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AND

SCIENTIFIC OBSERVATION

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THE
ALPINE JOURNAL.

FEBRUARY 1904.

(No. 163.)

THE ALPINE CLUB AND THE EXPLORATION OF
MOUNTAIN REGIONS.

*The following Report has been made to the Committee by the
Special Committee appointed for the purpose indicated in it.*

THE Sub-Committee appointed to consider the possibility of establishing a scheme whereby the Alpine Club might furnish to travellers and explorers, intending to visit mountainous regions, such advice and assistance (not including pecuniary grants) as the Royal Geographical Society gives to travellers generally, beg to report as follows:—

They are of opinion that the scheme is desirable. In the opinion of the Sub-Committee the encouragement of mountain exploration in any part of the world is a very proper function of the Alpine Club.

The value of many journeys might be much enhanced if travellers were provided with proper mountaineering outfit, &c., and if advice were given as to its use. Opportunities for acquiring information as to the physical geography of little known mountain districts are often wasted because the explorer has no special knowledge of mountain travel; hardships are often unnecessarily undergone, and risks incurred, because the travellers are ignorant of the elementary principles of the methods that should be employed in glacial regions.

In a large proportion of the mountain regions of the world the native inhabitants have little or no knowledge of mountain travel, and the traveller, unless he has some acquaintance with the general principles of mountaineering, is either debarred altogether from exploration in the higher regions or else fails to profit as fully as he might by his outlay and exertion.

The Sub-Committee have every reason to believe that the Royal Geographical Society would co-operate heartily in any

scheme that may be devised. For the most part the intending explorers would be referred to the Club by the Royal Geographical Society, and there would thus be a primary guarantee to some extent that the persons so referred were serious travellers.

The Sub-Committee suggest the following method of carrying out the proposal systematically :—

The establishment of a list of referees, who shall be members of the Alpine Club. These referees should be invited by the Committee to undertake the duty of advising travellers referred to them on the districts or subjects with which they have special acquaintance. There need be no limit to the numbers.

Members of the Club might naturally hesitate to accept an honorary office if it were likely to entail much correspondence. On the other hand they would probably be very ready to accord a personal interview. The Sub-Committee suggest that the method of personal interview should be exclusively adopted.

It should be the duty of the Assistant Secretary to satisfy himself that any applicant is *prima facie* a suitable person, and, if so, we shall refer him to one of the referees, and arrange a meeting between the traveller and the referee; if the latter wishes it the Club rooms will be placed at his disposal for this purpose. In case of doubt the Assistant Secretary shall refer to one of the officers of the Club or to the Committee.

It is not at present proposed to include the European Alps in the scheme. The Sub-Committee consider that no special arrangement is required to enable mountaineers to obtain easily such information as they may desire about these districts; and, further, they desire to guard the Club against applications from persons merely desirous of ascertaining how they may qualify themselves for membership of the Club.

In the future it might be possible to modify the scheme, and give information on some of the lesser known districts of the European Alps.

The Sub-Committee strongly recommend that a new edition of 'The Report of the Special Committee on Equipment for Mountaineers' be forthwith prepared. The present issue is in many respects out of date.

Signed { C. T. DENT,
J. NORMAN COLLIE,
A. L. MUMM.

The above report has been adopted and approved by the Committee, and communicated to the Royal Geographical Society, and the following reply with reference to it has been received from the Secretary of the Society :—

Royal Geographical Society,
7 Savile Row, Burlington Gardens, W.
November 24, 1903.

DEAR SIR,—I am asked by the Council to say with reference to your letter of the 18th and enclosure, that they consider the proposed scheme a very desirable one, and will be glad to do all they can to co-operate with the Alpine Club. Probably the best way in which the Society could co-operate would be to send any of our men who propose to explore mountains or ice-regions to the Club to receive special instructions.

I am, yours very truly,
J. S. KELTIE.

A. L. Mumm, Esq.

A list of referees is in process of formation, and members have consented to act as referees in regard to the following districts and subjects :—Central Africa, the Andes, the Canadian Rockies, the Caucasus, the Himalayas, Norway, the Pyrenees; outfit, &c., photography, physical geography as applied to mountains and glaciers.

LOFOTEN.

By J. NORMAN COLLIE.

(Read before the Alpine Club, December 14, 1903.)

IN August 1901 when I first visited Lofoten, the special charm of these lonely islands of the Arctic Ocean made it almost impossible for me to stop long away from them. For they possess a beauty which is peculiar, a beauty only found where ranges of excessively rugged mountains and fantastic peaks are encircled by a great ocean, and where during the summer months the sun slowly circles low down round the horizon, casting wonderful shadows on the mountains, and often filling the great expanses of sky for hours together with such colour as can be seen only where the Gulf Stream produces an atmosphere laden with water vapour.

In fine weather the Lofoten Islands are a veritable lotos-eater's land, a land where it is always afternoon, where even the streams fall lazily down the rock precipices, where the waves seem to creep in from the open sea with a more languid motion, and the mountains sleep in an endless sunshine.

But although, from a purely artistic and lazy point of view, the Lofoten are delightful and unlike any other mountain land that I have visited, yet they have another attraction. The endless number of steep rocky mountains give the enthusiastic rock-climber a splendid choice of scrambles, many of exceptional difficulty, and all on ground comparatively new. Many of the peaks still remain unclimbed, and certainly the majority cannot boast of a second ascent.

As that enthusiastic Norwegian mountaineer Cecil Slingsby had never climbed a peak in Lofoten, it was considered high time that such a reproach should be rendered impossible for the future. Together, therefore, we planned a tour there last summer.

Slingsby brought his son with him, and I asked D. Northall-Laurie to join the party. We started on July 18 from Newcastle, and travelling straight through, arrived at Svolvær on the evening of Thursday the 23rd.

As we were going to camp out for the next four weeks, it was necessary to get some man who would look after our camp and also as far as possible cook for us. Such a person we were unable to procure at once, and whilst waiting we spent a day climbing a peak near Svolvær called the Kongs Tind. On our arrival at the top, which did not require any difficult climbing, although we entirely encircled the peak before we found the way up, we found a very ancient cairn, the stones of which were covered with lichen. There is a legend that a former king of Norway made the ascent; perhaps, therefore, this was his cairn, certainly it looked as if it had been there for centuries.

On our way down we had a splendid view of the peaks in Ost-Vaagö, Higraf, Gjeitgaljar, and Rulten. Rulten looked most inaccessible, promising to be a difficult mountain; as it turned out later, the promise was kept, and we got better climbing on it than is often obtained on many other mountains four times its size.

But before trying the ascent of Rulten we were very anxious to visit Moskenesö, the furthest W. of the big islands of the Lofoten. On looking at the map it will be seen that Lofoten proper consists of a series of islands running S.W. Ost-Vaagö nearest the mainland, then Vest-Vaagö, Flakstadö, and then Moskenesö, with two small islands Værö and Röst, still further out in the Arctic Ocean. The newly published map* shows the extraordinary nature of the island of Mos-

* 'Topografisk Kart over Norge.' Blad. I. 11. Lofotodden.

kenesö. It consists of nothing but fjords, lakes, and very steep mountains, some rising almost sheer 3,000 ft. out of the sea.

Having at last obtained a somewhat elderly fisherman named Christian to look after us, we set sail for Moskenesö. Our first camp was on the Fors Fjord, on one of the very few spots level enough to allow us to pitch the tents.

It was a most charming spot; due W. across the fjord rose the highest mountain in the island, Hermandals Tind (3,392 ft.), in the form of a pyramid. The sun shone, the fjord was beautifully calm; on three sides of our camp we were shut in by the walls of glacier-worn rock, over which several streams tumbled. There was plenty of choice of climbing. Next morning, July 29, we rowed across the fjord to the foot of Hermandals Tind, and, ascending the steep grass slopes, soon reached a spot where a good view of the eastern face of the mountain was obtained. It consisted of precipices of dark rock, with here and there patches of snow.

Between us and Hermandals Tind, some 200 to 300 ft. below, lay a dark tarn partly covered with small icebergs. From its opposite shore a steep snow gully led. Hermandals Tind, unlike many of the peaks in Lofoten, is a real mountain, and not a mere rugged pinnacle of rock. Another point wherein it differs from many of the lower peaks is that on its summit there seems to be no evidence of glaciation. It therefore must have risen above the surface of the great ice-sheet that at one time covered this district.

We did not try to ascend the great gully, for it would have necessitated first a descent to the lake and afterwards a considerable *détour*, but instead turned to our right, making for the northern ridge of the mountain. Before, however, reaching the ridge, the great snow-gully had to be crossed at its head. It was here that we obtained a most extraordinary and unique view. Almost at our feet, nearly 3,000 ft. below, lay the shipless Arctic Sea; precipice after precipice of the mountain descending to the deep waters of the ocean. From the head of the snow-gully, another, deeply cut, ran down the other side of the mountain straight to a dark cleft, into which the great waves of the sea ceaselessly rolled. The upper part of this gully was filled with snow at a steep angle, below evidently were many sheer drops, and the dark cleft at the bottom looked almost as if one could have thrown a stone into it, so steep was the general angle of the mountain. This western side of Moskenesö is magnificently wild, and if it were possible (which probably is not the case) to climb along this

coast from Bunes, past Hermandals Tind to the S. end of the island, the scenery could not be surpassed for lonely grandeur by any mountain range in the world. For on one side are the mountains rising almost sheer for 3,000 ft., on the other is the coast-line broken into many wild rocky bays, where long lines of white-crested billows roll in from the Arctic Ocean and hurl themselves against the iron-bound coast, sending stray flakes of foam drifting up the walls of solid rock to rival in whiteness the plumage of the sea-birds that circle round this lonely island. Out in the sea are a few isolated remnants of rocks, desolate sea-stacks, raising their heads above the surging waves, whilst miles and miles away across vast expanses of sunlit waters lies the horizon, seeming to rise up to meet the hazy clouds of the downward-bending sky.

The only piece of climbing we had was from the head of this gully up the first part of the weather-beaten northern ridge of Hermandals Tind. It was not difficult, and we soon found ourselves on the summit of the mountain. A member of the Norwegian Survey Department had been there before us, for on the top was a large cairn. The view was very fine, for the mountain was surrounded practically on all sides by the sea. Far away to the E. across the W. fjord were the peaks of the mainland, below were endless lakes and arms of the sea; moreover, it was a new and unknown land of mountains to all of us. The weather was perfect, only a faint breeze blew, and there was no need to hurry in a land where the sun did not set.

We descended the southern or easy side of the mountain towards a wonderfully wild lake, the Krokvand (1,142 ft.), that lies hidden away amongst the highest peaks of Moskenesö. On the farther side of this lake rises the second highest peak in the island, Ertenhell Tind (3,090 ft.). During our evening meal by the side of Krokvand, we made up our minds that, should we be able to force a way along the narrow eastern ridge of the mountain, probably we should have some very good climbing.

On our way home some of the party learnt that to try to traverse a hill-side in Moskenesö is attended with much danger and is often attempting the impossible as well. The ice in former days has polished the faces of the hills in the most perfect manner, slabs of over a thousand feet high, excessively steep, and without crack or place even where a bird could find footing, are to be found in every fjord and valley. On the way back to camp, besides Ertenhell Tind we noticed



Photo by J. Norman Collie.

