wandered with much anxiety along its bank, I found a place which I thought the ladder was sufficiently long to cross. The ladder was accordingly laid down and was seen to rest on the opposite edge; but its bearing did not exceed an Inch on either side. We now reflected, that if we should pass the Chasm, and its opening, which had enlarged so much in the course of a few preceding days, should increase in the least degree, no chance of return would remain. We farther reflected, that if the Clouds, which so often envelop the hill, should rise, the hope of finding, amidst the thick fog, our way back to this only place in which the Gulf, even in its present state was passable, would be little less than desperate. However, notwithstanding these alarming apprehensions, the Guides after a Moment's Pause consented to go with me and we crossed the Chasm. We had not proceeded far, when the thirst, which, since our arrival in the upper regions of the Air, had been always troublesome, became almost intolerable. No sooner had I drank than the Thirst returned, and in a few minutes my Throat became perfectly dry. Again I had recourse to the water, and again my throat was parched. The air itself was thirsty; its extreme dryness had robbed my body of its Moisture. Tho' I was continually drinking, the quantity of my Urine was almost nothing; and of the little there was, the Colour was extremely deep. The Guides were equally affected. Wine they would not taste; but the moment my back was turned, their mouths were eagerly applied to my Cask of Water. Yet we continued to proceed till 7 o'Clock, when having passed the place where M. de Saussure who was provided with a tent had slept the second night, we sat down to Breakfast. At this time the Thermometer was four degrees below the freezing Point.

We were now at the foot of Mount Blanc itself, for tho'

it is usual to apply that term to the whole assemblage of several successive Mountains, yet the name properly belongs only to a small mountain, of a Pyramidal Form, that rises from a narrow plain, which, at all times is covered with Snow. Here the thinness of the Atmosphere began to affect my head with a dull and heavy pain. I also found an acute sensation of Pain, very different from that of weariness, immediately above my Knees.

Having finished our repast, we pursued our Journey, and soon arrived at a Chasm which could not have existed many days; for it was not formed at the time of M. de Saussure's descent.

Misled by this last Circumstance (for we concluded that as he had seen no rents whatever from the time that he passed the place on which he slept the second night, none were likely to be formed) we had left our ladder about a League behind, but as the Chasm was far from being wide, we passed it on the Poles that we used for walking; an expedient which suggested to me that the length of our ladder might be easily increased by the addition of several poles laid parallel and fastened to its end; and that the hazard of finding our retreat cut off, from the enlargement of the Chasms, might by this means be materially diminished. At this place I had an opportunity of measuring the height of the Snow which had fallen in the preceding winter, and which was distinguished by its superior whiteness from that of the former year. I found it to be five feet. The Snow of each particular year appeared as a separate Stratum. That which was more than a twelvemonth old was perfect Ice, while that of the last Winter was fast approaching to a similar state.

At length, after a difficult ascent, which lay among Precipices, and during which we were often obliged to employ the Hatchet in making a footing for our feet, we reached and reposed ourselves upon a narrow flat, which is the last of three from the foot of the small mountain, and which according to M. de Saussure, is but 150 Fathom below the level of the summit. Upon this Platform I found a beautiful dead Butterfly, the only appearance which, from the time that I entered on the Snow, I had seen of any animal.

The Pernicious effects of the thinness of the air were now evident on us all. A desire, almost irresistible, of Sleep came on. My Spirits had left me. Sometimes, indifferent as to the event, I wished to lie down: at others I blamed myself for the expedition, and tho' just at the Summit, had thoughts of returning back without accomplishing my purpose. Of

my Guides, many were in a worse situation ; for being exhausted by excessive vomitings, they seemed to have lost all strength both of mind and body. Shame at length came to our relief. I drank the last pint of water that was left, and found myself amazingly refreshed ; yet the pain in my Knees had increased so much, that at the end of every 20 or 30 Paces I was obliged to rest till its Sharpness had abated. My lungs with difficulty performed their office ; and my Heart was affected with violent Palpitations.

At last however, but with a sort of Apathy which scarcely admitted the sense of Joy, we reached the summit of the mountain ; when six of my Guides and with them my Servant, threw themselves on their Faces, and immediately fell asleep. I envied them their repose but my anxiety to obtain a good observation for the Latitude subdued my wishes for Indulgence. The time of my arrival was half an hour after ten in the Morning : so that the hours which had elapsed from our departure from Chamouni were only twenty-seven and a half ; ten of which we had passed in the Hut. The summit of the Hill is formed of Snow, which spreads itself into a sort of Plain that is much wider from East to West than from North to South, and in its greatest width is perhaps thirty yards. The Snow is everywhere hard, and in many places is covered with a sheet of Ice.

When the Spectator begins to look around him from this elevated height, a confused impression of Immensity is the first effect upon the mind ; but the blue colour, deep almost to blackness, of the Canopy above him soon arrests his attention. He next surveys the Mountains around him, many of which from the clearness of the Air, are to his Eye, within a Stones throw from him, and even those of Lombardy (one of which appears of an altitude but little inferior to that of Mount Blanc) seem to approach his neighbourhood ; while, on the other side, the vale of Chamouni, glittering with the Sun Beams, is to the view directly below his Feet, and affects his head with giddiness. On the other hand, all objects of which the distance is great and the level low are hid from his Eye by the blue vapour which intervenes, for I could not discern the Lake of Geneva. Yet at the height of fifteen thousand seven hundred English Feet, which, according to M. de Saussure, was the level on which I stood, even the Mediterranean Sea must have been within the line of Vision. The Air was still, and the day so remarkably fine, that I could not discover in any part of the Heavens the appearance of a single Cloud.

As the time of the Sun's passing the Meridian now approached, I prepared to take my observation. I had with me an admirable Hadley's Sextant, and an artificial Horizon; and I corrected the refraction of the Sun's Rays by the Thermometer which I had brought with me, and by the descent of the Barometer as determined by M. de Saussure. Thus I was enabled to ascertain with Accuracy, the Latitude of the Summit of Mount Blanc, and found it to be $45^{\circ} 50'$.

I now proceeded to such other observations as the few Instruments which I had brought permitted me to make.

At 12 o'clock the Mercury in the Thermometer stood at 38 in the Shade. At Chamouni at the same hour, it stood, when in the shade, at 78.

I tried the effect of a burning Glass on Paper, and on a piece of Wood which I had brought with me for the purpose; and found, (contrary, I believe, to the generally received opinion) that its strength was much greater than in the lower regions of the Air.

Having continued two hours on the Summit of the Mountain, I began my descent at half an hour after 12. I found that, short as my absence had been, many new rents were opened, and that several of those I had passed in my ascent, were become considerably wider. In less than six hours we arrived at the Hut in which we had slept the night before; and should have proceeded much farther down the mountain had we not been afraid of passing the Glaciere de la Cote at the close of the day, when the Snow, from the effect of the Sun Beams was extremely rotten. Our Evening's repast being finished, I was soon asleep; but in a few hours was awakened with a tormenting pain in my Face and Eyes. My Face was one continued Blister, and my Eyes I was unable to open; nor was I without apprehension of losing my sight for ever, till my Guides told me that in a few days I should recover their use; and that if I had condescended to have taken their advice of wearing, as they did, a Mask of black Crape, the accident would not have befallen me. After I had bathed my Eyes with warm water for half an hour, I found, to my great satisfaction, that I could open them a little; on which I determined upon an instant departure, that I might cross the Glaciere de la Cote before the Sun was risen sufficiently high for its Beams to be strongly reflected from the Snow. But unluckily the Sun was already above the Horizon; so that the pain of opening my Eyes in the bright Sun Shine, in order to avoid the Chasms and other hazards of my Way, rendered

my return more Irksome than my Ascent. Fortunately one of the Guides, soon after I had passed the Glaciere, picked up, in the Snow, a pair of green Spectacles which M. Bourrit had lost, and which gave me wonderful relief.

At 11 o'clock on the 10th of August, after an Absence of 52 hours, of which twenty were passed in the Hut, I returned again to the village of Chamouni.

From the want of Instruments the observations I made were few ;—Yet the effects which the Air, in the heights I visited, produces on the human body, may not perhaps be considered by the Society as altogether uninteresting ; nor will the proof which I made of the power of the Lens on the summit of mount Blanc, if confirmed by future experiments, be regarded as of no account in the Theories of Light and Heat. At any rate, the having determined the Latitude of Mount Blanc may assist the Astronomical Observations of such persons as shall visit it in future ; and the knowledge which my Journey has afforded, in addition to that which is furnished by M. de Saussure's, may facilitate the ascent of those who, with proper Instruments, may wish to make, in that elevated level, experiments in Natural Philosophy ; a business which if others, who are better qualified, should not undertake, I shall myself, at some future period, probably pursue.

NOTE BY DOUGLAS W. FRESHFIELD.

The paper here reprinted is copied from the original MSS. hidden in the archives of the Royal Society. It remained unprinted until 1817, when it appeared in the February number of the 'Annals of Philosophy.'¹ Colonel Beaufoy contributed several later papers and notes to the same journal. He lived at Hackney Wick. His grandson, who dined with the Alpine Club a year or two ago, had no knowledge of any other Alpine papers of his ancestor. Bourrit's 'Lettre à Miss Craven' of August 13, 1787, reprinted privately by Mr. Montagnier in 1911, from which I venture to make a quotation, supplies some picturesque details as to Colonel Beaufoy's ascent.

Mes yeux depuis lors ont été enflammés, et ils l'étoient encore après le départ de M. De Saussure pour Genève, lorsque j'appris

¹ Vol. i. p. 97.

qu'un Anglois s'étoit annoncé ici pour monter le Mont-Blanc, ma situation m'ôta l'espoir de le suivre. C'étoit Monsieur de Beaufoix, Astronome et Physicien. Jeune, plein d'ardeur et de courage, il partit le mercredi 8 du courant avec dix guides et son domestique : je le vis atteindre le sommet le jeudi, et vendredi il fut de retour le matin. Il a beaucoup souffert ; il s'est cru aveuglé et son visage a été boursoufflé. Au pied du Mont-Blanc, il se sentit comme dans l'impossibilité d'achever sa course ; il se repentoit vivement de son entreprise. Cependant, arrivé au sommet, il en prit la latitude qu'il trouva de 45 degrés 50 min. 11 secondes. Il estima le Mont-Blanc être à 60 milles de Neufchâtel, ou à peu près vingt lieues en ligne droite de cette ville. Son épouse, qui n'a que dix-neuf ans, a joui du succès de son époux. Sensible, très instruite, c'est elle qui a tiré les résultats des opérations faites au sommet, avec une facilité dont j'ai été surpris, et qui prouve avec quel soin l'éducation des Angloises est soignée.

Sur l'insouciance que l'on éprouve au Mont-Blanc, je demandai à M. Beaufoix, et en présence de son aimable épouse, si sur le Mont-Blanc il avoit pensé à elle ? Il répondit par un non absolu ; le vin, les liqueurs y sont pernicieuses, et l'on y soupire qu'après de l'eau : à peine s'en étoit-on procuré, par la fonte, une bouteille, qu'elle étoit viduée, et plusieurs des guides n'étoient occupés qu'à souffler le charbon qu'ils avoient pour cet objet.

Jacques Balmat voulut descendre du côté du midi, pour y chercher quelques parties de rocs, et se trouva quelques instants dans l'impuissance de remonter, par l'affoiblissement dont la rareté de l'air étoit la cause ; il fut contraint de s'étendre sur la neige plusieurs fois pour reprendre haleine.

The next climber of Mont Blanc, in 1788, was Wm. Woodley. He was young (Bourrit), and is said to have been the son of a 'Governor of America,' and himself at a later date Governor of the Leeward Islands.

It may be serviceable, perhaps, to point out here that according to the author of 'La Montagne à travers les Ages,' Vol. II. p. 213 (Grenoble, 1904) the Bibliothèque Nationale at Paris contains a collection of 'Fourteen Narrations written by those travellers who have successfully attained the summit of Mont Blanc between the years 1786 and 1838,' made by Capt. Markham Sherwill, who climbed the mountain in 1825. It would be worth while if any one of our Members who may be in Paris would inspect and report on the volume. M. Grand-Carteret's note is given below in full.