HERMANDALS TIND.

[Swan Electric Engraving Co.]

towards the S.E. a very sharp rock-tooth, on the map it was given the name Munken (2,641 ft.). As it was nearer our camp than Ertenhell Tind, next day we started out to climb it.

No difficulty was found in getting as far as the base of the tooth, here the real climbing began. After carefully scanning the whole face with our glasses, it was evident that to start with the left-hand side of the western ridge would be the easiest side to attack, the ridge itself being too steep. For some distance we managed to climb from point to point, but the slabs got steeper and the pitches more difficult. I was leading, and ultimately found myself unable to climb further ; a traverse some short distance out to the left showed nothing easier, whilst to the right I was only able to get as far as the nose of the ridge, which at this point was clean cut to a solid angle, almost perpendicular for at least forty to fifty feet. Across this solid angle, round on to the other, or southern, face of the mountain, was a crack. If I could have climbed up so as to get my feet into this crack, which sloped inwards, it could have been used as a traverse for about six feet to a small shelf, from which there seemed an easier way up. There was, however, an alternative : using the crack to hold on to, I might make a hand traverse across that six feet, but there would be no support for my feet. The more I looked at it the less I liked it ; perhaps I should not be able to pull myself up on to the shelf at the end of the traverse ; perhaps I should find difficulty in getting back ; moreover I could get no help from the rope ; yet it seemed the only way out of our difficulties.

Further investigations showed nothing better, and after being dangled at the end of an eighty-foot rope and taxing the patience of the party for a considerable space by having all the fun to myself, whilst they sat on a ledge, the conclusion arrived at was, it must be the traverse or nothing. Will Slingsby came as far as the nose, and looked round it at the traverse ; he thereupon announced his intention of trying it. I saw that, by standing at the corner of the ridge, with the rope hitched through the crack, even if Will had let go altogether whilst on the traverse, no harm could have come to him ; he would be quite safe as long as I was there to hold the rope into the crack. The change of leaders was most successful ; Will traversed along to the small shelf, where, hanging on by one hand, he cleared away from the shelf some moss and soil ; he then pulled himself on to the shelf ; thence clambering up a short distance further, he sat himself down on a spacious platform, and was ready to pilot the rest of the party across the nose of the mountain.

Beyond that point the climbing became easier, and not long afterwards we reached the summit, on which a cairn was immediately built. The eastern side of the mountain falls sheer for most of its height, and at the top actually overhangs.

The next day Slingsby, Will, and I went out for a row on the fjord with Christian. We finally found ourselves at the head of the Bunes Fjord. Thence we wandered over a neck of land not more than 200 ft. high to find a beautiful sandy bay facing N.W., where the waves were breaking in the sunshine on the shore. On our right were perpendicular rock-walls coming right down to the level sands; to our left the mountains were almost as sheer, whilst towards the mouth of the bay was a fisherman's house marked on the map Bunes. Slingsby had a bathe in the sea. This fjord during the winter months, when the westerly gales sweep over Lofoten, must be a desolate place, and there must be considerable difficulty in even keeping up communication with the nearest neighbours. But during the summer months Bunes is a most romantic spot. Long lazy ocean waves quietly break on the sandy shores between the grim rock portals on either side, and the sea, the cliffs, and the bay bask in the sunshine.

It was not till August 2 that we started for Ertenhell Tind. Climbing up to the shores of the Tennesvand (756 ft.), we skirted between it and the Krokvand, crossing a small stream that flowed between the two. Before we could get near the south-eastern ridge of Ertenhell Tind, we had to climb up a steep wall of rock, which gave us some good scrambling. Thence we made our way over some snowfields to a spot when we looked down on to an extraordinarily wild fjord called the Troid Fjord (485 ft.). It was not until after lunch that the ridge was reached. This ridge was full of surprises, one of the first being that at one place where we expected steep rock we found a grass slope instead, which, however, did not make it any the easier or safer to climb. Then in another part where from below the ridge looked easy and the face impossible, the best route was eventually found after all to be across the face. At last we got to a point just underneath the final peak, only to find ourselves stopped in our upward progress by a hopelessly impossible precipice. The north side of the mountain was also sheer; the only route therefore left was down a snow gully on the southern side towards the head of the Troid Fjord. After a descent of several hundred feet, which was not very rapidly accomplished,

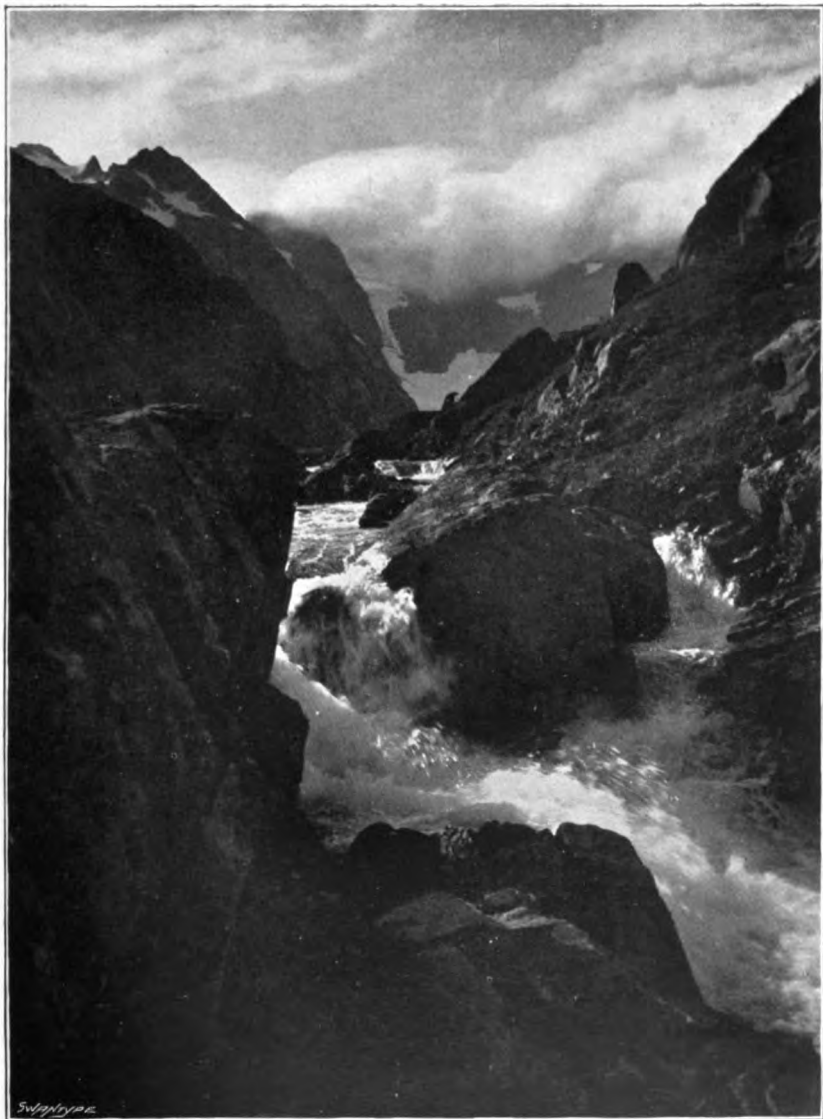


Photo by J. Norman Collie.

[Swan Electric Engraving Co.]

MOUNTAIN STREAM, TROLDGFJORD.

owing to the fact that a considerable number of steps had to be cut, we found a steep rock chimney leading up the precipice on our right. It seemed our only chance; bit by bit we worked up it; there were awkward corners, small traverses, and steep pitches to be conquered, but we were determined not to be beaten, and for our reward eventually came out on to the sloping snow-cap that covers the top of the mountain. Of course we built a cairn, but unfortunately mist prevented us from getting any view. Later it began to rain, and before getting back to our camp we were all wet through.

Before leaving Moskenesö and Hermandals Tind to return to Svolveær, we spent one more day fishing in the Fors Fjord. Our fishing was both curious and amusing. Christian, being before all things a fisherman, had narrated to Slingsby (who alone understood his Norsk patois) many strange fishing stories. Amongst the numerous sea monsters mentioned there was one called 'Sprut,' but from his description it was not possible to say what particular kind of sea-beast it might be in plain English. However, on the morning after the ascent of Ertenhell Tind, we made its acquaintance in the flesh. Small jets of water were seen coming up out of the calm water of the fjord. Christian at once became highly excited, assuring us that the phenomenon was caused by the beast 'Sprut.' Our boat was at once pulled down to the water, and we all embarked to fish for the monsters. Looking down into the clear water of the fjord we could see numerous 'Sprut,' in size about a foot and a half long, darting about like small submarines. Shaped like torpedo-boats, these 'Sprut,' or cuttlefish, made tremendously rapid darts backwards through the water, and we saw that it was only when near the bait that they would swing round through half a circle in order to go tentacles first. When pulled up above the surface of the water, the first thing they do is to discharge a jet of water as thick as one's finger about 8 ft. or 10 ft. into the air, and should one not be careful, the miniature deluge may hit either one's self or some one else in the face.

It seems that they are excellent bait for other fish, and as a result of our fishing we were soon able to return to camp with a dozen fine cod. It was on the same day that we noticed a most curious fact relating to the behaviour of the cuttlefish. On one part of the rocky shore of the fjord near our camp, Slingsby discovered hundreds of them committing suicide in the most determined manner by darting madly on to the rocks and the beach. Why they should do this is not

clear; Christian, when asked about it, said they were after the sild (or herring), but when it was pointed out to him that herring do not live on dry land, he shrugged his shoulders, saying it was their nature so to do; our question therefore remained unanswered. Next day we packed up our tents and rowed round to Reine in order to catch the local steamer that evening for Svolvær, where we arrived next day.

The time had now come for our attack on Rulten, so on the following day (August 6), having obtained a fresh stock of provisions, we hired a boat and rowed up the Oihelle Sund to a small bay called Reknes, due E. of Rulten. Here we camped at the very foot of our peak. Two years before I had tried to climb Rulten by the southern ridge, but after much scrambling had finally stopped about 1,000 ft. below the summit. In my former paper on Lofoten, read before the Alpine Club in February 1902, are the following remarks about the mountain:—'Rulten is undoubtedly a very difficult peak. At present I see no way up it, but probably by a systematic attack, and by trying every side, a weak spot will finally be discovered.'

This was written after having seen the peak from all sides, and as events turned out was very near the truth. On the day after we arrived at Reknes, Laurie and I started on a tour of inspection. We climbed on to the Sneskar glacier that lies on the N. side of Rulten. The day was perfect, without a cloud in the sky, and as we passed underneath the sheer precipices that run all along the N. side of the peak we were unable to find any possibility of a route from the glacier on to the summit-ridge of the mountain. At the head of the glacier was a pass which led over to the Ostnes Fjord; here we obtained a most unexpected view. Instead of seeing westward across the islands and the Ostnes Fjord at our feet, a vast sea of rolling clouds hid most of the view. These clouds had been driven in from the sea by a N.W. wind, and were pouring over the backbone of the Lofoten Islands in a great cataract of sunlit billows. Here and there could be seen some rocky summits with the cloud-waves poised high above them, soon to be hidden by the descending vapours. Again these white sea-mists would open for a moment, showing, far below, a snow patch or the reflection of the sunlight on the fjord. Vaagekallen alone was free.

Whilst Laurie was busy photographing, I prospected the ridge that led straight up from the pass to the summit of Rulten, 1,000 ft. above us. I soon saw that it was impossible, being made up entirely of bare slabs and perpen-

dicular pitches. The western face of the mountain, however, looked more hopeful. In order therefore to find out as much as I could, I descended the snow-gully on the W. side of the pass for some distance, and then by climbing up a chimney I was able to get on to the ridge some distance above the pass. From here, looked at sideways, the face seemed moderately easy, and I fancied that, after a snow-patch some distance up the mountain had been reached, no particular difficulty would be met with.

On our return to camp, I gave it as my opinion that the mountain was a fraud, and that we could easily get to the top in less than an hour from the pass. How far I was wrong we found out later.

On August 10 we started for our mountain; it was about one o'clock that the pass was reached, and the real rock-climbing began. At the very outset there was an excessively nasty pitch, which I found considerable difficulty in coming down last, this pitch leading to a traverse across the W. side of the mountain that was necessary in order to reach the snow patch. Part of this traverse was over dangerous ground, for the small ledges were covered with grass and soil and often offered but scanty foothold. The snow patch was reached at last, and we found ourselves at the bottom of a wide gully, that seemed to lead to the summit of the mountain; below us an almost perpendicular precipice of at least 1,000 ft. Up this gully we climbed, partly by using the cracks in the rock slabs on its side, and partly by cutting steps in the steep snow. It is worth mentioning that in 1901 there was no snow at all in these gullies on the western face of the mountain. We soon found another open gully looking easier that branched off on our left and leading up to the ridge, so it was followed for about 200 ft., but in the end neither could we get on to the ridge from it, nor were we able to traverse out of it towards the main gully. The slabs on these Lofoten peaks are most uncompromising. In size and texture they exactly resemble those on the Chamonix Aiguilles, and the splintered ridges and smooth perpendicular faces of the peaks might easily be mistaken for parts of the Charmoz or the Grépon. As we were entirely stopped in our attempt to reach the ridge, we had to descend again to the big gully, up which for the next five hours we slowly made our way foot by foot. I handed over the leadership at an early stage in the proceedings to Will Slingsby, who proved a most successful leader. How we spent the five hours I am unable to say, pitch after pitch and slab after slab had to be surmounted.

One or two places, however, stand out more prominently than the rest. Will had cut up a very steep tongue of snow into a vast cave with an overhanging roof some 40 ft. above us. Fortunately about 25 ft. up and across the mouth of the cave was a jammed stone. Could we get there? it was our last chance. At the back of the cave a very wet crack ran up the wall; this crack Will managed somehow to climb, then by a traverse across the wall he got on to the jammed stone; another traverse out along the face and some more slabs brought us back again into the gully above this pitch. Further up we were again stopped by another pitch, this time quite impossible; again we had to traverse to our right, finding ourselves in a subsidiary gully, a place most difficult to describe. It was a sort of cup on the mountain side with a great hole in the bottom, through which one could see almost straight down for considerably over 1,000 ft. This cup had evidently been formed by a huge slab, or rather a part of the mountain at least 60 ft. high and much broader, becoming wedged across the jaws of a narrow gully, the walls of which were evidently of very hard rock. Behind this in the gully the rock was far more splintered, consequently it had worn away bit by bit, leaving a huge hole behind the slab. This hole in its turn had been partly filled up low down near the bottom of the slab by more blocks some 20 ft. or more in diameter, across which we had to traverse. Beyond this curious place were more slabs to crawl up and more pitches to climb. But just eight hours after we had left the pass, or at nine o'clock, we got to the top of our gully, and an easy walk over snow took us to the top of the W. peak of Rulten. It was a splendid climb, and Will Slingsby had led us magnificently.

If I were to describe every sunset and every magnificent panorama of sea, peaks, and clouds that we saw in Lofoten, it would mean that the number would almost correspond to one a day. But on the evening that we climbed the W. peak of Rulten there was a more wonderful display than usual across the vast stretches of the Arctic Ocean.

Although we had climbed our peak, and although a perfect sunset and a marvellous view was spread out in front of us, yet Rulten was still unvanquished, for the eastern peak, some third of a mile away, was evidently about 20 ft. to 30 ft. higher; also, to our disgust, the connecting ridge between the two was quite hopeless.

A big cairn was built on the western summit, and a smaller one on another lower summit that lies between the two

peaks. After spending more than an hour on the top, we started down the mountain. We certainly were not a slow party, yet, climbing as quickly as possible, it was over four hours before we reached the pass, and the sun was shining brightly by the time we got back to our camp, where we found Christian waiting for us, and quite ready to cook the dinner.

Of course, the next expedition had to be an attempt on the higher or eastern peak of Rulten. We had seen that it was impossible to approach it from the western peak; the northern face was one long precipice. There remained only the eastern ridge and a very savage gully lying between the two peaks on the S. side of the mountain. We had looked into this gully in 1901 when we were stopped on the southern ridge; we had also looked down it from the summit of the western peak, and from both spots it looked possible, though difficult, to climb. Whether we should be able to get out from the top of it on to the eastern peak was not very clear; still we could not tell till we had tried it. The eastern ridge was excessively steep in places, and there were several sheer drops in it which from below looked distinctly unpleasant. Another point in favour of the gully was that it was filled with snow almost from top to bottom, although at a very steep angle.

We therefore started to investigate the gully, but the weather was unfavourable, and all we did was to walk up the glacier on the S. side of Rulten. We were in mist most of the time, so were unable to see anything of the top of the mountain. The next day was wet, and on the 14th, although not raining, yet it was not weather to attempt a difficult ascent, so we climbed one of the Langstrand Tinder in dense mist. The peak turned out to be the one that Priestman, Woolley, and Hastings climbed in 1898. We, however, had climbed it from another side. Next day we made our attempt on the eastern peak of Rulten by the gully on the S. face, and, to cut a long story short, it was an entire failure. We started up an enormous fan of snow several hundred feet high that had been avalanched down the gully on to the glacier below. At the summit of the fan, where it narrows to the neck at the bottom of the gully, was a fearsome bergschrund about 20 ft. wide, and going down into dark and unknown depths. Fortunately across it was wedged a great block of snow, whilst on each side sheer walls of rock seemed almost to overhang the narrow entrance. We crossed the snow-bridge one by one with great care, to find a small platform of rock; above the snow had broken away, leaving a perpendicular face about 12 ft. high that overhung the gloomy chasm. Up

this we had to cut a staircase in order to get into the gully proper, up which endless steps had to be cut. In order to avoid the hard work of step-cutting, several times I tried to force a way up the narrow gullies in the rock on the right hand, always in the end to be stopped and forced back again into the main gully. After several hours of this work when still a long distance from the top, we saw that, although progress up the gully itself was not impossible, yet it would only lead us to the gap between the eastern and western peaks, and from that gap to the eastern summit we knew would be too difficult for our party. So at last reluctantly we resolved to return, but not before Slingsby and I had agreed that not even amongst the couloirs of the Mt. Blanc Aiguilles had we seen slabs of rock on a larger scale than those on Rulten. The whole descent to the bergschrund had to be done with our faces to the slope, and we were not sorry when a glissade brought us down to the level glacier at the bottom; for the gully was an awe-inspiring place, and should an avalanche of stones occur it would be a most dangerous place to be in. At the foot of the fan, however, there were no remains of such avalanches.

On the morrow we again returned to Svolvær, and personally I was rather sceptical whether the eastern peak of Rulten would ever be climbed. However, Slingsby was much more optimistic, and as our party was strengthened by the addition of H. S. Mundahl, who last year had successfully ascended that terrible-looking pinnacle of rock in the island of Langö, named Røeka, we made up our minds to attempt the ascent of Rulten once more, this time by the eastern ridge.

We hired a small sailing-boat that had been fitted with a petroleum auxiliary engine, and as the engine happened on that day to be in working order, the party got to Reknes early. A start for the peak was made at once. It is very often that the unexpected happens, and as we had found on Ertenhell Tind, the worst and steepest part of the ridge was very different from what it looked like from below. This is often the case, but one does not expect to find a small gully running right up the very nose of the mountain. Also later we were able to entirely leave out the last part of the ridge between the last peak and the summit, which from below had looked particularly formidable. This was done by a descent on the southern side of the mountain, a subsequent traverse across the face bringing us to the final peak. The climbing was good throughout, though nowhere of any great difficulty; care, however, was always necessary. It was evening when

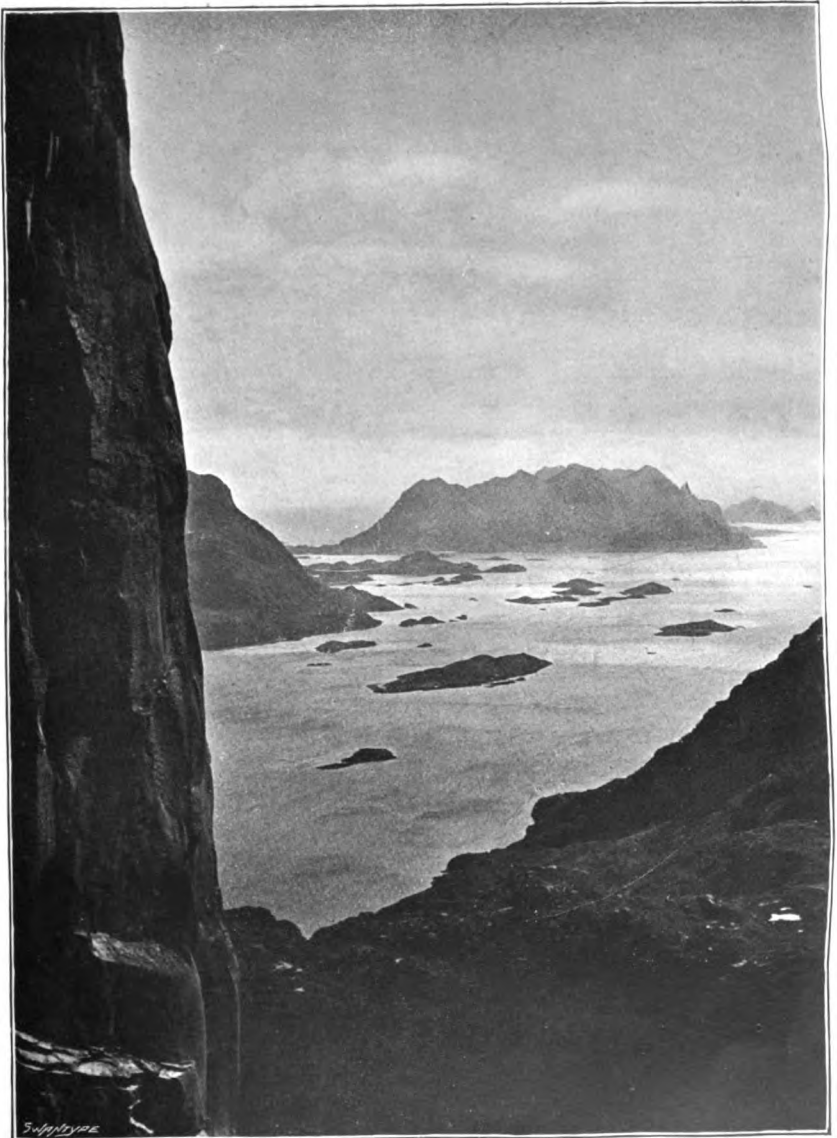


Photo by J. Norman Collie.