Le capitaine Markham Sherwill, qui fit l'ascension du Mont-Blanc avec le Dr. Edmund Clark (25, 26, 27 août 1825) et dont la relation

fut traduite en français en 1827 avait constitué une importante collection d'images, de portraits, de brochures, de documents, de récits d'ascensions, de lettres originales d'ascensionnistes (il en possédait plusieurs de M^{lle}. d'Angeville) et cette collection était destinée à la Bibliothèque du Roi de Sardaigne, le Mont-Blanc et la Savoie appartenant alors au Piémont, mais des revers inattendus de fortune firent qu'elle reçut une autre destination, ce dont nous ne saurions nous plaindre, puis-qu'elle échut à la Bibliothèque Royale et se trouve aujourd'hui au Cabinet des Estampes de la Bibliothèque Nationale composée de trois volumes sous le titre suivant spécialement imprimé pour ce recueil factice: *Fourteen narratives written by those travellers who have successfully attained to the summit of this mountain between the years 1786 and 1838 collected by Markham Sherwill, one of the intrepid adventurers.*

Au point de vue des documents, c'est, certainement, la collection la plus importante qui ait été jamais faite, mais en images on n'y trouve que les estampes de petit format et de format moyen; en réalité toutes celles qui pouvaient entrer dans un in-4°.

La capitaine Markham Sherwill avait fixé sa résidence à Fontainebleau et son ouvrage sur Chamonix, né à la suite de recherches faites sur les lieux mêmes en fouillant de vieux papiers en un coin du prieuré, *A brief historical sketch of the valley of Chamouni*, fut publié à Paris en 1832.

M. Grand-Carteret gives an alleged portrait of Captain Markham Sherwill which might pass very well for a guide of that period.

ARTICLES ON THE FIRST ASCENT OF THE JUNGFAU

(COMMUNICATED BY HENRY F. MONTAGNIER.)

EXTRACT from the 'Gazette de Lausanne' of August 20, 1811, page 119, a small 8vo. journal appearing Tuesdays and Fridays. The only complete collection I have heard of is in the Lausanne Library:—

Après avoir passé trois jours et quatre nuits sur la glace, deux naturalistes suisses sont enfin parvenus le 3 de ce mois sur la cime de la *Jungfrau*, le plus haut des glaciers du canton de Berne, et ils y ont planté un drapeau noir. Jusqu'à présent cette expédition avait été regardée comme impossible.

Extract from the same journal, October 4, 1811, page 221:—

ARAU, le 30 septembre.

Voici des nouveaux détails sur l'intéressant voyage qu'ont fait le 1er, le 2 et le 3 du mois d'août au sommet de la montagne

dite *Jungfrau Horn* (La Vierge), les frères Meyer, d'Arau, fils du célèbre Rodolphe Meyer connu par son plan en relief et son atlas de la Suisse. Nous ne parlerons pas des préparatifs de ce voyage, des difficultés et des fatigues qu'ont éprouvés les intrépides voyageurs, et de la manière dont ils les ont surmontées. La description du voyage de M. de Saussure sur le Mont-Blanc, connue de tout le monde, donne une idée de cette périlleuse entreprise.

Les voyageurs étaient au nombre de cinq. MM. Meyer avaient pris d'abord trois personnes d'Arau et un paysan, et avaient recruté sur une montagne, pendant leur route, deux chasseurs de chamois ; mais arrivés au glacier de Loetsch ils renvoyèrent les trois premiers, qui ne pouvaient se faire à la marche sur les glaciers et à l'éclat de la neige, malgré la précaution qu'ils avaient prise de se couvrir les yeux d'un crêpe.

' Lorsque nous fûmes parvenus,' disent MM. Meyer, ' à la mer ou vallée de glace, d'environ trois à quatre lieues de long, qui joint le glacier de Loetsch à celui d'Aletsch, et nous ne voyions plus que le ciel, la neige et des ai-[here begins page 222] guilles de roches isolées, le premier phénomène qui attira notre attention fut de trouver à une hauteur où il n'y a plus la moindre trace de végétation, pas même de mousse ou de lichen sur les rochers, toutes sortes de feuilles des différens arbres qui croissent dans les vallées situées au-dessous de la montagne. Nous vîmes aussi sur la neige un papillon vivant de la classe des sphinx, et quelques abeilles engourdies ou mortes. La violence du vent avait emporté là ces insectes et ces feuilles ; c'est ainsi que la nature fait parvenir les semences des végétaux au-delà des mers et des montagnes, dans des isles où la main de l'homme n'a jamais semé ni planté. Nous trouvâmes deux chamois morts ; l'un ayant les jambes fracassées, l'autre desséché comme une momie. Vers le soir de la première journée, nous eûmes un peu de pluie. D'après les arrangemens pris pour notre première couchée, nous eûmes moins froid que nous ne l'avions craint.'

Le lendemain, 2 août, les voyageurs eurent à franchir des crevasses de plus de 50 pieds de largeur et d'une profondeur prodigieuse, qui n'offraient pour ponts que des bandes étroites de glace ou de neige durcie. Des torrens coulaient avec fracas au fond des abîmes. Un vent du sud-ouest, connu des montagnards sous le nom de *foen*, et qui, étant humide et chaud, amollit la glace et la neige, les força de reculer jusque vers l'endroit où ils avaient passé la nuit dans la crainte que les ponts de neige ne fussent plus assez solides. Vers deux

heures après-midi, le ciel s'étant éclairci, ils se remirent en marche, reconnurent la situation des glaciers environnans, et la manière dont ils sont unis ensemble. L'un des deux frères aperçut alors une surface de neige assez considérable, qui était d'une belle couleur de pourpre, provenant du reflet des lichens de cette couleur, dont étaient tapissés plusieurs rochers d'alentour.

Les voyageurs s'arrangèrent ensuite pour la nuit un nouveau gîte, où ils n'avaient point à craindre, à la vérité, les voleurs et les bêtes sauvages, mais bien les chutes de neige et de masses énormes de glace, dont le bruit épouvantable interrompit seul le silence de cette affreuse solitude. Le 3, à la pointe du jour, ils continuèrent leur marche; ils eurent à franchir encore nombre de rochers et de vallées, ce qu'ils firent à l'aide des cordes & de l'échelle dont ils étaient pourvus. Ils arrivèrent à midi au pied de l'aiguille qui forme proprement le sommet de la Jungfrau, et qui a environ 600 pieds de haut. Il fallut y gravir sur une croupe de neige escarpée; ils atteignirent enfin vers les deux heures cette cime, objet de leurs travaux et de leurs efforts.

Le sommet de ce pic a environ 12 pieds de diamètre; il est arrondi de toutes parts en forme d'émisphère. De là les voyageurs voyaient comme réunies à leurs pieds les trois longues aiguilles de Grindelwald, Lauterbrunn et Wallis, qui ont un pic de 2000 pieds, absolument inaccessible. Le coup-d'œil que leur offrait l'ensemble des vallées ou mers de glace (comme les nomment les montagnards) était unique dans son genre. MM. Meyer et leurs compagnons n'éprouvèrent, comme M. de Saussure et ses prédécesseurs Paccart et Balmat, ni malaise accompagnée de nausées, ni tintement d'oreille, etc. etc., mais seulement de la fatigue, ce qui les forçait de s'arrêter souvent pour se reposer quelques momens. Le peu de densité de l'air à cette hauteur et le défaut total d'écho rendaient le son faible et l'empêchait de se propager. Les seules montagnes que les voyageurs vissent distinctement se détacher des autres étaient le Mont-Blanc, le Mont-Rose, le Finster-Aarhorn, le Schreckhorn, le Moine, les deux Eiger, et huit à dix autres pics qui n'ont pas encore de noms. Le reste se perdait au niveau de la mer de glace. Il en était de même des montagnes [here begins page 223] inférieures qui se confondaient avec la pleine campagne, le tout présentant le coup-d'œil d'une terre en friche, où l'on distingue à peine quelques inégalités. L'œil plongeait avec une espèce d'effroi sur la vallée de Lauterbrunn, qui ressemblait à un vaste abîme ténébreux et sans fond.

Quoique le ciel fût parfaitement serein, les voyageurs ne distinguaient ni villes, ni lacs, ni rivières ; tout leur paraissait noir et obscur ; cet effet provenait peut-être de ce que la neige avait ébloui leurs yeux.

Pour laisser une trace de leur voyage sur ce sommet, ils y plantèrent aussi solidement que possible, en forme d'étendard, une pièce de toile noire de quatre pieds en carré. L'examen qu'ils ont pu faire de la nature de cette montagne les porte à croire que toute la chaîne entre le canton de Berne et le Valais est composée de montagnes primitives, et qu'elle ne présente aucune trace de formation par couches. Ils ont trouvé sur le sommet de la Jungfrau un mélange de mica, de hornblende (pierre à corne) et d'ardoise.

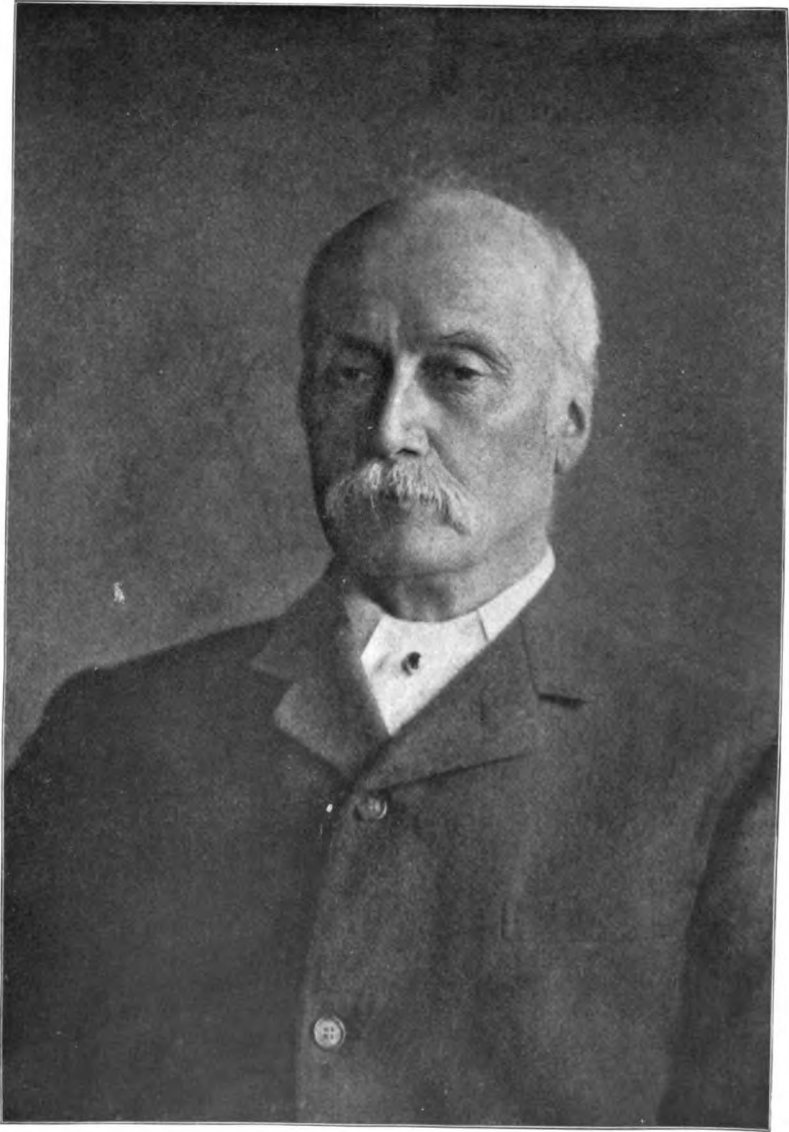
IN MEMORIAM.

JOSEPH H. FOX.

JOSEPH H. FOX, of Wellington, Somerset, though not quite an original member of the Club, ranks among the early mountaineers, and he kept up a devoted love for the Alps for more than fifty years. He was a sound climber, of great physical strength and activity, but debarred from undertaking the most ambitious attempts by a defect in vision, having lost the sight of one eye by an accident in early life.

We learn from his 'Holiday Memories,' printed for private circulation in 1908, that his first experience of the Alps was in company with F. F. Tuckett (afterwards his brother-in-law) in 1853. They visited Zermatt, where the Hôtel Mont Cervin had just been opened by Herr Clemens.¹ The Hôtel Monte Rosa was not opened by the Seilers until the following year. The St. Théodule pass appears to have been the most ambitious expedition that year. In 1856 his first experiences were gained of real climbing, again in company with F. F. Tuckett. From Chamonix they crossed the Col du Géant, at that time considered a formidable undertaking, and it appears never to have been attempted so early in the year as June. It is interesting to recall the names of their *four* guides. (It appears that they were obliged to take the first three on the rota before they might have the one they wanted—Victor Tairraz.) The names were Jean Tairraz, Gédéon Balmat, Simon Pierre Couttet, and Victor Tairraz. In addition they had Michel Tairraz as porter.

[¹ See Mr. Coolidge's *Swiss Travel and Swiss Guidebooks*, particularly the chapter 'The History of Zermatt,' pp. 251-322.]