[*Swan Electric Engraving Co.*

ROCK SLABS ON RULTEN.

we got to the summit; then we all congratulated each other on a fine climb and on the fact that at last this desperate mountain had been conquered.

Rulten is undoubtedly a fine rock peak; its slabs and precipices may be said to start almost out of the sea, and any mountain that can give 3,000 ft. of bare rock, most of it set at an angle of over 70°, must be treated with respect. The rest of our expedition may be briefly summed up; next day, August 19, we were to start early for the Trold Fjord, but our boat ran aground in trying to start, and we had perforce to wait till the evening before the rising tide floated her again.

The Trold Fjord and the Trold Fjordvand, both unique in their way, having been visited, we steamed away to the northward, through the Raftsund for the Lunke Fjord, in order that we might climb the highest of all the peaks in the islands—Mosadlen (over 4,000 ft.). We pitched our camp at the head of the Lunke Fjord, and on August 22 we ascended Mosadlen; it is an easy climb. From the summit, on which the Survey have built a magnificent cairn, could be seen the coast from the peaks of Senjen on the N. to the Trænen Islands on the S. The Trænen Islands are 290 kilomètres S. of Mosadlen.

For this excessive clearness of the atmosphere we paid the penalty of two days' rain, and after everything in the camp had been thoroughly drenched, we started back to Svølvær. During our passage through the 'Strom' of the Raftsund our wretched petroleum engine broke down hopelessly, with the result that we were very nearly wrecked. The boat being entirely without control, turned round and round, and was swept half a mile backwards in less than five minutes. If we had touched a rock the bottom of our boat would have been ripped from stem to stern. Svølvær, however, was finally reached about midnight, in time for us to catch next morning the weekly boat S. So we bid good-bye to the Lofoten.

Our summer trip was ended; we had spent a glorious time, and in spite of all its difficulties we had vanquished Rulten. I have elsewhere pointed out the great charm that these sea-girt mountains possess. It is a charm that increases on further acquaintance, and I am sure that those who can appreciate a really beautiful country with an individuality all its own will be amply repaid by a visit to this lonely mountain land of the far north.

ASCENT OF THE BHAYAKARA LA, BALTISTAN.

BY DR. WILLIAM HUNTER WORKMAN.

EARLY in the afternoon of August 20, 1902, our party, consisting of Mrs. Fanny Bullock Workman, the writer, Mattia Zurbriggen, guide, and Giuseppe Muller, porter, having finished the exploration and first ascent of the upper N.E. branch of the Chogo Lungma glacier, reached the base of the cirque of high mountains which give it birth, the highest of which is the fixed peak measured by the Indian Trigonometrical Survey at 24,470 ft., and known on its records as 'Indus Nagar Watershed Peak No. 2.'

The day had been oppressively hot. The high walls enclosing the glacier shut off all breezes, and the sun burned with fiery fervour through a film of cirrho-stratus clouds. The heat reflected from the dazzling white covering of recently fallen snow struck us like the radiation from a blast furnace, blistering our faces, already burned to a deep copper colour, from the chin to the forehead under our sola topis. The temperature in the sun at 1 P.M., even through the thin clouds, as registered by the solar thermometer was 183° F. For the last three hours of the ascent the gradient of the glacier was steep and its surface much crevassed.

At 2 P.M. we pitched our camp on a small snow-covered section of glacier surrounded on three sides by wide crevasses at a height of 17,500 ft. (determined by hypsometric readings compared with simultaneous ones of the Government mercurial barometer at Skardo). This camp we named Crevasse Camp. It was safe from avalanches, but we could not have moved many yards from our tents after dark with safety. The mountains rose around us in tremendous unscalable precipices. There was only one point which gave promise of a peep at the beyond, and that after an ascent of a steep avalanche-scored snow wall of 1,760 ft., leading to two cols, one on either side of a perpendicular rock ridge rising a thousand feet or more above them.

As we wished to learn what lay beyond that ridge we determined to accept the gauntlet which this wall threw down to us and attempt its conquest. The night of the 20th was clear and cold. The minimum temperature was 12° F., which was favourable, as it hardened the snow. On account of the crevasses we waited till daylight of the 21st to start.

Our path at first lay over the steeply ascending crevassed glacier, then up the still steeper débris of an avalanche that

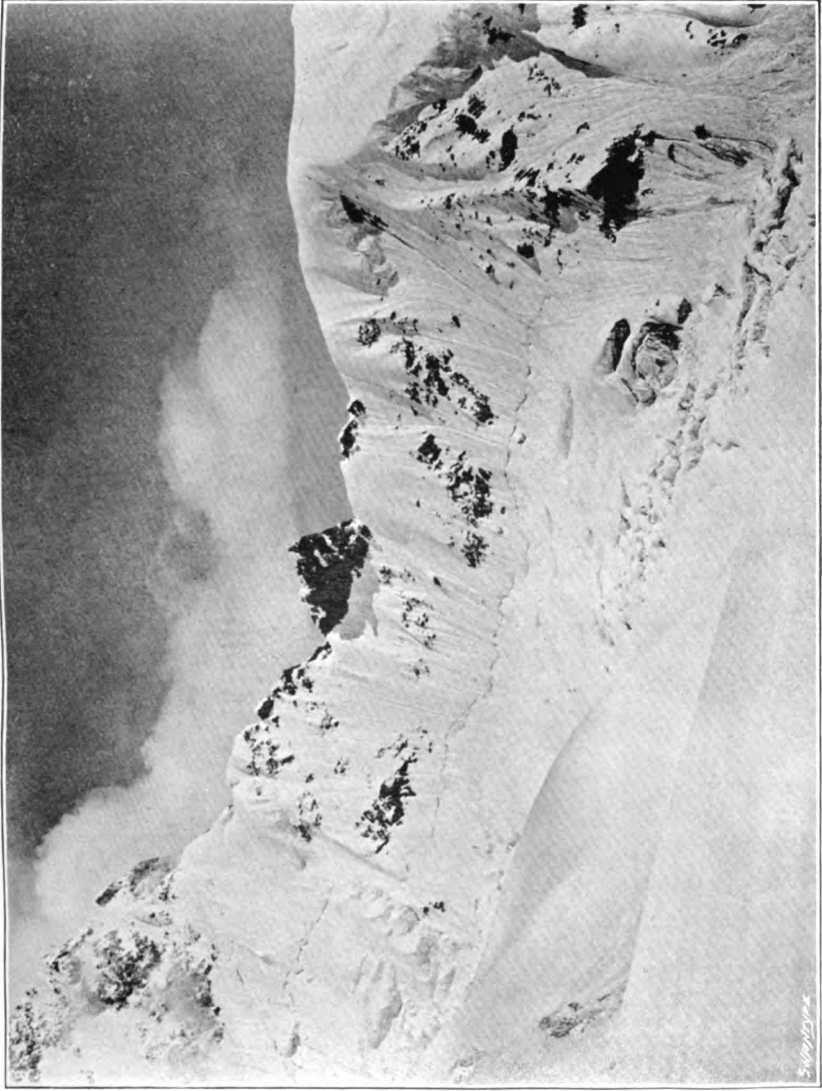


Photo by Dr. and Mrs. Bullock Horkman.]

THE BHAYAKARA LA, 19,260 FEET.

[Swan Electric Engraving Co.

had fallen two days before. Above this came a wide bergschrund, over which we found but a single insecure snow bridge. This passed in safety we had before us the ice wall, which gave us all the work we cared to do for the remainder of the day. This wall was steep from first to last, varying in different parts a few degrees either way from 60°. On the ascent every step had to be cut from bottom to top, as the wall being on the E. side of the valley did not feel the force of the sun's rays till about 11 o'clock, and its surface remained hard till noon.

A series of rocks projected through the ice at intervals of a few hundred feet, and we laid our course from one to another of these. After 2½ hrs. we reached the last rock, and then had before us only the blank ice slope, which stretched several hundred feet upward to the foot of the perpendicular rock ridge above. We had intended to strike directly from the last projecting rock to the right-hand col, which, though not so high as the other, was much nearer our route, but on leaving the rock we found the slant at this part to be of solid smooth ice of 60° incline thinly covered with fresh snow and too dangerous to attempt.

We therefore decided to turn to the left, where the snow was deeper and the foothold better, gain the base of the rock ridge as soon as possible, and with what hand-holds it might afford traverse the top edge of the ice slant where it joined the rock face, and thus reach the left-hand col.

After another 1½ hr. of laborious step-cutting we got to the base of the rock ridge, which was found to consist of rotten and crumbling sandstone, so weathered away as to afford but few hand-holds, and what few there were had to be used with the greatest caution, lest they should scale off.

The upper sharp edge of the ice slant did not lie close against the rock, but was separated from it by an interval or schrund, varying from 6 in. to 2 ft. or more in width and of unknown depth. The steps cut along this edge made a more precarious foothold even than those on the steep slant, and in the absence of hand-holds progress was necessarily very slow. To add to the difficulty transverse crevasses existed at intervals, some of them covered with snow, into which we were in danger of falling. It was a most uncanny path over which we cautiously pursued our way for more than 2 hrs. At last at 1 o'clock we reached the col, a sharp edge with a slant on the further side steeper than that by which we had ascended, ending in a precipice which overhung a large glacial icefall.

It overlooked a vast trefoil glacial basin surrounded by

massive ragged mountains, which cut off all view beyond, and sent down a complex of glaciers and icefalls to form a large glacial branch of the Chogo Lungma, which we afterwards explored almost to the top of its highest icefall. There was barely standing room, and no opportunity to take hypsometric readings, so we had to rely on the readings of our Watkin aneroids, which had been checked the previous afternoon at the camp by the boiling-point thermometers. One of the aneroids differed from the last by only $+0.1$ in. The corrected readings compared with those at the same hour at Skardo made the height of this col or point 19,260 ft., 1,760 ft. above our camp. The difficulty of the ascent can be judged somewhat by the fact that only 251 ft. of altitude per hour were made.

For the last 2 hours the midday sun had shone upon us, and, crowded as we were against the rock wall, the heat was almost unendurable. The temperature in the shade could not be obtained, as there was no shade except that cast by our bodies. In our shadow the temperature was 80° , but the sun burned from a cloudless sky with greater power than on the previous day.

Its rays struck with savage energy perpendicularly upon the ice slant, and by this time had softened its covering of snow. We did not remain long at the col, partly because there was no comfortable standing place, and partly because we were anxious about the descent. It was evident that, owing to the softened snow, the latter would be more dangerous than the ascent. The steps cut with so much care no longer afforded a firm foothold; our feet sank through them from a few inches to 2 ft. till stopped by the solid ice beneath.