JOSEPH H. FOX.

1832—1915.

Fortunately we have a record of their climbing outfit. 'One of our men carried a ladder, and Victor an axe slung over his shoulder. We had three ropes, and all carried alpenstocks.' (The modern ice-axe was only gradually evolved at a later date.) Their provisions, for the one day, were three fowls, a joint of beef, a joint of veal, two large loaves, and four bottles of *vin ordinaire*. No wonder we required a porter!

The ascent from the Montanvert went easily, but when the guides inspected the state of the snow on the Courmayeur side they considered it unsafe to attempt the descent, and it required a speech from Tuckett worthy of Thucydides to induce them to proceed. At last they consented to try the first 100 yards and then all went well, though the narrow snow arête along which they had to pass was in a condition to try the nerves of even more experienced climbers. They reached Courmayeur about 4 o'clock. A visit was paid to the Col de Chécouri, and then, from Aosta, they proceeded to Zermatt by way of the Col de Collon and the Col d'Hérens, a route that at that time was little known, and for years afterwards was spoken of with respect as the 'High-level route.'² They were detained by bad weather at the chalets of Prarayen, and had full leisure to study the whole process of cheese-making. At Evolena the hotel was only in course of construction, and the description of the accommodation in the mountain huts recalls to old mountaineers memories—happy certainly, but not altogether savoury. From Zermatt they crossed the Adler Joch, a pass that at that time was considered by most people quite new, as Wills' 'Wanderings in the High Alps' did not come out until later in the same year. It was regarded then as the highest pass in the Alps. They had for guides Matthäus zum Taugwald and Victor Tairraz, who had accompanied them from Chamonix, and a porter. They reached Saas Grund after an interesting expedition of 14 hours. At the little inn, the Curé, Herr Imseng, well known to later travellers, appears to have seen to their comfort. Returning to Zermatt, they ascended the Mettelhorn and then went over into Italy by the St. Théodule and the Cimes Blanches. This appears to be the first ascent of the Mettelhorn, and incidentally the first of Tuckett's many 'first' ascents.

At Gressoney they met young Mr. Smyth, who, the year before, had, with several friends, made the first ascent of the Hôchste Spitze by the now ordinary route and had ascended Mont Blanc without guides, in company with his brother, and Hudson, Kennedy, Ainslie, and Stevenson. At the time, as recorded in the classic

[² The 'High-level route,' as generally understood, leads from Chamonix via Bourg St. Pierre and Chanrion to Zermatt, the usual stages being (1) Col de Chardonnet (2) Col de Sonadon (3) Cols de L'Évêque, du Mont Brûlé and de Valpelline, the crest of the Col de Collon being only traversed, not crossed.]

'Where there's a Will there's a Way,' these were very rightly considered very remarkable feats.

The conversations that then took place appear to have given Tuckett and Fox their first information about the proposed Alpine Club and aroused a desire to join that body, which they both did in 1859. This journey in 1856 was probably the most interesting that Fox ever made, owing to the novelty of the expeditions, but it was followed by many others. In 1859 he made various ascents from Grindelwald, and began an acquaintance with Ulrich and Christian Lauener.

At Easter 1865 an interesting party met at the Pen-y-gwryd Inn at the foot of Snowdon, including William Mathews, C. E. Mathews, F. F. Tuckett, J. H. Fox, Moore, Craufurd Grove, Horace Walker, and Macdonald. C. E. Mathews, in a paper which he wrote describing the party, adds the names of W. S. Church, E. N. Buxton, Digby, and Morshead, but Fox is not clear that these were present at the same time as he was, while he adds Blackstone. In 1869 Fox visited the Dolomites and ascended the Marmolata etc.

In 1871 he was one of the party who had the remarkable escape from an avalanche on the Eiger, the description of which by F. F. Tuckett is so well known. ('A Race for Life' 'A.J.' v. 337 *seq.* It was also published in the first number of 'The World of Adventure'.)

Mr. Coolidge and Christian Almer, who were on their way to the Eiger Joch, witnessed the fall of the avalanche and thought that the party was certainly overwhelmed; but with intense relief they counted them when the dust cleared away and then heard a Jodel giving assurance of their safety. In 1911—forty years later—Coolidge and Fox met at the Little Scheideck and with Freshfield, who also happened to be there, they posted a joint greeting to Tuckett.

It was in 1871 that Fox appears to have first met François Devouassoud, who became a lifelong friend, and whose company he enjoyed on many alpine journeys, even in later life when unable to undertake serious climbs. He was one of the twelve friends who joined in erecting a monument at Chamonix to the good old guide, and by no one was Devouassoud's loss more truly felt.

Fox continued his visits to the Alps until 1911, when he was in his seventy-ninth year, with keen enjoyment of old scenes and old friends. He was through all his life a lover of athletics—an ardent cricketer in his younger days, and later an important supporter of Rugby football in his native county of Somerset, although I do not think he played that game much himself. He played hockey until he was over seventy-two.

He passed away on March 8, 1915, with his wide sympathies and many-sided interests as vivid as ever, and the influence of his clear mind and strong religious character will long be felt far beyond the bounds of his own neighbourhood.

E. H(OWARD).

Mr. J. Coleby Morland writes :

‘ Mr. Fox took the keenest interest in Alpine matters up to the last, and was in Tyrol a year or two ago. As a business man and in county matters he took a very high place in the West of England ; a better, straighter man it would be hard to find.’

ALBERT HAROLD CAWOOD.

ALBERT HAROLD CAWOOD was born in Yorkshire in 1835. He spent some years in India in the Indian Civil Service, but eventually, suffering from recurring attacks of fever, he was obliged to resign.

Then he undertook a pilgrimage to Mecca, in disguise, with Dr. Bicknell. The journey was fraught with much personal danger, and he was not destined to accomplish it, for he was down again with fever in the Red Sea ; but the doctor, garbed as an Arab, pushed on, was successful, and afterwards published an account of the journey.

Cawood continued his journey in the Red Sea northward, reached Syria, and was for some time in the district about Mt. Lebanon.

He afterwards spent five or six years at Appenzell, in Switzerland, where he made many friendships, among them that of Studer, the cantonal governor, whose writings on ice and snow and panoramas of mountain ranges are well known.

Many years afterwards, when Cawood and I were climbing alone in Switzerland, we reached the hotel on the Furka Pass one night about 10 P.M., intending to climb the Galenstock the next day ; but we learned, to our dismay, that two gentlemen were already there who also meant to do the Galenstock on the morrow—that they had gone to bed, and were to be called next morning at 3 A.M. We supped, asked to be called at 2 A.M., and hurried off to bed.

Early in the morning I heard the hotel astir, so I dressed, woke up Cawood, and went down to explore, and found two grey-headed gentlemen at an early breakfast. I went back upstairs and told Cawood he need not hurry, for our two rivals were very old, and we could easily give them an hour’s start.

Then I mooned about ; the gentlemen finished their breakfast and set off with their guides. Soon after Cawood came down, we breakfasted, and left the hotel an hour after our rivals. We had some time previously, when spying out the way up the Galenstock, gone over the rocky ridge between the hotel and the Rhone Glacier, but we now decided to walk down the road, and get on the glacier where it abuts on the road. This we did, and made our way up the middle of the glacier. After some time we espied the four men immediately on our right, getting off the rocks on to the glacier—so, to our joy, we knew we were well ahead of them.

On we went up the Rhone Glacier, until we turned to the right to attack the south snow-slopes of the Galenstock. When well up

these slopes, we saw behind us a party rapidly advancing, and by the time we had reached the col, looking eastward, they had overtaken us. They were Swiss, searching for crystals. I bought a smoky one of them for a franc, and they disappeared over the col to examine the eastern precipices of the Galenstock.

We continued our climb, and reached the summit without any appalling difficulties.

The day was young, and the weather charming. We lingered on the top, in pure enjoyment of the scenery around us, for a long time, until I suggested descending. 'No,' said Cawood. 'We will wait here to congratulate the two old men when they arrive.'

So we stayed, until their heads appeared above the snow rim of the summit, and soon after Cawood exclaimed 'It's Studer,' and rushed forward to meet and embrace him. The old men were very fit, and after some talk Studer showed us his panorama of the Bernese mountains, which he proceeded to correct and finish. Afterwards we left them and descended.

After leaving Switzerland, Cawood stayed some time in Paris and, as usual, made friends there; so that some years later we three C's—Cust being the third,—on our way to Switzerland, found a private 'bus awaiting our arrival at the Paris station, which carried us off to the house of a French countess.

After his stay in Paris he became attached to the suite of Prince Duleep Singh, when that celebrity settled in Suffolk, on an estate provided for him by the Crown.

In 1872 he came to Rossall, as German and assistant French master. As a linguist, I have never, by a long way, met his equal. In Hindustani, Arabic, French, German, he was an expert.

Once upon a time he and I were passing through a village, and he espied the name 'Naomi' over a shop.

'Ah,' said he, 'a good old Arabic word. I am full, I have had enough'—and he put up his hand to his throat. 'But,' he added, 'the name is rather familiar to me,' and I suggested that he had read his Bible.

The day before we three C's made our ascent of the Matterhorn, Cawood and I had had a long day's hunt to discover the position of the old hut. In this hunt we had been successful.

Next day, after many consultations, in which Seiler, our host, did everything he could to make our attempt a success, we three C's started about mid-day, with two guides as porters, carrying about 10lb. each. When we neared the Hörnli, our porters picked up a few dry sticks only. Cawood was indignant, and, picking up a young fallen fir, strapped it across his shoulders. We reached the Hörnli, and proceeded along the up and down ridges towards the base of the Matterhorn. Our guide-porters, following, were conversing in their *patois*, and Cawood told us that they were saying that we had engaged them as porters, but meant to employ them as guides. So he told me to go fifty yards ahead, and keep there up to the hut, which I did.

After we had left the Hörnli ridge behind us and were crossing the snow slopes at the foot of the Matterhorn, I looked behind me, and saw one of the guides clambering up the rocks on the right. I knew right well, from our yesterday's researches, that there was no way up those rocks, so I sat down and awaited events, and the guide, defeated, soon returned to his party.

Soon after this I crossed a steep snow-slope, and, on the further side, waited to see the others coming on. I saw the guides enlarging my steps, so I hurried back and said 'I am guide; I will cut your steps,' which I did.

We ascended a very steep snow couloir, and when near its head, with overhanging snow, we took to the rocks on the right, climbed up on very small footholds, and then found ourselves well launched on the Matterhorn itself. Here I built a small stone man, which was useful to us on the morrow as we descended. We reached the hut in good time. The porters deposited their light burdens. 'Good-nights' were spoken, and they departed. 'Hullo!' said Cawood, 'the guides are saying that we shall be very glad to descend early next morning.' The next day was a magnificent one.

I felt very elated and honoured when my companions declared that I was to be first up and last down.

The story of the ascent is in the 'A.J.' vol. viii. Cust anticipated that the Alpine Club would censure us for our rash adventure, so in his story he defends our 'rashness.' He wrote a much more personal account of our ascent in the 'Rossallian.'

In August 1878, Cawood and I went to Chamonix and pensioned at Couttet's Hotel, at seven francs a day each, very cheap, especially considering the comforts and good food they gave us. We stayed there a fortnight, and when we left our wine list came to more than our pensions.

The weather was bad, rain all the mornings, with fine afternoons. We did what we could on those fine afternoons to discover the best and safest route up Mont Blanc. Five or six times during this doubtful weather fortnight we went up to the Grands Mulets, and a few days before our final ascent we went up the Brévent, to decide whether to go by way of the 'Dromedary' or by the Eastern route. We decided to go over the 'Dromedary,' and I am glad we did so. When descending from Mont Blanc after our successful expedition we were of course fairly tired out, and the warm afternoon rendered me, at any rate, somewhat careless. We were descending diagonally a steep snow-slope under the Dôme—Cawood leading—treading in our morning's footsteps without taking the trouble to enlarge them. Suddenly my foothold gave way, and I went rolling down. I felt the tug when Cawood was pulled off, turned on my stomach and struck my ice-axe into the snow above me, but it rebounded from the hard ice under the thin covering of snow. I tried again and succeeded in getting a firm grip. I held on as firmly as I could. But it was of no avail.

The rope tightened, and with a mighty jerk I was torn away from my axe, which remained firmly fixed. By 'no avail' I mean I had to leave the axe behind, but I think the axe saved us. Cawood got as big a jerk from me as I had from him, and this very considerably reduced his speed downwards, while I, when torn from my hold, started downwards with little momentum. The slope of the snow became less steep, and by the time I reached Cawood we both managed to pull up uninjured. One of the first things I did, when we found ourselves safe, was to see if the Chamounix telescopes had viewed our mishap, but a cloud hid us from them.¹ Looking around we saw a crevasse about forty yards below us, into which we must have gone if our fall had not been arrested.