We returned slowly and painfully along the treacherous edge in the pitiless heat of the sun, finding neither handholds nor satisfactory axe-holds. Every now and again some one would slip on an insecure place. After going a short distance Zurbruggen said, 'Es ist sehr gefährlich. Wir kommen heute nicht hinunter.' This was the first time we had known him to lose courage. We replied, 'If we do not get down to-day we shall not get down alive.' Whatever might be in store for us on the descent, to remain where we were would be certain death. No shelter of any kind was to be found on that ice slant. There was not even a place where one could sit down to rest. We should be obliged to stand in the narrow steps on which our feet rested till we dropped with fatigue, which would mean a slide of some

2,000 ft. down the avalanche-gullied ice flank into eternity. Could we manage to stand there we should be frozen stiff in our tracks before morning, as the temperature would drop to zero. With such a prospect before us nothing remained but to go on and take our chances.

It was now 2 o'clock, and having eaten nothing since 8 A.M. we were becoming faint. There had been and was no opportunity to take a comfortable lunch. We stopped in our tracks, took out what kola biscuit and chocolate happened to be accessible from our pockets, as well as a stray tin of jam, off which we made a hurried meal, and then crept forward again.

Shortly after this the porter, who was between Mrs. Bullock Workman and myself, lost his footing and slid down eight or ten feet. Zurbriggen, who was last on the rope, happened to have his ice axe fixed in a narrow crevasse, and the rope around it, so he was able to hold firmly. I, who was leading, although I had only one foot secure on a narrow ice step, had a fairly good hold with the blade of my axe on the edge of the ice, which enabled me to keep my balance. The porter being thus supported at both ends quickly regained his feet. Had the whole strain come upon me I should undoubtedly have been pulled off.

When we came to the spot where our upward track left the rock face, and led diagonally down over the snow-covered ice slope, prudence suggested that we should not follow it further for fear of starting an avalanche. We decided to go straight down backwards, in order to avoid this mishap, and also to obtain a better foothold.

Zurbriggen fixed his axe firmly and secured the rope to it to hold us in case of accident. The porter went down first to the length of rope between himself and myself. When he had placed himself as safely as possible I followed, treading exactly in his steps. In the same manner Mrs. Bullock Workman followed me, and last of all Zurbriggen descended and braced himself anew.

In this manner we made a tedious descent to some rocks below, from which we were able to regain the line of ascent. It was now 5 o'clock, and the sun having sunk behind the opposite mountains, the snow soon stiffened sufficiently to permit of our resuming the forward position. Although we sank into the snow above our knees at every step we reached the bergschrund without accident. Here the snow bridge was found to be so soft that we did not venture to use it, but jumped the schrund into the soft snow below and reached

camp after 6 o'clock, having had 12 hours of continuous mental and physical tension. We did not sit down to rest once during the day, and there was no place after the ice slope was reached where we could have rested had we been so disposed.

Zurbriggen called this the most difficult col he had ever made. The effect of altitude was added to the difficulties of a purely alpinistic character. Above 17,000 ft. the resistance of most persons to fatigue is distinctly lessened, and a march or climb of 6 hrs. is felt as much as one of the same character of double that length at lower altitudes.

We named the col the Bhayakara La from the Sanskrit word for 'perilous.'

THE MEIENTHAL.

By LEGH S. POWELL.

IN the following narrative the reader will find no account of thrilling mountain exploits. He will merely have his attention drawn to an easily accessible, but comparatively neglected valley, of considerable beauty, which, though it boasts no great mountains, is notwithstanding full of interest to the lover of unfrequented districts. The probability that a carriage road will be constructed over the Susten Pass in the near future means, of course, that the innkeeper will be attracted, and will be followed by the general public in greater numbers than hitherto. Then will the present order of pristine simplicity and charm pass away. As things are now, a very small proportion of the pedestrians who cross the Susten Pass ever turn aside to ascend a peak, or cross the mountains to an adjoining valley. Until last summer there was but one place in the Meienthal where an intending visitor could stay with any degree of comfort—the inn at the village of Meien, and even here fresh meat is a luxury, only to be obtained occasionally by ordering beforehand. The postman, moreover, is seen but three times a week. But rumours of a road, and something more than rumours (for, although not yet actually sanctioned, it has been marked out with red paint, figures, and posts) have already commenced to disturb a somnolence that has evidently continued for many years. A new, clean, and passably good inn at Färnigen has this year supplemented the dirty hovel which has hitherto supplied the traveller with milk and other drinks; whilst

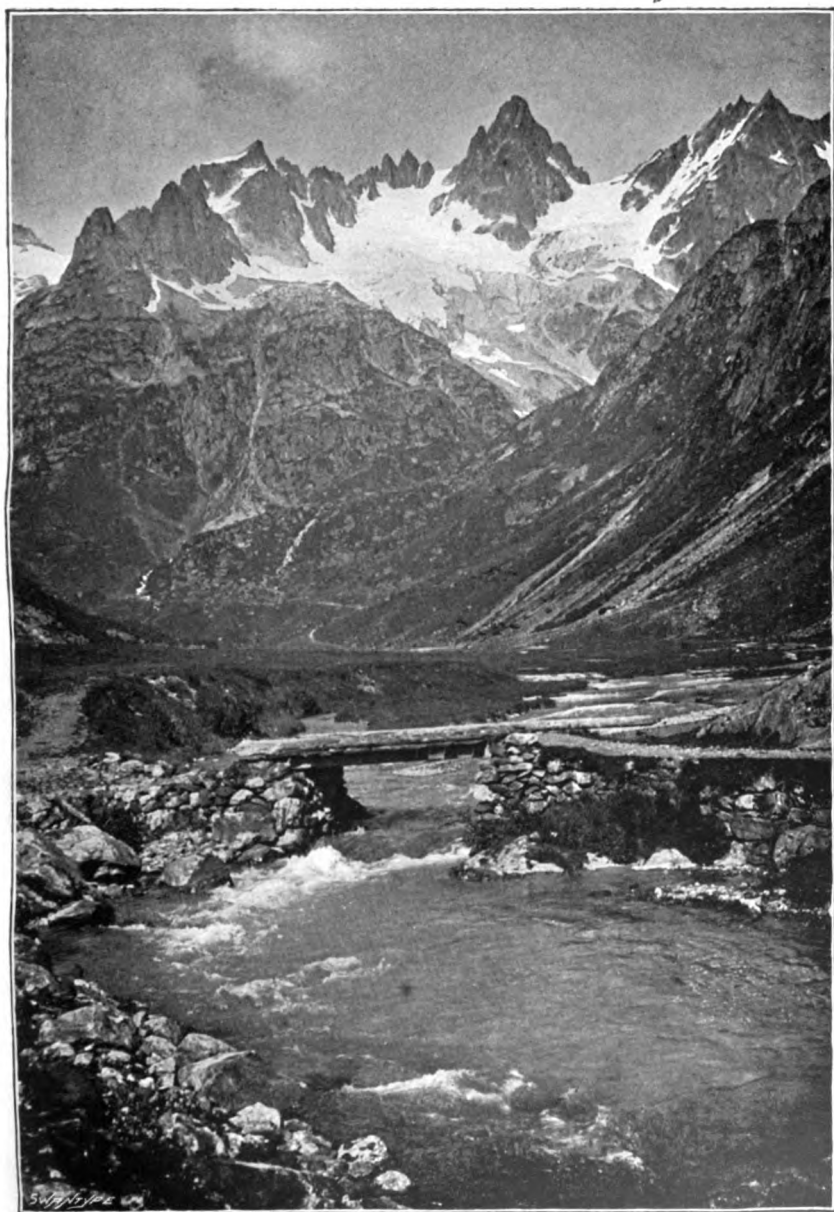


Photo by A. V. V. Richards.

[Swan Electric Engraving Co.]

VIEW LOOKING UP THE MEIENTHAL.

over the Susten, the little Stein inn has passed into different hands, and the new proprietors have already made changes in the prices, and are about to make alterations in the accommodation for visitors.

As the mountains which bound the valley are of no great altitude, the highest being the Fleckistock (3,418 m. = 11,215 ft.), and the Hinter Sustenhorn (3,320 m. = 10,893 ft.), and consequently the expeditions neither long nor fatiguing, the village of Meien, which is 1,820 m. = 4,332 ft. above the sea, forms a very fair centre. Its proximity to the woods and pastures of the picturesque lateral Kartigelthal, and its generally pleasing situation, render it, particularly on off days, a more agreeable halting-place than the dirty and odoriferous hamlet of Färnigen, three quarters of an hour higher up the valley. The latter, however, is manifestly the better situation for reaching all the mountains, except the Kuhplankstock and a few other points to the S.E. of the Fleckistock. In point of fact, the spot known as the Gorezmettlen Alp (1,565 m. = 5,137 ft.), at the mouth of the Kleinalpthal, and twenty minutes beyond Färnigen, is the place of all others in the valley for an hotel. Around this spot snowy slopes and rocky summits crown the heights which rise on every side, but eastwards, down the valley, thus making it a 'centre' of no mean interest. To the north the summits of Zwächten, the Spannörter, and the Wichelplankstock, to mention those most prominent, are easily approached; to the west, sundry excursions may be made among the Fünffingerstöcke, of which perhaps the most interesting would be a new route up the highest point of the group—the Wendenhorn, which is well shown in the annexed photograph; * whilst, to the south, ascents may be made of the higher and more imposing summits of the Sustenhörner and the Fleckistock. Moreover, passes may be made to no less than five distinct and adjoining valleys, if we count the Wendenthal, exclusive of the main pass of the region—the Susten, leading to the Gadmenthal.

It is not my intention to describe in detail either the principal excursions that may be made from this valley, nor yet all those I have accomplished during the last two summers with Mr. Walter Larden and others. I propose, however, to make a few remarks about one or two that I have made, which seem to me to possess some degree of interest, and

* I am indebted to Mr. Valentine Richards for this and the other photographs which accompany this article.

which have not, it is believed, with one exception, been noticed in this Journal.

The one prominent and well-known pass for reaching the Voralpthal from the Meienthal is the Sustenloch, lying between the Hinter Sustenhorn, to the W., and the Stucklistock, to the E. Guide books are, however, silent as to the existence of any alternative way of communication between the two valleys; and, as there may not impossibly be one or more hotels at Meien in due course, it seemed of interest to visit the range to the E. of the Fleckistock, to ascertain what sort of passage might be effected at that part. The map shows a marked depression between the Fleckistock and the Winterberg, with a height of only about 2,900 m., but below it on the Voralpthal side a continuous wall of rock is indicated. A visit of inspection made the summer before last disclosed a distinctly formidable cliff which comes into view from the expansive terrace, called Aufden Flügen, at its foot, a spot reached from the hut by a well-marked track. Two assailable points are, however, noticeable—one a steep snow couloir reaching from top to bottom, the other a rock couloir at no great distance to the E. of the first named. The latter appeared the more promising, and Larden in fact ascended it without difficulty, alone, one unsettled day when I was fetching provisions from Goschenen; a change in the weather having upset our calculations as to food requirements. Owing, however, to the unsafe character of the ascent, as he found it, from falling stones, it was considered more prudent the following day to try the snow couloir, although we surmised that a good deal of step-cutting might be required. This surmise turned out only too true, the snow proving very hard. When about half way up the couloir we tried the rocks to our right, but as these gradually became more difficult, and as there was no obvious way by which we could regain the snow, we certainly did not improve matters. In addition to the natural difficulties we were greatly encumbered by unusually heavy sacks, and as a result I do not record the time it took us to reach the ridge. Unless the snow should be soft enough to permit of kicking steps, there is no question but that the rock couloir would be the easier and quicker of the two ways; but anyone following our route will do well to keep to the snow the whole way. In crossing from Meien the snow couloir is first reached, and may be easily inspected, as it is flush with the Kartigel névé; but it should be mentioned that, even at its best, this couloir is not free from the danger of falling stones.

The descent to Meien offers no difficulty; but to prevent delay from troublesome moraine at the lower end of the glacier the traveller should bear well to the left. Lower down, where there is a cirque of cliffs, we experienced considerable difficulty and delay in hitting off the right sheep track. We at first managed to get too much to the left, found ourselves stopped, and had to retrace some of our steps. The proper way starts a little to the W. of the most westerly stream, close to where the latter falls over the cliff. Assuming that no mistakes are made, the passage ought not to take more than 6 hrs. or 7 hrs. The pass was crossed on February 18, 1890, by Herren Labhardt and Helbling, who named it the Fluhlücke.*

Guide-books are silent as to a mountain route from the Erstfelderthal to the Meienthal. Now that there is an inn at Färnigen, a traveller arriving at Altdorf, and bound, say, for Stein or the Haslithal, will find it an interesting alternative to the railway to Wassen and the road up the Meienthal to cross one of the two neighbouring and perfectly practicable passes which lie at the head of the Erstfelderthal, to the E. of the Klein Spannort. It is only in the limited portion of the range between the Klein Spannort and Zwächten, a distance of about two kilomètres, that the Erstfelderthal abuts against the Meienthal. To the E. of Zwächten the watershed range divides the Erstfelderthal from the Gornerenthal, whilst to the N. of the Klein Spannort lies the Engelbergerthal. The expedition may be made equally well in the opposite direction, and it was in this way that Larden and I took it in the summer of 1902. Starting from Meien, we made our way up the N.E. branch of the Rossfirn, by an obvious route, crossed a conspicuous rib of rock to gain a higher level of this glacier, and somewhat further on left the glacier to ascend an easy arête, ending in a shaly slope (to the S. of Zwächten) and leading to the ridge overlooking the Gornerenthal. From this point we found we could without difficulty traverse the E. face of Zwächten nearly on a level, over snow and ice, to a second ridge or shoulder, the true watershed (not clearly indicated on the Federal map), and descend to the Glattenfirn, our maximum height being somewhat over 3,000 m.=9,844 ft. Here the regular route from the Krönte Hut to the Spannörterjoch is joined. We spent the night at the Krönte Hut, and next morning made our way down the lonely but very striking valley to Erstfeld.

* *Alpine Journal*, vol. viii. p. 67.

What appears to be an equally simple pass, and easier to find in cloudy weather, lies near to, and E. of, the point on the buttress of the Klein Spannort, marked 3,030 m. on the Federal map. This passage is described in the local guide-book 'Uri. Land und Leute,' page 87.

The ridge was also crossed in 1895 by Herren Brun and Schultz, who ascended the deepest couloir immediately below the summit of Zwächten, and when about 20 m. below the summit turned to the left and descended to the Glattenfirn. This way is probably less easy than either of the preceding.

A suitable name for the passage would be the Zwächten Pass, the true pass being that described in 'Uri: Land und Leute,' the others being variations.

A distinctly interesting ladies' expedition, which is equally conveniently made from either Meien or Färnigen, is a visit to the Seewenfirn and the ascent of the Bächlistock. This latter (3,012 m. = 9,883 ft.) is the highest summit of the range which separates the Meienthal from the Gornerenthal. Last summer I made its ascent with a young cousin, and we were repaid by a particularly fine and extensive view, in which the Fleckistock formed the principal feature. On the summit, which was reached from the upper end of the Seewenfirn by a short climb up the easy granite rocks which face N.W., we found a cairn, with a bottle containing a single card—that of Herr Karl Seelig—bearing the date 1895. I have since heard that a subsequent ascent of the point has been made. Lovers of Alpine flowers will find the Märzenstafel Alp, which is passed on the way from Meien to the Seewenfirn, a very attractive place. *Paradisica Liliastrum* grows in abundance, and there is a singular profusion of other flowers.

A climb of a very much more exciting character than that of the Bächlistock is that up the highest point of the Wichelplankstock (2,975 m. = 9,762 ft.). In the ascent of this peak, an offshoot from the main chain dividing the Meienthal from the Engelberg valley, Larden and I were accompanied by Valentine Richards. We started on August 31 last from the new inn at Färnigen, and followed the Susten path for half an hour as far as the bridge which crosses the Meien Reuss to the right bank. At this spot a well-defined track starts up the slope to the right (N. slope of the Meienthal), and a steady ascending traverse leads past the Oberplatti Alp, up grass, stones, and snow patches, with scarcely a single zigzag, to a fairly steep snowfield, above which rose the

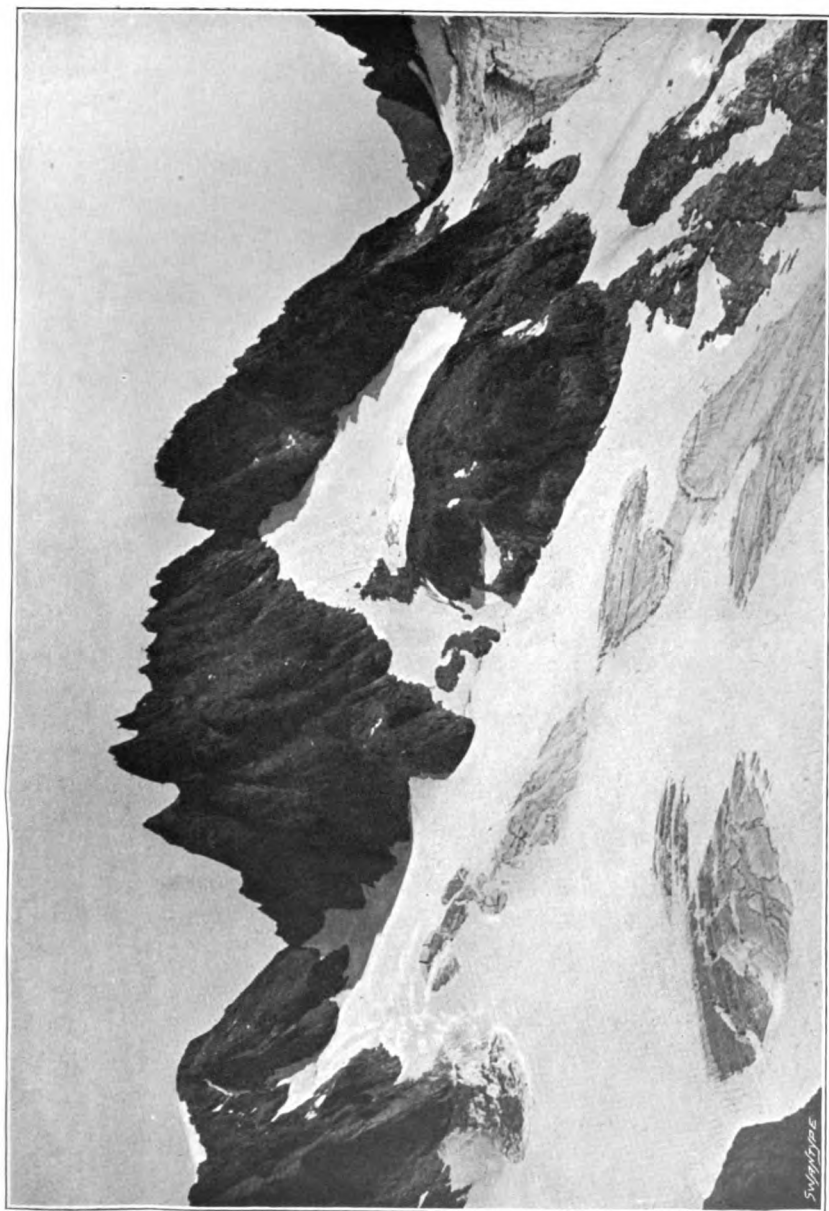


Photo by A. V. V. Richards.

THE WICHELPLANKSTOCK FROM THE WASENJOCH.

[Swan Electric Engraving Co.]

peak. This consists of a short chain of formidable-looking pinnacles running practically from N. to S., and separated from the main watershed range by an appreciable dip. The highest point lies to the N.W., and the obvious line of ascent is up a steep narrow chimney which leads from the face common to all the pinnacles, to a gap between the highest point in question and the next to the S.W., seen in the photograph to the right, of the highest point. To reach the face from where we stood the rather steep patch of hard snow was ascended diagonally to a little break in the rocks. No difficulty was experienced in traversing the face, but the narrow and very steep, though safe, chimney gave us plenty of exercise for our arms, legs, knees, and backs. The final short climb, however, from the gap between the two pinnacles proved to be the most sensational part of the ascent. The face overlooking the Wichelplankfirn is an awe-inspiring, vertical precipice of smooth, unbroken rock, whilst the side facing W. is nearly as steep and impracticable as far as climbing is concerned. The only means of reaching the summit was to climb the very steep, well-nigh knife-edged arête formed by the meeting of the two faces. By dint of careful hoisting and clinging to the sundry succeeding cracks and knobs of rock, we managed at length to get to the top, where we were just able to sit closely huddled together, the ascent from Färnigen having taken us rather less than 5 hrs., of which one was spent in climbing the rocks. We found no cairn on the summit, and were naturally inclined to conclude that we were the first to make the ascent, and we accordingly made a small pile of stones and left a bottle, with a card recording our names and the date. I have, however, since ascertained that Joseph Kuster, the well-known Engelberg guide, made the first ascent on July 9, 1895, with a Dutch gentleman, and they 'left a little flask about 2 in. in length in a chink'—a record we failed to see. Two subsequent ascents are also known to have been made. The Wichelplankstock may be thoroughly recommended to those who enjoy an exciting scramble, and it vies in interest with anything to be obtained in the neighbouring Fünffingerstöcke group.

I have reserved to the last an expedition which seems to me the most interesting, and from a utilitarian point of view the most important, of all those I have to refer to. It is one that affords a means of reaching the Engstlen Alp from the valley of the Reuss in a single day's journey, *via* the Meienthal, the Sustli Alp, the Wasenjoch, and the Titlisjoch; and it is a route that I think should be mentioned

in guide-books.* The Engstlen Alp can, of course, be reached from this frequented quarter by two other, and it must be admitted, easier, routes for the ordinary tourist—that by the Surenen and Joch passes, and that by the Susten and Sätteli passes. Both these ways, however, are more circuitous; they do not compare in point of time, when the mountains are in good condition, with the one about to be described, and in the case of the route by Engelberg the ascents and descents involved are greater. With regard to the time required for the passage, I may mention that Larden and I have twice made the expedition, and on each occasion we carried pretty well filled rucksacks. On the first occasion the condition of the mountains was normal, and, deducting time lost in finding a way up the first rock-wall of the Titlisjoch, we took almost exactly 9 hrs. actual going, starting from Meien. Our second passage was made from Wassen, after a heavy fall of snow in the mountains, where we sank deeply at each step, and this time we were 11 hrs. 20 min., exclusive of halts. Stated generally, the expedition may be said to take 10 hrs. to 11 hrs. from Wassen, easy going, without halts; but there is no doubt that an active walker, especially without a weight on his back, could make the transit in less time. In the reverse direction the time occupied should be appreciably less, since, in the first place, there is a difference in level of almost 3,000 ft. between Engstlen and Wassen; in the second, good glissades can be obtained in the descent of the Wasenjoch to the Sustli Alp; and, in the third, because one can get up a good swinging pace down the road of the gently inclined Meienthal.