Mr. Dent was also at Couttet's, busy with assaults on the Dru. We did not know him. We kept our intention of climbing Mount Blanc as much to ourselves as we could. This evidently made him suspicious of us.

'Were we lurking about, seeking to snatch from him his favourite Dru?' He was obliged to return to England for some days. We were made aware of this situation by some young ladies, who came up to us one evening on Couttet's lawn and quizzed us about our doings. We assured them we had not the slightest intention of touching the Dru.

As a master at Rossall, Cawood was very popular with his colleagues and pupils. He was no athlete in games, but he took a warm interest in watching the outdoor sports of the boys.

As a most sociable and agreeable companion in travel and mountaineering I have not met his equal, but I must except Richard Pendlebury, whose genius for arranging and carrying out expeditions always excited my greatest admiration. Cawood's 'forte' was not of that kind, but rather in smoothing out the smaller difficulties which invariably occur in travel and ascents.

Cawood left Rossall in 1880, and we then find him installed as French and German master at Boston Grammar School. There, as usual, he made many friends, and when his health began to weaken a public subscription was raised to send him for a voyage in the Mediterranean. He died at Boston in April 1913, aged 78 years.

Cawood and I, without porters or guides, ascended Mont Blanc, the Jungfrau, the Galenstock, the Düssistock, and the Grosse Windgälle.

With Cust we ascended the Matterhorn, crossed the Bertol pass from Arolla to Zermatt, the Adler pass from Zermatt to the Saas Valley, and ascended the Oberalpstock in the Maderanerthal.

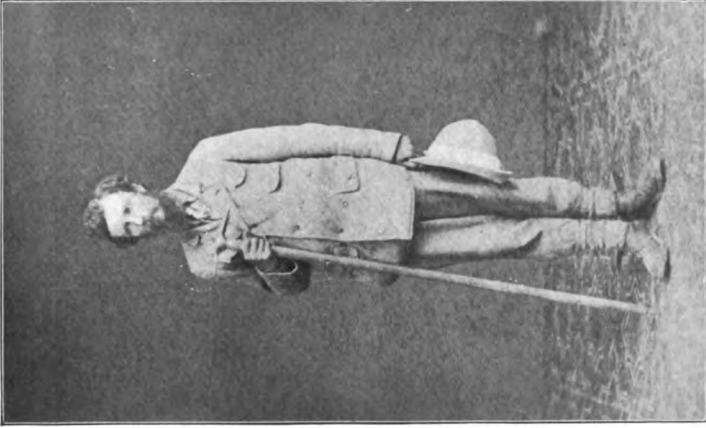
J. B. COLGROVE.

¹ *Alpine Journal*, May 1915, p. 140:—

'The friendly névé was only some fifty feet below us, but a tumble would have been at least disconcerting; and who could say that some distant telescope might not reveal the disgrace to the world at large?'



ARTHUR CUST.
1840—1911.



ARTHUR CUST.
1840—1911.



A. H. CAWOOD.
1835—1913.

ARTHUR CUST.

ARTHUR CUST was elected a member of the Alpine Club on March 3, 1874. He visited the Alps almost every year from 1866 to 1898 inclusive. He died after a long illness in 1911, when the Club had to deplore the loss of an energetic member who took the greatest interest in all its proceedings, and who was an ardent mountaineer with a genuine love of mountain scenery and an instinct for exploring little-known districts. He was also devoted to sketching, both in water-colours and with pencil. He never liked to leave a peak or a pass without a sketch of the scenery, and in consequence was often benighted on his way to his hotel.

Mr. Cust's name as a climber is best known in connection with his ascent of the Matterhorn without guides in 1876, accompanied by two Rossall colleagues, Messrs. Cawood and Colgrove. The expedition was carried through without a hitch, and attracted much attention at a period when guideless climbing was not so common as it has since become. Cust read an interesting paper at the meeting of the Club on February 6, 1877, giving an account of this expedition.

In 1880, with a guide and porter, he made the first ascent from the N. of the northern summit of Pic d'Olan.

After this period his time was mostly spent in exploring the districts round Arolla and Tosa Falls. In both he might be said to have ascended almost every peak and crossed every pass. A point on one of the ridges of Mont Blanc de Seilon is known locally as Tête à Cust. In the latter part of his life he was much given to solitary climbing, which he defended by claiming that he was always ready to turn back if the ground became unsafe.

J. B. PARISH.

Arthur Cust was, as was Cawood, a Yorkshireman, his home near Northallerton, and his father Archdeacon and Canon of Ripon. He was born about 1840. He was a scholar of St. John's College, Cambridge, took his degree in Classical Honours, and was appointed Classical Master of the Fifth Form at Rossall School in 1866. He was a strict but fair disciplinarian, and his pupils soon found that they had to get their work done. Unlike most masters, he did not smoke. I often offered to teach him how to do so, if he would buy a box of cigars for that purpose, but he never did.

He delighted in long walks. To Blackpool, Lytham, and even to the Yorkshire hills on whole holidays, we often went. These hills, as well as the Lake Mountains, are clearly seen from Rossall on bright days, as also the high summits in the Isle of Man—fifty miles distant—but these latter were to be seen only three or four times during the year, near sunset.

We all acknowledged Cust as our Alpine Expert in the Common Room at Rossall.

His love for Alpine work was very great, not so much for mere climbing as for the beauty of the scenery. He painted many pictures of the Alps, of which I have about half-a-dozen. Also he

was fond of drawing panoramas of the mountains—two are preserved in the *ALPINE JOURNAL*. In his pictures and drawings there is very great accuracy of the outlines, and not much, I think, of what artists term ‘atmospheric effect.’

I owe much gratitude to him for the help he gave me in my early visits to the Continent. In 1871 or ’72, two colleagues and I went to the Oberammergau Passion Play. No one of us had before been out of England. Cust kindly made out the whole route for us there and back again, which we successfully followed in every detail, excepting the ascent of the Hörnli. He also made me a map of the Dolomites, which was of great use when Mr. P. Watson and I visited that district.

Furthermore, in 1877 he persuaded Richard Pendlebury and Charles Taylor to invite me to accompany them to the Dauphiné Mountains, hoping that we should do the Meije, then unclimbed. We did the Pelvoux, Écrins, and made a first ascent of the Pic sans Nom, with the help of Pendlebury’s two guides.

Cust left Rossall in 1877, and throwing up professional work devoted himself to his Alpine climbings, writings and drawings, generally going alone to Switzerland. I had expected that he would publish a book on his exploits. He once showed me a leaf of a printed proof, with a picture which he had himself sketched and etched, but the book never appeared.

He died in April 1911, aged about 71 years.

J. B. COLGROVE.

Sir Edward Davidson made a long allusion from the Chair to Mr. Cust’s death at the Meeting after it took place and suitably recorded the loss sustained by the Club.

FREDERICK MORTON BEAUMONT.

As an intimate friend for some twenty-five years of the late Canon Beaumont, I should deem it a privilege to be allowed to endorse and to supplement the words of the President respecting him, at the June meeting of the Club.

In 1862, on leaving Oxford, where he was a Fellow of St. John’s, he was for three years a master at Rossall, and then served for the same period as curate of Holy Trinity, Hoxton. From 1868 to 1872 he was rector of East Farndon, Northants, and then he began the main work of his life as vicar of that grand church, Holy Trinity, Coventry. This charge, after forty years of laborious though happy work, he resigned in the autumn of 1912, greatly respected and beloved far beyond the limits of his own parish. In 1887 he had been made Rural Dean of Coventry; in 1892 Hon. Canon of Worcester, and in 1908 Canon of St. Michael’s Collegiate Church, Coventry.

When we first met, Beaumont had already been climbing for a good many seasons and his activities were beginning to diminish,

but I had many delightful days with him in the nineties, our old friend Frederick Ball, who is still, happily, with us, being generally one of the party, on the glaciers, and in tramps over passes in Switzerland and Italy. Always a most cheery and entertaining companion, he had the heart of a boy, a strong sense of humour, and a keen delight in life; he made light of difficulties and discomforts, and was ever the same, whether in sunshine or in storm, at home or abroad.

For some years past he suffered from a complaint which greatly crippled him, and his visits to Switzerland ceased, but his enthusiastic love of the Alps was to the end unabated, as was his interest in the Club and its doing; he continued to attend its meetings, and was rarely, if ever, absent from the annual meeting and dinner.

On leaving Coventry, he was presented with a very handsome purse of money which he decided to spend on a tour of the Empire. Accordingly, soon after, although in his seventy-third year and by no means in good health, he started, alone, on a tour which lasted nearly two years. Not many weeks before his death he wrote to me in high spirits, giving a glowing and most interesting account of his travels, in the course of which he visited—spending some time in each—South India, Ceylon, the principal cities of Australia, New Zealand, Fiji, and Canada, and also the United States. At the end of his letter, after alluding to this awful war, he added (quoting Wordsworth):

‘ But ’tis bliss to be alive;
To be young would indeed be very heaven.’

Now, alas! for his friends, whose name is legion, there remains but the treasured memory of him and of the days that are past, and, as a very old Jewish friend of his at Coventry wrote to me shortly after his death, ‘As a man Beaumont stood for all that makes life worth living. The times are too sad to let us bear equably such bereavements.’

H. M.

HAROLD WARD TOPHAM.

THE Alpine Club demands of its member at least two things:

1. He *shall* be a good fellow.
2. He *should* be a good man on a mountain.

Harold Topham could well answer to both. Born in 1857, son of the late John Topham, M.D., F.R.C.P., he was educated at Marlborough and Magdalen College, Oxford (1877–1880). In 1883 he went to Florida and spent about three years there, growing oranges. On his return to England he passed the greater part of the year travelling, returning in more recent summers to the Solent for sailing.

His mountaineering career seems to have commenced in 1880 at St. Moritz and in 1881 at Saas, and he got his education under good men like Gabriel Taugwalder, Xaver Imseng, Aloys Supersax, and Aloys Pollinger senior, some of the best men of their time.

His first ascents were numerous, some of them, like the Loccie Arête of the Punta Gnifetti, of the first rank. They included the following :

1. Traverse from the Mittaghorn to the Egginer, August 23, 1886.
2. Nadelhorn by the splendid arête from the Südlenz, August 29, 1886.
3. Allalinhorn from the Hohlaub Glacier, July 12, 1887.
4. Fletschhorn by the S.W. arête, July 16, 1887.
5. Monte delle Loccie by the N.E. arête, July 25, 1887.
6. Punta Gnifetti by the E. arête, July 28, 1887.
7. S. Aiguille rouge d'Arolla and traverse to the central peak, September 3, 1887. ('A.J.' xiv. paper by Wm. Cecil Slingsby.)
8. Mont Blanc de Seilon by the E. arête, September 7, 1887.
9. Dent d'Hérens from Breuil by the S. face and the E. arête, August 31, 1889.

In March 1888, with his brother, he visited the Selkirk district of the Canadian Rockies with a view to a future expedition. Topham described his journey in a paper in 'A.J.' xiv.

This expedition makes Topham probably the first pioneer of the district, for it was in the summer of that year that Mr. W. S. Green, under the auspices of the R.G.S. ('R.G.S. Journal' xi., No. 3) made his great expedition recorded in his well-known book 'Among the Selkirk Glaciers.'

Two years later Topham and Forster joined forces with MM. Huber and Sulzer, of the S.A.C., in a new expedition to the Selkirks, described in 'A.J.' xv. The new ascents then made included Mts. Selwyn, Sugarloaf, Fox, and Purity.

In later years a peak in the district, first ascended by Mr. Howard Palmer, was named Mt. Topham.

In July 1888 Topham led a party consisting of his brother Edwin, Mr. George Broke, and Mr. William Williams, on the second attempt to ascend Mt. St. Elias, Alaska. They surveyed the S. side, but found it impracticable, and by the time their relief schooner arrived were nearly starved. He contributed a paper on the expedition to 'A.J.' xiv. and read a paper before the R.G.S. in 1891 (vol. xiii.).

By this time it will easily be understood that Topham had become a mountaineer of very wide experience. Endued with great strength and endurance, carrying no flesh, equally fit in summer and winter, there were few men of his day who were his equals in independent capacity, scarce one his superior.

I met him first in the winter of 1892-93, when we were both staying on the Lake of Geneva. I was toiling up the Rochers de Naye with two ladies in deep snow, and as we were negotiating an awkward corner there suddenly appeared a sinewy, keen-eyed Englishman, his face burnt to a permanent brick red. He had by that time given up taking guides. That spring he and I made many small ascents, mostly in the neighbourhood. He was always a strong goer, but had one awful habit of racing directly he struck the path on the



H. W. TOPHAM.

1857—1915.

homeward journey. I was not easily quitted in those days, but he must have had steel springs in his knee-joints.