The route as far as the Gufierplatten Alp (at no great distance from the zig-zags up the Susten Pass) need not be remarked upon. From this spot the shortest way in the end to the Sustli Alp is to cross the two streams which flow down the lateral glen to the N., and to follow the rough track to the Alp, rather than to leave the Susten path earlier and take a tempting-looking short cut up slopes covered with grass and rhododendron bushes. From the Sustli Alp grass slopes are mounted in a north-westerly direction, and then turning

* A notice of this expedition is recorded in the *Alpine Journal* of November, 1902. In this record the first of the two passes is named the Wassenhornjoch. Since, however, it is customary in naming passes to drop the 'horn,' it is now proposed to call it the Wasenjoch. The Wasenhorn is spelt with only one 's' in the Federal map—not two, as in the village of Wassen.



Photo by A. V. V. Richards.

[Swan Electric Engraving Co.]

VIEW SHOWING THE WASENJÖCH FROM THE WICHELPLANKSTOCK.

northwards at an obvious spot a rock terrace is reached and traversed. The way continues up grass and stones to the foot of the E. arête of the Wasenhorn, where the Stossenfirn is struck, high up, and above a number of awkward-looking crevasses. Hence to the col (2,744 m. = 9,004 ft.) is an easy mount up snow, as may be seen from the accompanying photograph. In the descent to the Wenden Glacier it is well to bear appreciably to the left. The glacier is crossed to some limestone screes, at the foot of the point 3,032 m. on the Titlis cliff. Here an attempt was made to scale the rock, in order to gain access to the Klein Glacier, and thus avoid a descent to the foot of the rock wall below that glacier, but a practicable way did not appear. Future travellers are recommended to follow our course on the occasion of our second visit, and at once continue along the rock terraces leading down to the foot of the imposing rock barrier, which looks as if it would effectually stop all further progress. Here will soon be found a watercourse (the most easterly of those which descend from the Klein Glacier), which has carved a way by which access to the glacier is perfectly practicable. The first few steps up some sloping rocks, affording very poor foothold, and scarcely any handhold, require care, but the way soon becomes easier and safer. Arrived at the top of the cliff, there follows a gentle ascent up the snow-covered Klein Glacier, to the foot of a second rock wall, little less formidable in appearance than the first, leading to the Titlisjoch. This we attacked a little to the left of the lowest part of the ridge. The climb up these weather-worn limestone rocks, which are safe and offer good hold, is an agreeable scramble, free from any kind of real difficulty.

The descent to the Engstlen Alp need not be described, since almost immediately below the pass the track up the Titlis from the Engstlen Alp is struck. In bad weather, however, even this well-marked way may be difficult to follow, as we found when we first made the passage. A thunderstorm, accompanied by rain and fog, overtook us soon after leaving the pass, and although we knew the way, through having been up the Titlis a week or two earlier, we managed to get too high in traversing one of the snow-slopes and landed on steep black ice, near some rocks. Down the former we had to cut our way, in dense mist and pelting rain. A little later, after regaining the track, we had some excitement in dodging a number of stones that the rain had loosened, and that came bounding down the snow-slope we were on. After an experience of this sort a hearty welcome

at the Engstlen Hotel from Herr Immer, a warm bath and the loan of dry clothes, are comforts not easily forgotten.

It may be remarked that the Wasenjoch, in addition to affording means of access from the Meienthal to the Engstlen Alp, may be used as an interesting alternative route to the Susten Pass in order to reach Gadmen ; or, by combining it with the Wendenjoch, Engelberg may be easily reached.

THE NEW ZEALAND ALPS.

BY O. J. BAINBRIDGE.

PART I.

The Hermitage.—Mt. Cook.

IN spite of the work of the New Zealand mountaineers, Messrs. Harper, Mannering, and Fyfe, and the expeditions of the Rev. W. S. Green and Mr. FitzGerald ; in spite of the foundation of a New Zealand Alpine Club, and the facilities for mountaineering supplied by the Government, the popularisation of the New Zealand Alps has so far proceeded comparatively slowly.

Tourists there are in plenty : some come by one coach and go by the next, content with a view of Mt. Sefton and Mt. Cook ; others allow themselves a week to see the ice of the Tasman Glacier or to explore the moraine of the Mueller ; but those who would benefit from a close inspection of the mountains, an inspection which necessitates all the impedimenta of mountain expeditions, must be content to wait patiently and watch. A week or ten days at the Hermitage is useless for the mountaineer. But before discussing the difficulties he must face it would be well to enumerate the excursions from the Hermitage that are open to those who are not at home with the ice-axe and the rope.

An hour's walk to Kea Point will disclose the moraines of the Mueller and Hooker Glaciers. Mt. Sefton is too near to allow a proper appreciation of the steepness and extent of its glaciers, but Mt. Cook shows well from here. Neither the clear ice of the Hooker nor the Mueller Glacier can be seen, the outlook being one of extreme desolation. Any grandeur it has is derived from this characteristic ; probably nowhere in the world can such a quantity of moraine and debris be seen in a similarly enclosed area.

Those who are energetic can sample the moraine of the Mueller Glacier by a short though steep descent from Kea

Point, and then a long weary trudge will reward the tourist with a view of the clear ice of one of the glaciers which descend from Mt. Sefton. Some interesting work can be done among the seracs, but no particularly extensive view can be seen from this point of the peaks which lie at the head of the Mueller Glacier. Mount Sealy stands out prominently at the head of the Sealy Range, but the best practicable point for seeing this peak is from the Tasman Glacier. The ice of the Hooker Glacier can be reached more easily, as no weary trudge over moraine is necessary. The river is crossed by a suspension bridge. Thence a path skirts the lateral moraine for 2 to $3\frac{1}{2}$ hrs., after which another hour is required to reach the ice.

But by far the best excursion from the Hermitage (excepting the two days' journey to the Maltebrun Hut on the Tasman Glacier) is Mt. Olivier, the 'Gornergrat' of the district. This is one of the lower eminences on the Sealy Range, and requires about 4 hrs. of rough walking to reach it. For twenty minutes the Kea Point path is followed; then a steep gully is ascended to the left by a path which, though rough, continues until a lagoon 2,000 ft. above provides a suitable resting-place. If fine, an excellent reflection of Mt. Cook can be seen. From here the tourist makes for the nearest point on the range, and thence to Mt. Olivier, where his exertions will be rewarded by a splendid alpine view. Sefton and Cook stand prominently out, while a glimpse can be got of the peaks at the head of the Tasman Valley. The Nun's Veil and Rotten Tommy both look well beyond the Cook Range, while the whole extent of the clear ice of the Mueller Glacier with the peaks of the Sefton Range and the attractive-looking rock peaks at the head of the glacier can be seen to advantage.

The finest expedition from the Hermitage yet remains to be recorded. And that is to the hut on the Tasman Glacier named the Maltebrun from the range which it guards. The Ball Hut (fourteen miles) is a convenient resting-place, but it is a great mistake for the tourist to go no further, for this hut is nothing more than a half-way house and commands no view. Many do this, however, and are content with a walk on the glacier before returning to the Hermitage. Horses can be taken to the Ball Hut, and on the second day, with the exception of some interruptions in the way of moraines, the tourist has a walk on clear ice for many miles. Four to 7 hrs. walking will bring him to the Maltebrun Hut, the final scramble from the glacier proving rather hard at the

end of the day. The view is a thoroughly alpine one, and as the Hermitage can be reached again in one day by energetic walkers, it is quite worth while resting a day at the hut, even if the Hochstetter Dome (the Breithorn of the district) remains unascended.

These excursions should prove sufficient for the casual visitor, otherwise the lower hills on the Cook Range or Mt. Sebastopol will provide as nice an example of sérac as the most fastidious would wish to sample. But by this time, indeed, it is probable that the tourist will have had enough of 'climbing,' unless, indeed, the mountains he has seen have engendered in him an ambition to take up real mountaineering work: unfortunately this is rarely the case, and it is not until he has encountered some of the difficulties to be found in real climbing that he is struck with the fever. It is a fever then from which he never recovers, but merely a view of the mountains has often a deterrent effect.

When the Burke Pass introduces the great Mackenzie plain, and Sefton and Cook are revealed to the eye, the visitor is struck with amazement that mountains so easily accessible do not draw greater numbers to their midst. Maybe the coach drive is in some way responsible for this, as the road is very rough in parts; yet neither gorge nor precipice nor bush is present to harass the engineer, and when, after leaving Tekapo, the coach turns southward, and, avoiding the network of torrent and shingle which forms the Tasman River, makes a wide détour round Lake Pukaki, the driver's explanation that a bridge over the Tasman appears too expensive or too difficult, suggests that a railway round by Pukaki would solve the difficulty by conveying passengers to the Hermitage from Fairlie at least in one day instead of two. Remembering the immense source of wealth the mountains are to Switzerland and the difficulties the Government has successfully overcome to popularise them, it would seem that New Zealand has a comparatively easy task to perform. There are visitors in thousands every year, and it remains with the Government to make the Mt. Cook district so attractive that none would leave the Island without including the Hermitage in their tour. Mountaineers who affect to despise the bier halle at Zermatt, or even the orchestra in front of the Monte Rosa Hotel, and who long for the isolation which can be enjoyed no more in Switzerland, might possibly change their views after a month or six weeks at the Hermitage: otherwise I must appear in my anxiety for the Government to forget their interests. It would, however, require years of work

before the Mt. Cook district would be in a position comparable with that of any of the districts in Switzerland, and even then there remains the country to the North, at present almost wholly unexplored, and also the region which embraces Mt. Aspiring, to the South. There can be no doubt that the Mt. Cook district is the most important from the climber's point of view, even if it be admitted that first-class mountaineering work can be found elsewhere. So far at least, mountaineers and surveyors have almost entirely centred their energies in the neighbourhood of Mt. Cook, and it is with this district alone that we are at present concerned. W. G. Tennant spent six weeks with me in making observations and ascending peaks as the weather and other conditions permitted, and though the climbing was not all that could be desired, we were at least enabled to make ourselves acquainted with the conditions as they were.

I remember feeling somewhat lost when we drove up to the Hermitage. Instead of meeting with a more or less cheerful welcome, we found it necessary to carry in our own luggage, and were told that there was very little room, but that we might have a room apiece for two days. The Governor's party was at the Hermitage at the time, and the good people of the house were evidently thrown a little out of gear. After a 40-mile drive, however, our reception seemed a little cold, very different from what is accorded at the hotels of Switzerland or the Austrian Tyrol. A little adaptation is required to colonial methods, and things go very well; but there is a good deal that is irritating at first to the English visitor, as service, though paid for, seems grudgingly given. We found the people very nice though, and every encouragement is given to make oneself at home. It was difficult to tear ourselves away at last, as the quiet comfort of the Hermitage was very attractive.