Another habit of his was to carry even over a pass a quite unnecessary burden, so that I was not altogether surprised when two or three years later he developed 'heart' and practically forsook active climbing.

In the early summer of the same year, 1893, we had many a splendid day together on the Blümlisalp, the Argentière, the Tour Noire, and other expeditions.

I would have been well content to go on climbing in Topham's company, for there could be no more careful or competent mountaineer. My agenda, however, covered much that he had done, and I had moreover at my disposal the services of the incomparable Daniel Maquignaz, between whom and myself there existed already ties of friendship that fifteen subsequent long campaigns only tended to strengthen. Topham and Herbert Marsh, who had been our companion in the Mont Blanc group, went on together and the ascents of the Bietschhorn and the Grand Combin, well described in 'Two Seasons in Switzerland' (H. Marsh), were probably the best work Topham, independently, ever did.

There was, in my appreciation, at that time, no amateur better qualified to undertake an arduous expedition without any professional assistance than Harold Topham, and I should have to think well before I named his equals. I shall have to live long before I forget the sinewy figure of the man who was my good comrade—more often my leader—on many a great day, or the, not always subdued, anathemas that followed him when he set out to race downhill on a path and I was fool enough to try to live with him. You were a great man on a mountain, *mon ami*, and one does not forget!

Of his splendid performances as a skater and tobogganer has not Mrs. Aubrey Le Blond, a great judge, written in the 'Field' of July 10 last?

It is said that in his later years he sank to croquet. I feel sure it is a malevolent libel.

A few years back he resigned from the Club, but on rare occasions he came with his brother Alfred to meetings, and I well remember how our faces lit up as our hands gripped and our memories flashed back to many an unforgettable day. You were a good comrade—a true son of the great mountain.

J. P. FARRAR.

HARRY WALKER.

NOT since the death of A. F. Mummery, twenty years ago, has any officer of the Club or member of the Committee passed away during his term of service, but now, by the lamented death of Harry Walker

on September 27 last, from wounds received in action, a gap is again made in the ranks of the Committee, and the Club has lost one of whom much was expected by all who knew him.

Walker was born of an old Fifeshire family in 1869 at Newport, Fife. He was educated at Edinburgh, and, after leaving Edinburgh University, went to study in Paris, before entering on a business career. He settled at Dundee, and became the principal director of a jute-spinning company, with which his father had been associated.

For the last few years of his life he was one of the leading men in that trade, and his position and ability had been recognized by his appointment as President of the Chamber of Commerce of Dundee in 1913, and as a Director of the Caledonian Railway Company in the same year. He was also a Justice of the Peace and Deputy-Lieutenant for his county, and had taken his share in all public and philanthropic work.

But these calls of an active business life were not enough. With his work he combined the study of military matters, and in every way open to him followed the career of a Volunteer or Territorial Officer. He joined the 1st Volunteer Battalion of the Black Watch (Royal Highlanders) in 1890, and twenty years later, in March 1910, was appointed to command the battalion, which had then become the 4th (City of Dundee) Battalion of the Black Watch. He had also become a member of the Territorial Force Association for the county, and had been awarded the Territorial Decoration. He had passed all the examinations possible for a Volunteer of those days, and had devoted much of his time to lecturing to and training the younger officers. It is no doubt largely due to the confidence which he inspired in all classes that, upon the outbreak of war, there was a rush of men of the finest class to fill all vacancies in the ranks of his battalion.

He went abroad with his battalion in February last, and they took a prominent part in the action at Neuve Chapelle in March last. In that action they lost a number of officers and men, and Walker himself received a slight flesh wound, but his name never appeared in the casualty lists. He was complimented by the Generals for his leading on that day, and was mentioned in Sir John French's despatches, and on June 23 was gazetted as C.M.G. We who knew what he was were not surprised to hear that he had been thus honoured. We were sure he would do well.

Not very much is known of the final scene. The regiment left their billets, not far from La Bassée, on the night of September 24 and attacked at dawn. They took and passed five lines of German trenches, and the survivors dug themselves in, but, being without effective support, eventually had to retire after being heavily counter-attacked. Colonel Walker had been wounded early in the action and could not be removed for over twelve hours, but the wound was mortal, and from the first there was no hope of his recovery. He died at the hospital at Merveille on Monday, September 27. He is buried in an orchard near his old billet at Pont du



LT.-COL. HARRY WALKER, C.M.G.

1869—1915.

Hem, where in the spring he had loved to see the blossom on the trees, as he has described in his letters home.

As a mountaineer Walker was of a very high class. His strong athletic figure and his great reach gave him advantages of which he made full use. He was an excellent rock climber, and steady and safe on ice or snow. His first visit to the Alps was in 1894, when he joined Dr. Colin Campbell in the Vispthal and ascended the Dom and other peaks. From that time he went either to the Alps or Norway almost every summer, and had climbed most of the well-known peaks in the Alps, and he had made in the Lofoten Islands a number of first ascents. In 1909, notwithstanding bad weather, he had a particularly successful tour with C. W. Walker. Starting from a camp near Rekneson, they made a number of good expeditions including the ascent of Rulten and of two unnamed and unclimbed peaks to the east of that mountain, and subsequently having moved their camp to the entrance to the Meraftasdalen, they climbed the eight unnamed peaks at the head of the Meraftasdalen, six of which showed no trace of any earlier ascent. In the Highlands he had made innumerable expeditions in every month of the year, and would often persevere and achieve success in the face of wind and snow that turned back less dauntless men. He had served as Vice-President of the Scottish Mountaineering Club, and it was the hope of every member that at a very early date he would succeed to the Presidency.

Walker joined the Alpine Club in 1906, and last year was elected a member of the Committee, but, owing to his being on service, he was never able to attend any meeting. He would undoubtedly have been a strength to the Committee, not only from his personal qualifications, but as, in a very special sense, representative of the strong northern contingent of the Club.

I have written of Walker as a citizen, as a soldier, and as a mountaineer, but by his friends, and they are innumerable, he will be remembered as one of the most lovable men they have ever known. To those of us who have been accustomed to see him in the Highlands year after year at Easter and the New Year, those meetings of the Scottish Club can never be quite the same again. We can no longer look for his friendly greeting, and we shall miss on the hills the companionship of an enthusiastic mountaineer and a devoted friend.

To Mrs. Walker and his children we can only tender our heartfelt sympathy. We like to think that his last leave in England was spent just alone with them, at a quiet village on the Essex coast. His friends would have wished to welcome him, but it is characteristic of the man that he chose rather to give the few days to those who loved him most, and we would not have had it otherwise.

This war has cost us much of the best of the manhood of the Empire, but none who are called away will leave behind the record of a more stainless life—not slothful in business—honouring all men—serving the King.

GODFREY A. SOLLY.

CHARLES FRANCIS KIRKPATRICK CARFRAE.

It is with very sincere regret that we have to record the death, in action, of one of our younger members, Charles Francis Kirkpatrick Carfrae, captain, (52nd) Oxfordshire Light Infantry, in his thirty-first year.

He was educated at Wellington College and was captain of the football team 1903-4, and afterwards played on several occasions for the 'United Services.'

Previous to his election to the Alpine Club in 1910, he had made several important climbs in the Alps, some of which he described in an article in the *Oxfordshire Light Infantry Chronicle* entitled 'High Alps in October.' He also gave an account of these climbs in the *JOURNAL* (February 1907) under the heading 'October in the Mont Blanc Range,' and graphically describes the ascents he and his brother (Captain C. T. Carfrae, R.F.A.) were enabled to accomplish so very late in the season.

Captain Carfrae obtained his commission in 1904, being gazetted to the 7th Battalion King's Royal Rifles, but transferring, the following year, to the Oxfordshire Light Infantry (the old 52nd).

In the autumn of 1913 he went to the French manœuvres, furnishing a report which was duly acknowledged by the War Office.

Soon after the War broke out he was attached to the 5th (Service) Battalion of his regiment and was serving in this when he was killed, on September 25, leading his column in the attack on Bellewarde Farm, near Ypres.

His Colonel wrote: 'He is indeed a loss to the regiment; he was one of the bravest men I knew, and in the hottest fighting was always calm and composed, and set a wonderful example of cheeriness to all round him. . . . His loss to me is indeed a serious one, and I shall always miss his pleasant companionship and his most valuable service. . . . He was recommended for a reward some time ago during the operations at Hooge, and I again sent in his name this time.'

The Adjutant adds: 'I cannot tell you what a terrible loss he is to the British Army, but I can measure your grief with mine and so sympathise with you *most* deeply. For him I do not grieve; his death is his gain and our loss, for a more perfect Christian officer and gentleman I never knew; officers and men all loved and trusted him, and as a soldier he was all that one *most* needs on active service.

. . . Had he lived he would have received the D.S.O., I feel sure, as he had already been recommended once.'

He was a life member of the United Services Institution.

It is an interesting fact that Charles F. K. Carfrae and his brother, Cecil T. Carfrae, have both been fighting for the past months on some of the ground where Thomas Carfrae, Captain-Lieutenant in Colonel Newton's Dragoons, served during Marlborough's campaign in Flanders.

J. A. C.



CAPT. C. F. K. CARFRAE.

1884—1915.

In Carfrae we lose one of the very best of our younger members, one of those to whom we instinctively felt that we should not look in vain to carry on the traditions of the Club. To the veteran member it was always delightful to look on this splendid specimen of the young Englishman, to hear the musical voice and to see the friendly responsiveness in his eyes. Hard as nails, of great strength and well trained under good men like the Summermatters and the Brocherels, his progress in mountaineering knowledge was very rapid. His death is a great loss to the Club. Among his friends the memory of a very charming personality and of a good soldier can never fade.

F.

JOSEF LOCHMATTER.

BORN at St. Nicolas in 1871, Josef was the second son of Josef Marie Lochmatter, one of the best guides of his day, who, with his eldest son and Mr. W. E. Gabbett, was killed on the Dent Blanche in 1882.

Notwithstanding the tragedy of their father's end the young brothers, Josef, Rudolf, Franz, Raphael and Gabriel all followed the same calling, and together they have earned for their family a reputation as guides not surpassed by any in the Alps.

The rock-climbing side of mountaineering has in the last twenty to thirty years been completely transformed. Men to-day—even the best of them—are no better mountaineers than old Christian Almer; few indeed possess his incomparable general knowledge of a mountain, or his ability in ice. Yet in rock-climbing things are now successfully done which would make that great master open his keen blue eyes with incredulity.

In this new school the St. Nicolas valley has produced some of the most famous pupils in the Lochmatters, the Summermatters, the Pollingers, the Knubels, and others. Of these there was probably no sounder all-round mountaineer than Josef Lochmatter. One or two of the others could possibly outclimb him on difficult rocks, but there was no more trustworthy director of a party than he, and so far as I know no climbers in his charge ever sustained an accident, notwithstanding the fact that he has carried through, in the course of his career, some of the most desperate expeditions in the Alps.

In 1897 he formed one of Mr. E. A. Fitzgerald's expedition to the Andes. In the same year, in 1898 and 1900, and possibly later, he was one of the guides of the late Mr. Schintz, who had many a great climb to his credit. In 1898 he also accompanied Mr. W. M. Baker.

On January 10, 1902, we find him making a winter ascent of the Weisshorn. The same year he was in the service of Dr. O. K. Williamson and Mr. A. W. Andrews, and was one of Mr. Broome's guides on traverses of the Lyskamm, Rothhorn, and Gabelhorn.

In 1903 we find him with Major Strutt in the Ortler and Bernina districts, who writes: 'He is a most excellent guide in every respect, and a most worthy representative of the best that St. Niklaus can produce.'

The same year he did the Teufelsgrat with Mdlle. Kuntze, and traversed the Weisshorn from Zinal to Randa with Mr. J. W. Wyatt.

But, in his career, that year is chiefly memorable for being his first season with Captain V. J. E. Ryan, with whom he and his brother Franz subsequently made some of the most difficult new rock climbs ever done.

They started in 1903 with the Grépon, Charmoz, and Requin; in 1904 they did the Grépon and Blaitière in one day, the traverse of the Drus, the Teufelsgrat, the descent of the N. arête of the Weisshorn, the Viereselsgrat of the Dent Blanche, the Charmoz from the Mer de Glace; in 1905 the Meije, the Grépon from the Mer de Glace, the Aiguille du Plan (Mummery's route),¹ the Charmoz by the Montanvert face, the Blaitière from the Mer de Glace, the Dom from Saas with the traverse to the Täschhorn and Mischabeljoch and return to Saas, the Matterhorn by the Furggengrat, (to close under the summit), the Weisshorn by the S.E. face, the Finsteraarhorn by the S.W. ridge and S.W. face, the Scerscen and Bernina, the Croda da Lago, an attempt on the Grandes Jorasses from the Col des Grandes Jorasses and some others; in 1906 the Aig. du Plan from the Mer de Glace, the Blaitière by the Chamonix ridge, Mont Blanc by the Brenva, the Ferpêcle arête of the Dent Blanche, the Dent d'Hérens from the Col Tournanche, the Zmutt arête of the Matterhorn, the Jägerjoch arête of the Nordend, the Täschhorn straight up the centre of the face from the glacier above the Täschalp, a very dangerous expedition, beyond the fair limits of reasonable climbing, only persisted in through return being still more dangerous; in 1914 several very difficult new ascents of the Requin, Plan and Grépon as described in 'A.J.' xxix. 200-202.

In the more difficult of these expeditions he was careful to make sure of the companionship of his brother Franz, and it was doubtless due to the supreme confidence each had in the other that this incomparable list of expeditions was carried out without mishap.

His other employers included—in 1904—Mr. Geoffrey Young, with whom he did the Znutzgrat, when that severe young wrote: 'Admirable on rocks, workmanlike, quiet and confidence-inspiring in all situations'; Mr. R. W. Lloyd with whom he traversed the Grépon and the Drus;—in 1906—Mr. Howard K. Knox with whom he descended the Schalligrat. That same year—1906—was the first of several extensive journeys made with the Misses Irving. These campaigns continued in 1907, 1908, 1910, and 1912, and comprised many fine climbs in the Zermatt, the Dolomite, and the Dauphiné districts. In 1907 he made with the Rev. W. C. Compton and Mr. J. W. Wyatt the ascent of the Dent d'Hérens by the icefall of the W. face, a route that is not often open. In 1908, 1909, 1911, and possibly later he was the leader of Mr. A. E. W. Mason, who, when he does accomplish the Brenva route, can hardly improve on the brilliant description

¹ Cf. *A.J.* xxviii. 77-79, 'The Chamonix Faces of the Aiguille du Plan.'



JOSEF LOCHMATTER.

1872—1915.

of it which he has already given to us in 'Running Waters.' In 1910 my long friend Rolleston seems to have made the first of several journeys with him. I do not know why, for there is no man in my acquaintance who less needs a guide. He writes: 'I feel that I cannot speak too highly of him.'

Among other things they made the ascent of the N. face of the Breithorn—none too safe a climb—and in the brilliant but absolutely abnormal year—1911—the descent of the Zmutt arête of the Matterhorn, the ascent from Macugnaga of the Nordend, of which however the season had abated the high degree, the Dent Blanche by the Viereselsgrat, descending by the Ferpècle arête, thus combining the most difficult routes, and returning the same day by the Col d'Hérens to Zermatt, an unconscionable journey, while the two Josefs, Lochmatter, and Pollinger were Mr. Meade's companions on a January ascent of the Matterhorn, when frostbite caused the traveller severe suffering. Mr. Meade and these two splendid guides were surprised on the summit by a frightful northerly gale. Whatever frostbite may have cost him as it was, with less skilful, strong, devoted and courageous guides he would hardly have escaped the very, great danger involved.

In 1913 Josef and his brother Gabriel, with Mr. Rolleston and Mr. Bowen, made a useful variation of the C. P. route up the Grépon ('A.J.' xxviii. 83), demonstrating that the mountain could be climbed direct by the obvious route, although it had turned back François Simond and had deterred other attempts.

These are the principal expeditions in the life of a most strenuous member of a great craft. You can well judge him by his deeds.

After braving all these dangers, Josef Lochmatter was destined to find his end by the simplest possible accident.

A sergeant in the Landsturm, he was called up in August 1914 upon the mobilisation of the Swiss army and was quartered at Zermatt. When coming out of the schoolhouse one night, he struck his head against a horizontal bar that had been lowered without his knowledge. From January onwards he complained of violent headache, and manifested slight cerebral trouble. He took to his bed on April 1, and for the next fourteen days remained in a sort of comatose state, unable to speak, the eyes half closed, but appearing to recognise those about him. The digestive functions were suspended, and he could retain hardly any nourishment.

On April 15 it was decided to remove him to the Hospital at Brigue, whither his devoted brother Franz accompanied him. Two days later, after recovering consciousness for a couple of hours, he passed quietly away. He was buried at St. Niklaus on April 20, the funeral being attended by the whole community.

Of his generation there was no more thoroughly competent mountaineer.²—J. P. F.

² I am much indebted to M. le Lieutenant Charles Gos, of the Swiss Artillery, for many particulars given above, and to 'La Patrie Suisse' for the portrait now reproduced.

ROBERT CHARLET-STRATON.

NEWS has been received of the death in action of M. Robert Charlet-Straton, sergeant in the Chasseurs alpins. His mother is best known to English climbers as our own countrywoman, *née* Miss Isabella Straton; she made in early days the first ascent of the Aiguille du Moine and many other expeditions. His father, M. Charlet-Straton, is the well-known guide, famous as the conqueror of the Petit Dru. Although qualified as a guide at Chamonix, M. Robert Charlet-Straton did most of his climbing *en amateur* with his friends.

His parents will, we trust, allow the members of the Alpine Club to offer to them the assurance of their sympathy in the great loss which they and his country sustain in the death of this good soldier of France.

THE ALPINE CLUB LIBRARY.

The following additions have been made to the Library since June:—

Club Publications.

Akad. Alpen-Club, Zürich. xix. Jahresbericht, für 1914.

8 × 5½ : pp. 33 ; plate.

Zürich, Tschopp, 1915

Among the new expeditions described are the following:—

P. Schucan, Piz Vial, N.-Grat : Ganneretsch, N.-Grat : P. Urlaun
ü. d. Hängegletscher : E. Aemmer, Mte Pavallo v. N. : C. Egger,
Basch-Kara : Dschan-Tugan-Tau : Andürtschi : Tschegem Basch :
Tiu-Tiu-Basch :

Alpine Club. List of members.

A complete set from 1859–1899 has been presented to the Club by Mr. Unna. This includes one of the two copies known to exist of the 1859 list. Mr. Whymper reprinted a few copies of this from the original type, and it was only of this reprint that the Club hitherto has had a copy.

Alpine Club of Canada. Canadian Alpine Journal 1914 and 1915. Banff, 1915
9 × 6 : pp. viii, 263 : map, plates.

Among the articles are the following:—

H. Lambert, Ascent of Mt Natazhat in Alaska.
W. W. Foster, Mt Robson.
C. Kain, First ascent of Mt Robson.
B. S. Darling, First attempt on Robson by the west arête.
A. H. MacCarthy, Ascent of Mt Robson from the southwest.
C. Kain, First ascent of Mt Whitehorn.
W. E. Stone, A day and night on Whitehorn.
C. H. Mitchell, Mt Resplendent and the routes of ascent.
G. E. Howard, The Whirlpool, 1913.
A. L. Mumm, The Whirlpool, 1914.

- J. Hickson, Freshfield Glacier.
 E. Holway, Ascents of Beaver and Duncan.
 E. Harnden, Exploration in southern Selkirks.
 A. MacCarthy, First ascents of Mt Farnham and Mt Farnham Tower.
 J. R. Young, Traverse of Mt McBean.
 A. O. Wheeler, Motion of Yoho Glacier.
 Mary L. Jobe, Mt Kitchi.
- Appalachian Mountain Club.** Bulletin, vol. 8. 1914, 1915
 7½ × 5: pp. 138.
- Russian Alpine Club.** Ezhegodnik XI. 1911
 9 × 6½: pp. 138: plates.
 This volume is chiefly devoted to memorial notices of the late A. K. von Meck, President of the Club. There are also the following articles:—
 V. Ronchetti, Ulpata-tau from the valley of Tse.
 Ph. Kracilnikov, Across the Maruchski pass.
 N. Korzhenevski, Lake Iskander-kul.
 A. v. Meck, Corsica.
- Ezhegodnik XII. 1912
 9 × 6: pp. 163: plates.
 This contains the following articles:—
 P. Panyutin, To Kutais across Svanetia.
 L. Ch. Revelioti, To Tashkent across Kashmir, Gilgit, and the Pamirs.
 M. Zadner, Hohe Tatra.
 K. Teuber, Albanian Alps.
- Scottish Mountaineering Club Journal.** Edited by F. S. Goggs. Vol. 13. nos. 73-78. 1915
 8½ × 5½: pp. viii, 362: maps, plates.
 Among other articles this contains:—
 J. A. Parker, Glencar, Co. Kerry.
 E. W. Steeple, Gullies of Coire an Uaigneis.
 C. Deards, Knoydart and Glen Dessarry.
 Marion Newbiggin, The Highlands and the Alps.
 W. Inglis Clark, Kinlochleven. With coloured photographs.
 W. Galbraith, Some walks in Skye.
 G. Sang, Suilven.
 E. B. Robertson, Mountains and art.
 J. C. Thomson, East faces of Blaven and Clach Glas.

New Books and New Editions.

- Browne, The Rt. Rev. G. F.** The Recollections of a Bishop.
 8½ × 5½: pp. xi, 427: portraits. London, Smith, Elder, 1915. 10/6 nett
- Bulletin of the Geographical Society of Philadelphia.** Vols. 12 and 13.
 9½ × 6½: pp. 184: 164: maps, plates. 1914, 1915
 In vol. 13 are the following articles:—
 Dora Keen, Studying the Alaskan glaciers.
 W. W. Hyde, The mountains of Greece.
- Cadby, Will and Carine.** Switzerland in Winter. Discursive information for visitors. London, Mills & Boon, 1914. 5/ nett
 7½ × 4½: pp. xii, 232: map, 52 plates.
 Numerous illustrations.
- Daly, Reginald Aldworth.** A Geological Reconnaissance between Golden and Kamloops, B.C., along the Canadian Pacific Railway. Mem. 68, Canada Depart. of Mines, Geol. Surv. Ottawa, Govern. Print. office, 1915
 9½ × 6½: pp. viii, 260: maps, plates.
 Many good mountain views.
- Dübl, H.** Zur Erinnerung an Melchior Anderegg (1827-1914).
 8 × 5: pp. 32: portrait. Zürich, Tschopp (1915)
- De Filippi, F.** Expedition to the Karakoram and Central Asia, 1913-14. In Geogr. Journ. London, vol. 46, no. 2. August 1915
 9½ × 6½: pp. 85-105: plates.

- La Géographie.** Bulletin de la Soc. de Géographie, Paris. T. 29. 1914
 11 × 7½: pp. 491: maps, ill.
 Among the articles are the following:—
 C. Rabot, Les glaciers du versant nord-est du massif du Pelvoux au début du sixième siècle.
 E. A. Martel, La perte et le canon du Rhône.
 F. B. Workman, Le glacier Siachen ou Rosc.
 A. Hoel, Spitzberg en 1913.
 C. Rabot, Observations sur les glaciers français.
- Grinlinton, Capt. John L.** Notes on some glaciers of the Dhauli and Lissar Valleys, Kumaon Himalayas, September 1912. In Records Geol. Surv. India, vol. 44, pt. 4. Calcutta, 1914
 10½ × 7: pp. 280–335: plates.
- Grivel, B.** La montagne et le tempérament national. 2e cahier vaudois, opinions et rubriques. Lausanne, Tarin, 1914
 8½ × 6: pp. 20–31.
- Hyde, Walter Woodburn.** The mountains of Greece. In Bull. Geogr. Soc. Phil. vol. 13, no. 3. July 1915
 9¾ × 6¾: pp. 110–125: ill.
 An interesting paper for its discussion of height measurement, mountain climbing and literary descriptions of scenery among the ancient Greeks.
- Jobe, Mary L.** My quest in the Canadian Rockies locating a new ice-peak. Mt. Kitchi. In Harper's Mag., vol. 130, no. 780 May, 1915
 9½ × 6½: pp. 813–825: ill.
- Mt Kitchi: a new peak in the Canadian Rockies. In Bull. Amer. Geogr. Soc. vol. 47, no. 7. July 1915
 9½ × 6: pp. 481–497: map, plates.
 An attempt to climb the mountain in 1914.
- Joly, J.** The birth-time of the world and other scientific essays. 8½ × 5½: pp. xv, 307: plates. London, Unwin (1915). 10/6 nett
 Contains a number of good plates of alpine scenery; chapters on alpine flowers and the origin of mountains.
- Lantern Slides.** Catalogues of Newton and Co., London: York and Son, London: Wilson Bros., Aberdeen. 1915
- Lawson, John Parker.** Scotland Delineated. A series of views . . . accompanied by copious letterpress. London, Day: Glasgow, Griffin: n.d.
 12½ × 9: pp. iv, 282: 72 tinted lith. plates.
- Lorenzi, Arrigo.** I confini d' Italia nelle Alpi orientali. Lettura scientifica tenuta all' Accademia di Udine. Udine, Doretti, 1915
 9¾ × 6¾: pp. 32: map.
- Mason, A. E. W.** A romance of Wastdale. 6½ × 4¼: pp. 160. London, Hodder and Stoughton [1915]
- Mills, Enos A.** The Rocky Mountain Wonderland. 8½ × 6: pp. xiv, 363: plates. Boston and New York, Houghton Mifflin (1915). \$1.75.
- New Zealand.** Pictorial New Zealand. London, etc., Cassell, 1895
 9 × 6½: pp. xvi, 301: ill.
 — Tourist and health resorts department. Annual Report 1914
 13 × 8½: pp. 12: plates.
 Good plates of Mt Hopkins, Mt McKerrow, Alps from Malte Brun and Alps from Sealy Range.
- Rabot, C.** Voûtes sous-glaciaires observées dans les Pyrénées par M. L. Gaurier. In La Géographie, t. 30, no. 1. 15 juillet 1914
 11 × 7: pp. 36–9: ill.
- Smith, Alexander.** A summer in Skye. Edinburgh, Nimmo [1915]. 1/-
 6½ × 4¼: pp. (iv), 570.
 This is a beautifully printed edition of a delightful, well-known work: the fifth edition of the book, we believe.
- Stein, Aurel.** Expedition in Central Asia. In Geogr. Journ. London, vol. 46, no. 4. October 1915
 9¾ × 6¼: pp. 269–276.

- United States.** Department of the Interior. The Mesa Verde National Park, 1915.
 9 × 6 : pp. 32 : ill.
 The Yellowstone National Park, 1915.
 9 × 6 : pp. 70 : maps.
 The Glacier National Park, 1915.
 9 × 6 : pp. 36 : ill.
 The Mount Rainier National Park, 1915.
 9 × 6 : pp. 38.
- W[est], W. C.** Table Mountain. Some easy ways to the summit.
 7½ × 4½ : pp. 12 : map. Cape Town, Publicity Association, 1914
- Weston, Rev. Walter.** Exploration in the northern Japanese Alps. In Geogr. Journ. London, vol. 46, no. 3. Sept. 1915
 9½ × 6½ : pp. 188-200 : map, plates.

Older Works.

- American Big-Game Hunting.** The Book of the Boone and Crockett Club. Editors Theodore Roosevelt : George Bird Grinnell.
 8½ × 5½ : pp. 345 : plates. Edinburgh, Douglas, 1893
- Bowden, Rev. J.** The naturalist in Norway ; or, notes on the wild animals, birds, fishes, and plants, of that country. London, Reeve, 1869
 7½ × 5 : pp. xiii, 263 ; tinted lith. plates.
- Cornwall, Nolle.** Hallvard Halvorsen or the avalanche. A story of the Fjeld, Fjord and Fos. London, Partridge [1888]
 7½ × 4½ : pp. 316 : ill.
- Glarner-Alpen.** Clubführer durch die Glarner-Alpen. 3., im Auftrage des Zentral-komitees des S.A.C. durchgesehene und ergänzte Aufl.
 6½ × 4½ : pp. vii, 312 : ill. Zürich, Tschopp, 1913
- Lake District.** Our English Lakes, mountains, and waterfalls, as seen by William Wordsworth. Photographically illustrated. London, Bennctt, 1864
 7½ × 6 : pp. xii, 191 : 13 photographs.
- Lang, P. S.** Where the Soldanella grows. London, Heath, Cranton [1913 ?]
 7½ × 4½ : pp. 318.
- Murphy, Thos. D.** Three wonderlands of the American west. Being the notes of a traveler, concerning the Yosemite National Park and the Grand Canyon of the Colorado River, . . . Boston, Page, 1912
 9½ × 6½ : pp. x, 180 ; col. and uncol. plates.
- The Scottish Tourist,** and itinerary ; or, a guide to the scenery and antiquities of Scotland. . . 2nd edition, with considerable additions and improvements. Edinburgh, Stirling & Kenney, etc. : London, Duncan, 1827
 7 × 4 : pp. xiv, 415 ; maps, plates.
 — : being a guide to the picturesque scenery and antiquities of Scotland. 9th edition. Edited by William Rhind. Edinburgh, Lizars : London, Highley : etc. 1845
 7½ × 4½ : pp. xvi, 414 ; maps, ill.
- Seguin, L. G.** A Picturesque Tour in picturesque lands, France, Spain, Germany, Switzerland, Holland, Belgium, Tyrol, Italy, Scandinavia. London, Strahan, 1881
 15½ × 12 : pp. iv, 312 ; plates. No. 117 of édition de luxe.
- Stone, Ollvia M.** Norway in June. London, etc., Ward, 1882
 7½ × 5 : pp. xvi, 446 : plates.
- Vicary, John Fulford.** An American in Norway. London, Allen, 1885
 7½ × 5 : pp. viii, 283.
- Zurcher et Margollé.** Bibliothèque des merveilles. Les ascensions célèbres aux plus hautes montagnes du globe. Fragments de voyages recueillis, traduits et mis en ordre. 2me édition. Paris, Hachette, 1869
 7 × 4½ : pp. 346 : ill.

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- Lochmatter, Joseph.** Führer-Buch 1896-1913. MS.

NEW EXPEDITIONS IN 1914.

Bernese Oberland.

METTENBERG (3107 m. = 10,194 ft.) BY THE W. ARÊTE.—On July 11, 1914, J. H. Wicks, W. A. Wills, E. H. F. Bradby, and C. Wilson, with Henri Rey, ascended the Mettenberg by the W. arête. Having first tried, and failed, to force a way up the great limestone cliff above 'Hohthurnen,' they rounded the end of the W. arête, and scrambled up the ravine on its S. side to a chamois-tracked col on its crest at the point where limestone and granite meet. Here they crossed the ridge and, ascending on its N. side, regained the arête where it turns in a southerly direction towards the summit. The descent was made by the S.E. arête and W. face. This obvious route appears to be new, and offers a pleasant traverse in either direction.

GWÄCHTEN (3169 m. = 10,397 ft.) BY THE N. FACE.—On July 21, 1914, J. H. Wicks, E. H. F. Bradby, and C. Wilson (having been prevented by bad weather from starting early for a longer expedition) left the Gleckstein about 9 A.M. and traversed the Gwächten to the Bäregg, ascending from the middle plateau of the Ober Grindelwald Glacier, straight up the N. face to the summit. The E. branch of the Wechsel Glacier, which forms the chief feature of the climb, is seamed by enormous crevasses which, later in the year, might prove impassable. The descent to the Schwarzegg path was made by the glen between the Gwächten and Klein Schreckhorn.

[Sir Felix Schuster's party in 1880 descended the E. branch of the Wechsel Glacier direct to the Ober Grindelwald Glacier. Cf. Mr. Coolidge's 'The Bernese Oberland,' Vol. II. p. 76 (1904).]

EIGER ROTSTOCK (2668 m. = 8754 ft.) BY THE S. FACE and W. ARÊTE.—On July 14, 1914, C. Wilson, with H. Rey, ascended this rock by the S. face and W. arête, reaching the arête near its western end. As no record of this route is found, it may be new. The rocks of the S. face are so steep and smooth that the rope becomes a menace rather than a security, and neither climber would care to repeat the scramble. Once on the ridge the climb is interesting, up two rather difficult pitches.

ALPINE NOTES.

'BALL'S ALPINE GUIDE.' VOL. I. THE WESTERN ALPS.—Copies of the new edition (1898) of this work can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C. Price 12s. net.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART I.—A new edition (1907) of this portion of 'The Alpine Guide,' by the late John Ball, F.R.S., President of the Alpine Club, reconstructed and revised on behalf of the Alpine Club under the general editorship of A. V. Valentine-Richards, Fellow of Christ's College, Cambridge, is now ready, and can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C. It includes those portions of Switzerland to the N. of the Rhône and Rhine valleys. Price 6s. 6d.

'BALL'S ALPINE GUIDE,' THE CENTRAL ALPS. PART II.—A new edition (1911) of this portion of 'The Alpine Guide,' by the late John Ball, F.R.S., President of the Alpine Club, reconstructed and revised on behalf of the Alpine Club under the general editorship of the Rev. George Broke, is now ready, and can be obtained from all booksellers, or from Messrs. Stanford, 12 Long Acre, W.C. It includes 'those Alpine portions of Switzerland, Italy, and Austria which lie S. and E. of the Rhône and Rhine, S. of the Arlberg, and W. of the Adige.' Price 7s. 6d

MAP OF THE VALSESIA.—Some copies of the Map issued with the ALPINE JOURNAL No. 209, and of the plates opposite pages 108 and 128 in No. 208, are available and can be obtained from the Assistant Secretary, Alpine Club, 23 Savile Row, W. Price for the set (the Map mounted on cloth), 3s.

THE ALPINE CLUB OBITUARY.—Bainbridge, O. J. (1900); Buxton, Sir T. F., Bt. (1860); Carfrae, C. F. K. (1910); Chater, G. (1862); Dent, L. W. (1903); Eccles, J. (1874); Fuller, Sir J. M. F., Bt. (1885); Head, Bernard (1915); Jex Blake, T. W. (1862); Saunders, F. W. (1887); Squires, R. D. (1913); Walker, Harry (1906).

THE MONT D'OR TUNNEL AND THE FRASNE-VALLORBE LINE, of which it forms a part, were opened to traffic on May 15. The new line avoids the circuitous Pontarlier route, with its heavy gradients, and shortens the time of the journey between Paris and Milan, *via* Lausanne and the Simplon, by about half an hour.

Besides the Mount d'Or Tunnel, which is nearly 3½ miles long, there are four other shorter tunnels on the line, which has been remarkably difficult to construct, not only because of the water-bursts in the Mont d'Or Tunnel, but also because it runs for a time through peaty, boggy land near Frasnè, where it was extremely difficult to make any solid foundation at all for the embankment on which the line has to pass.

The tunnel and the line should have been opened to traffic on May 1 last year, the latter having been begun in September 1910. The tunnel was pierced on October 2, 1913, but water-bursts seriously interrupted the work. The worst of these water-bursts occurred in December 1912, when a spring suddenly gushed out, flooding the shaft with over 600 gallons of water a second.

When this water-burst occurred a stream, the Bief Rouge in French territory, near the Mont d'Or range, and of great importance to the local population not only for water-supply purposes but for furnishing power to factories, dried up completely. All the many places at which water percolated into the tunnel have now been plugged up with cement, and the springs feeding the Bief Rouge stream have again begun to flow normally.

The new line is a double track, the traction being by steam, but as the Mont d'Or Tunnel is virtually straight, ventilation in it is easy. Vallorbe Station, belonging to the Swiss Federal Railways, once a small and unimportant building, has now blossomed out into a large international frontier station, where the Swiss Customs examination takes place. The rebuilding and enlarging of this station has cost the Federal Railways £300,000.

The original estimate of the cost of constructing this new line and tunnel amounted to £1,480,000, a sum which must now have been very greatly exceeded owing to so many unforeseen difficulties. —*The Morning Post.*

THE LEUKERBAD LINE, the latest of the Swiss mountain railways, has just been opened. The construction of this new electric line, just over 6½ miles long, was begun in 1912.

DR. FILIPPO DE FILIPPI, the Italian explorer, before the Royal Geographical Society on June 14, gave a lecture on his expedition to the Karakoram and Central Asia in 1913-14. To the King of Italy; the Government of Italy, who lent nearly the whole outfit of scientific instruments; to the Government of India, and to many scientific bodies, Dr. Filippi said he owed the support which enabled him to make the arrangements for the expedition. His discoveries in connection with glaciers to the east of the furthest point reached by Sir Francis Younghusband, Dr. and Mrs. Workman, and the Duke of the Abruzzi more than justified the prophecies of Dr. Longstaff, on whose advice he undertook the expedition. Dr. Filippi related how he determined longitude by means of wireless time signals transmitted from Lahore. In January 1914 he set off on a long excursion up the valley of the Shyok, starting from the point at which it joins the Indus. His excursions proved that it is possible to penetrate without any serious difficulty, and during the depth of winter, into the most outlandish valleys of Baltistan, carrying an equipment so light as to exclude any supplies beyond the mere necessaries of life. A four-days' march above Skardu, at Kharmang, an oasis which lies at the foot of an imposing castle, he found the Indus frozen from bank to bank, which made it possible for people and ponies to cross the river safely. As he advanced higher up the valley it became more and more common to meet with these convenient natural bridges which served to connect villages and districts at other seasons completely isolated. Very rarely did the party find the Indus sufficiently narrow to allow of

its being spanned by the picturesque rope-bridges so characteristic of Baltistan. Leaving the valley of the Shyok, the exploring party climbed narrow gorges hemmed in by precipitous cliffs. Here they were obliged to wade for long stretches through the rushing and turbid waters, which at that season (the end of May) of melting snow surged through the bed of the gorge. Later they entered upon a road the aspect of which grew more and more dismal. It was literally strewn with the remains of animals dead from exhaustion, mountain sickness, and starvation; carcasses of horses, asses, and camels in every stage of decomposition, from bodies surrounded by birds of prey to skeletons bleached white from long exposure. Two marches beyond, they arrived at a spot 17,400 ft. above sea level, which served as their headquarters until August. The surface of the plateau was a mass of minute detritus and entirely devoid of vegetation. The explorer's comment on this place was: 'There can surely be few corners of the world which give such an impression of dreariness and utter desolation as this barren region of rocks and stones, which, moreover, during our entire sojourn, was swept continuously by an icy wind and beaten upon by hail and sleet. The line of skeletons which marked the length of the caravan road across the plain is a fitting feature of this desolate country.' Here it was for nearly two-and-a-half months that two of the scientific men, often working day and night, collected meteorological data, carried out aerological investigations, and also took readings of solar radiation on the rare occasions when the atmosphere was clear enough. From here two other members of the party made an independent exploration of the upper basins of the Shyok, Remo, and Yarkand. Later the Indo-Asiatic watershed to the east of the Seachen Glacier as well as the Remo Glacier were explored.

STACK-A-BIORRACH.—We have received the following note from Mr. R. M. Barrington:—

'In May 1913 you inserted an account of my ascent in 1883 of the famous stack at St. Kilda called Stack-a-Biorrach.

'Various estimates of its height were then given from old writers, but Heathcote's recent figure of 240 feet was assumed to be probably correct. The Admiralty chart does not help us, though it gives the height of several other stacks.

'A short time ago I came across some barometric readings taken by me at the time with a pocket aneroid, which enable one to estimate the height of Stack-a-Biorrach with a reasonable degree of accuracy.

'There are three points in St. Kilda—over 1000 feet—on which the aneroid was tested, and the difference between the readings at the sea-level and summit recorded; these were the great cliff Conacher, 1220 feet; the summit of Borrera, 1072 feet; and the top of Soa, 1031 feet. These heights are marked on the charts. Tested in this way it was found that this aneroid registered a fall of .01 of an inch for every 8.71 feet ascended, and as the difference between

the readings at the sea-level and the summit of Stack-a-Biorrach was .23 of an inch its height works out at 200 feet almost exactly.

‘ RICHARD M. BARRINGTON.

‘ Fassaroe Bray,
Co. Wicklow.
Feb. 3, 1915.

‘ P.S.—Wishing to obtain the latest information in possession of the Admiralty, I have been advised by that office, since writing above, that the height of Stack-a-Biorrach is given as 210 feet in a map published by the Geographical Society, but that the accuracy of that figure is not vouched for.—R. M. B.’

REVIEW.

Den Norske Turistforenings Aarbok for 1915.

THIS annual, as usual, devotes a good part of its space to mountaineering. Herr Tönsberg contributes two papers. The first, which deals with some remarkable achievements on the rock peaks of the Nordland coast, has previously appeared in ‘ Norsk Fjeldsport,’ a book which has already been reviewed in our JOURNAL. The second describes a winter journey on ski through the mountains of Jotunheim. The Norwegians are beginning to discover the possibilities of winter mountaineering and Herr Tönsberg is one of those who are giving them a lead in this direction.

There is a paper on the ascent of Uranaastind in Jotunheim and another on the glacier region at the head of the Aalfotfjord, but for those who are interested in Norwegian mountaineering the principal item is ‘ A Guide to the Climbs in the Horunger, prepared by the Norsk Tindeklub.’ This is an instalment of the first climber’s guide ever published in Norway. A start has rightly been made with the Horunger, for the group contains a finer combination of first-class ice and rock climbing than any other in the country.

Anyone who has followed the development of mountaineering in Norway during the last ten years will know that the authors have brought to their task a very intimate knowledge of their subject, and they are to be heartily congratulated on the result of their labours. There are broad directions for the ascent of each peak by various routes, and there is a wise restraint from those minute descriptions of detail which so often prove useless in practice. I am able to compare the directions for the majority of the routes with memories of finding my own way up or down them, and I believe that they should be sufficient to bring about the finding of the right way by anyone who has judgment and experience enough to make him a fit leader above the snow-line. The division into three classes, difficult, medium and very difficult, is a doubtful advantage when

applied to climbs on which the conditions of ice and snow vary so greatly from season to season.

The effort to cover the ground thoroughly has been successful with a few notable exceptions. No guide which treats of the Skagastölstinder should fail to mention the two fine routes up their eastern face from the Styggedalsbræ, the one to Mellemste Skagastölstind and the other to Vesle Skagastölstind. The first of these was made by Messrs. Ashford and Kempson with Ole Öiene in 1897 and was recorded in the Aarbok for 1898, and the second by Mr. Lowry with Ole Öiene in 1902. Mr. Slingsby's descent in 1897 from the V-shaped gap to the Styggedalsbræ, which is not mentioned, may perhaps be regarded as of minor importance, but it is quite as worthy of record as several other expeditions for which room has been found.

Passes have not been dealt with very fully, but as some of these are only half in that portion of the group which is included in the present instalment it is possible that the authors intend to describe them later. Such a one is the crossing from the Maradalsbræ to the Slingsbybræ, first made by Carl Hall in 1887. There is no similar reason for the omission of the pass over the main ridge from Turtegrö to the Utladal by the Skagastölsbræ and the Midtmaradalsbræ.

The guide is illustrated by some clear and useful diagrams, and also by a number of photographic pictures. Some of the latter are good, but most of them have already done duty elsewhere, and in any case they are hardly in place in a climber's guide. The photograph of Mr. Howard Priestman's very excellent map is neither large enough nor clear enough to be of much use, and we must still wait for the publication of some better map of the Horunger than the small lithographic reproduction of Mr. Priestman's work which is to be found in 'Norway, the Northern Playground.'

The pages of the Aarbok are obviously not the best place for a climber's guide, nor is the system of publication by yearly instalments suitable for the purpose. This work is much too good for such modest treatment, and it is to be hoped that the reception of the first instalment may be such as to encourage the authors to complete their guide for the whole of the group before the allotted time and to publish it in the form of a small book.

The many English friends of that best known of all Norwegian guides, Ole Berge of Turtegrö, will read with interest that he has made his 100th ascent of Store Skagastölstind, and that the Turistforening has appointed him an honorary member in recognition of his many and varied services to mountaineering.

A yearly feature of the Aarbok is the return, also prepared by the Norsk Tindeklub, of mountain ascents in Norway during the previous year. It cannot be said that the list for 1914 is evidence of any great enterprise on the part of the general body of mountaineers in Norway. The major part of Norwegian mountaineering is naturally enough done in the Horunger, but of the twenty expeditions in this group which are recorded, no less than fourteen were ascents of Store Skagastölstind, and in twelve of these both ascent and descent

were made by the ordinary route on the rocks of the western side. With certain brilliant exceptions, Norwegian climbers show some tendency to return again to a few well-known rock routes in the Horunger, and to shut their eyes to the splendid snow and ice climbs which surround them on every side, more especially in the eastern portion of the group, which appears to have been quite unvisited in 1914.

This can be accounted for to some extent by the very great scarcity in Norway of guides who are competent to lead a party on difficult ice and snow. The Turistforening are therefore to be congratulated in that they are making an effort to mend matters. In 1914 they held their second annual course of instruction for guides. These courses have been held at Turtegrö and have been attended by men from various parts of the country who have wished to qualify themselves to become guides, or to add to the limited knowledge of the principles of mountaineering which they already possessed. About a week has been devoted to the work, the days being spent in actual practice upon ice and rock under the supervision of Ole Berge and several skilful amateurs, and the evenings in theoretic instruction, the study of map reading, first aid, and that much neglected subject, the correct formation on an alpine rope of the few necessary knots—a subject which frequently remains unmastered by men who have climbed for years.

Even the Norsk Tindeklub come to grief over knots, for in 'Short Instructions for Climbing and the Passage of Glaciers,' which is printed each year in the Aarbok, they continue to exhibit a picture of a fisherman's bend tied wholly against the lay of the rope and another of a middleman's noose tied half against the lay and half with it, this last being accompanied by a diagram showing clearly the ingenious and only too well known manipulation by which that wrongful result can be reached. It must be confessed that more than one English author has been guilty of the same error. For all this the instructions are an admirable summary of mountain lore and contain most of those things which experience can suggest to help inexperience to go safely in high places.

R. BICKNELL.

THE PORTRAITS OF COL. BEAUFOY AND JEAN-MICHEL CACHAT.

THE portrait of Colonel BEAUFOY was presented by Mr. Mark Hanbury Beaufoy, grandson of Colonel Beaufoy, to Mr. H. F. Montagnier, and by him to the Alpine Club on behalf of Mr. Beaufoy.

Forbes states 'that Colonel Beaufoy . . . ascended the Aiguille du Midi at least up to the foot of the last rock summit' ('Travels

through the Alps of Savoy,' New Edition, 1900, revised and annotated by W. A. B. Coolidge, note on p. 232), but no other record of this ascent appears to exist.

JEAN-MICHEL CACHAT, dit 'le Géant,' 'owing to his having gone round the Aiguille du Géant on the passage of the Col of that name' ('The Alps in Nature and History,' by W. A. B. Coolidge, M.A., p. 230) was Colonel Beaufoy's leading guide, but had already taken part with Balmat in the second ascent on July 5, 1787 ('A.J.' xxv. 612), and was one of De Saussure's guides on the third ascent on August 3, 1787 ('A.J.' xxv. 613).

The reproduction is from a portrait in the collection of the Alpine Club.

CORRIGENDA AND ADDENDA TO VOL. XXIX. ;

P. 23. The paragraph commencing 'The rock arête' in No. 9 does not refer to illustration No. 9, but to the picture in 'A.J. xxviii. 227, which it had been intended to use again.

P. 28, line 10, for ten read *two*.

P. 113, note 2, add in line 2 'to the E. and N.'

P. 115, note 3, should read 'This is *not* the great couloir . . .' and add 'What is meant is the couloir Perazzi shown on the marked illustration, p. 128.'

P. 125, footnote 9. Hans Knubel was killed in the *next* year.

P. 126, route 2 *bis*. The first ascent by the S.E. arête was made by Jean Nicolas Vincent August 5, 1814.

P. 128, note 2, for *Carugat* read *Carugati*. For particulars see 'Rivista C.A.I.' 1915, pp. 111-2.

P. 128—Plate. The white line 'Colle Signal' stops short in error at the Silbersattel. It needs producing to its point of intersection of the 'Cresta Signal.'

P. 133, line 1, read *Gspaltenhorn*.

P. 135, 6 lines from bottom, read *Chapons de Biesse*.

P. 137, footnote 5, line 2, read to *one another*.

P. 138, footnote 7. Route No. 20 brings you to the Valsesia hut, whence route 9-9-12 is followed to the Northern shoulder of the Parrot *over which the Sesiajoch leads*. The depression marked in the illustration p. 128 'Colle Sesia' is, as stated, not crossed. In this illustration there are misprints: *Alagua* for *Alagna* and *Guifetti* for *Gnifetti*.

P. 148, the photograph of Vologata is by *Mr. J. R. Young*.

P. 171, line 10 from bottom, read *Meije* for *Maye* and *Col du Clot des Cavales*.

P. 187. Sir Edward Davidson is good enough to point out that the *second* ascent of the Petit Dru was made on August 6, 1883, by *Mr. J. Walker Hartley* and the two *Reys* ('A.J.' xvi. 293 seq.),

and that the *third* ascent was made on August 28, 1884, by Mr. J. T. van Rensselaer with François Simond and Edouard Cupelin ('A.J.' xii. 128).

Gaspard was one of the guides of the *fourth* ascent made on August 2, 1885, by M. Henri Brulle and the Comte Denys de Champcaux ('A.J.' xiii. 459).

P. 267, last line. Mr. J. H. Fox was a *cousin* of Mr. Harry Fox, not his father.

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PRINTED BY
SCOTTISWODE AND CO. LTD., COLCHESTER
LONDON AND ETON, ENGLAND



32101 076197423