The Hermitage is situated in the shelter of some bush-clad hillocks, which may have been placed by a kindly Providence to hide from the eye the desolate expanse of moraine which covers the lower portions of the Hooker and Mueller Glaciers. From the verandah of the hotel only Mt. Sefton is visible with its precipitous slopes of glacier and rock; but a minute's walk discloses Mt. Cook, and on the night we arrived we were fortunate in seeing a magnificent sunset. This peak, rising nearly 10,000 ft. from the Hooker Glacier on one side and the Tasman on the other, stands almost alone in the district in its marked individuality. So many of the others seem merely molehills rising from the range—almost

unapproachable on account of avalanches and falling stones—for the glaciers rise very steeply almost to the summits, disclosing to the eye the wonderful formation of serac which is one of the peculiarities in New Zealand alpine scenery.

Clark, the guide, was away with Mr. Claude Macdonald, who was making an attempt to climb Mt. Cook; with him was Smith, the porter, and there only remained Hans Fluckinger from Berne, who had received employment from the Tourist Department that year, and had been sent up to the Hermitage to act as 'guide.' I do not think he had ever climbed a mountain, but he possessed a pair of wonderful boots, and altogether seemed to give a tone to the place. This was Mr. Macdonald's second attempt, the former from the Hooker Glacier having been unsuccessful on account of a sudden change in the weather when the party had conquered all difficulties. Two days later a carrier pigeon informed us that the condition of the snow on the arête had prevented the ascent from the Tasman side being made; a previous snowstorm lasting some days was responsible for this.

On the day after our arrival we thought we would begin our training by a walk on the Mueller Glacier. There was no difficulty in following the path to Kea Point, but here we were greeted with such an expanse of moraine that our enthusiasm received a serious check. The Mueller Glacier takes a southerly bend round the Sealy Range, and no clear ice is visible at all, either on the Mueller or the Hooker Glaciers. A short steep scramble brought us to the glacier, but after sampling N.Z. moraine for about an hour we came to the conclusion that no imagination could call this pleasure, and as we did not like to return too early we sat down and rested. For the first time I thought I could understand why New Zealanders had not taken to mountaineering. Mr. Man-nering's words came back to me:—

'Oh, you Swiss mountaineers, with your knapsacks and feather beds. No; this N.Z. work is not like yours.'

Passing over the somewhat doubtful compliment implied in the words 'knapsacks and feather beds,' I am able, after six weeks' experience in this district, fully to endorse the latter part of the sentence. And the difference lies not only in the quantity of moraine to be traversed, the rottenness of the rocks and the inclemency of the weather, but in the lack of mountaineering facilities and the insufficiency of guides and porters. The only Alpine huts in the district are in the Tasman Valley: from the Maltebrun hut the Hochstetter Dome, Mt. Darwin, Mt. Maltebrun and Mt. Green are acces-

sible, but the beautiful Elie de Beaumont presents such a formidable ice-fall from this side that the mountain is quite unapproachable, at least in the latter part of the season.

On the following morning, February 23rd, we started to climb Mt. Olivier. It does not compare with the Gornergrat, as there is no refreshment room at the top; on the other hand, it is a pretty weary grind, and it did not take long to discover we were not quite fit for mountaineering exercise. The little lake half-way was smooth, and the reflection of Mt. Cook was fine, and when once the ridge was reached the whole Sefton Range was displayed in the dazzling light of the mid-day sun. Mt. Sealy does not look well from here, but then the distance away is over three miles. It was easy to understand the mistake Zurbriggen made when he failed to see that the mountain was separated from the range by a glacier; when there is mist round the mountain it is easy to discern that the culminating ridge of rocks on the range is separated from Sealy, but on a bright day it is difficult to see.

As there was no hope of getting Clark's services for some time, we thought that Sealy would be a suitable peak for a guideless climb. On Wednesday the 25th, therefore (Tuesday was wet), we made our way up the hill again, with sleeping-bags and billy and wood. On reaching the ridge (5,700 ft. high) the 'swags' were deposited among some huge boulders, and the Swiss whom we had employed as porter returned. It seemed a novel encamping ground, as we depended entirely for shelter on the huge blocks of rock which rose fantastically around us. But the night was fine, and we enjoyed what one seldom gets among the mountains, the sight of a sunset from an eminent position. It was like encamping on the Gornergrat, with a panorama of mountains all around. There was not a cloud in the sky when we turned in, and it really looked as if the weather could not change. My bed consisted of irregular slabs of rock, and in spite of a sleeping-bag I was most uncomfortable. It was 6 o'clock before we rose, and the outlook had entirely changed. Tennant had risen at 4, and seeing the N.W. clouds tearing across the sky, turned in again. Our mountain was almost hidden from view, but we determined to go as far as the way led for three miles at least along the Mueller side of the range and this presented no difficulty. But we were not destined to get very far, as the rain came on in half an hour from the time we left the camp, and as Tennant had a bad heel we did not see the use of making it worse by continuing. The mountain of course was out of the question. The day proved to be one of those

unsatisfactory days, hardly one thing or the other. We were continually asking ourselves whether if we had gone on we might have been successful. The storm seemed to spend its fury on the Sefton Range and northwards in the Hooker and Tasman Valleys, and Clark, who was in the latter with a party of tourists, told us later that he had given up all hope for us. As it was, the day passed slowly, but we did not like to return to the Hermitage, as it was quite possible the storm would pass and give us another fine day on the morrow. Fuel was scarce, but we preferred economising rather than descending to gather more. We had a pack of cards, but of course no literature; but the day was luxury in comparison with the night, which we both agree in thinking the most uncomfortable we have ever spent. At 6 P.M. the rain came down in earnest, so we put the remainder of the wood in the rucksac, and then set about finding shelter for ourselves. Our old sleeping places were out of the question: underneath the slabs, however, we found a place into which it was just possible for two to crawl, and here with our sleeping-bags we made sure we should at least keep dry. We were unable to sit up because of the sloping wall above us, so we lay side by side with our heads at opposite ends. A candle served to give sufficient light to smoke by, and we prepared to rest. We were at least sheltered from the wind, as we had had to descend through a hole in a slanting direction for 12 ft., and it seemed impossible for water to penetrate to our retreat. But it did: it seemed to trickle down the 'hanging wall' in two streams, gentle but persistent. Then at a point precisely over the back of Tennant's neck, the little drops of water would leave the rock. There was a sort of fascination for me in watching his contortions, and in hearing the measured time of the drops falling on the hood of his sleeping-bag, but before long all my energies were required to avoid the shower at my end. Needless to say, we were soon wet through, and at 9.40 P.M. we held a consultation. To descend to the Hermitage in the dark would be a difficult matter, especially with our 'swags,' and we did not like to leave the things behind. The place would be closed, too, so we determined to sit it out. I do not quite know how the remainder of the night passed. A little after 1 A.M. Tennant left the shelter, muttering something about 'Luxuries' not being in his line. He stood up against one of the overhanging rocks outside until daylight. I managed to get a little sleep, though towards morning it got very cold, and when I emerged at daylight, shivering and soaked, I was glad to see the billy on the fire.

We got down to the Hermitage at 8 A.M., still in rain, carrying the sleeping-bags in turn. Thus ended our first attack on Mt. Sealy.

Tennant was confined to the house for some days after this on account of his heel, and it was not until March 7 that we were ready for another try. In the meantime I had sampled a fair amount of scree on minor hills, but as this kind of thing was not exhilarating I kept for the most part to the hotel smoking-room. The Governor's party departed on the 4th, and though there were still a few tourists at the Hermitage, we were at last able to count on Clark's assistance.

On the 7th he accompanied a party up the Hooker Valley, and Tennant went with them. I had a touch of lumbago, so decided to wait until they returned, which they promised to do in time to take sleeping-bags, &c., to some camping-ground. The day was a beautiful one, and everyone was out. In Macdonald, the hotelkeeper, however, I found a companion of no small wit, and the time passed quickly enough.

The Ascent of Mt. Sealy, March 7 and 8.

As the party did not return from their excursion till late we decided to dine at the Hermitage, and then make our way to the lagoon half way up the hill, and not to the ridge again as we originally intended. We would have the moon to guide us.

We started a little in front of Clark, who stayed behind to pack the swag. It was pleasant going in the cool of the evening, and I hurried on up Kea Point path to get a glimpse of Mt. Cook before the glow from the western sun had disappeared. I could see the reflection of the sunset in the sky above Mt. Cook, and when the mountain itself came into view a magnificent after-glow was presented before me. The whole mountain seemed bathed in gentle light.

In spite of it being evening the climb up the gully was warm, and when I came to a convenient place for gathering fuel, I sat down and waited for Tennant. It was dark when he arrived, except for the moon, which was threatening to disappear behind Mt. Sefton, and after a rest we pushed on again, loaded with wood, towards the lagoon. I missed the path somehow soon after this, and began to think the lake had been left behind altogether. I called down several times to Tennant to ask him if this were not the case, but he assured me it was still above, and at last I reached recognizable ground, and a few minutes' walking along the slope brought me to the camp. Tennant and Clark arrived almost

immediately, just as the moon disappeared from sight: we had been two hours. But we had done well to take it as we did, for this is the roughest part of the whole thing excepting the Sealy rocks, and at the beginning of a long day would have been most objectionable. As we had plenty of fuel we boiled some tea before turning in, and the night was so fine and the grass so soft after the rocks on the ridge, that we passed a most comfortable night in spite of there being no shelter. I had taken the precaution of bringing up a hot-water bottle to prevent a recurrence of lumbago, so enjoyed an unaccustomed luxury.

We woke on a perfect morning and made a start at 5.20. An hour's walking brought us to the ridge, just as sunlight fell on the tops of the mountains. The Sealy Range protected the Mueller Glacier and the lower peaks at the head of the glacier. They looked remarkably fine in the morning light. We had now about two miles along the shaded side of the range on alternate slopes of snow and debris before we reached the Barrow Glacier. Frequently we turned to admire the panorama to the North, where Mt. Cook presented a splendid centre of Alpine peaks; then skirting below the rocks which Zurbriggen followed in the first ascent, we found ourselves on the upper portion of the Metfield Glacier, a delightful snowfield guarded by fantastic rocks to north and south, and terminating in a pretty col, to which after a rest we made our way. On our right were the Sealy rocks: behind us were the mountains across the Mueller Glacier, while northwards Sefton looked magnificent.

At 10.20 (8 hrs.) we reached the foot of the rocks at the col, and here we rested half an hour. The mountain looked so rotten that I thought it might be safer if I went unroped. We had only two short ropes, and I did not grasp for the moment that the middle man could have the ends of two ropes round him: I imagined somehow that it would necessitate a knot, which would be apt to dislodge stones. This was a mistake, but there are undoubtedly occasions when the rope is not a precaution, but an increased danger. As it was, the going was facilitated, and we reached the summit in an hour. Avoiding the precipitous block of rotten rock which introduces the arête, we followed the line taken by the original party in the descent, reaching the arête by a succession of extremely rotten chimneys to the right. Then the work became more interesting. It was very exposed in places, for the ice-bound southern slopes fell in incredible steepness for 4,000 ft. to the valley below. Progress continued

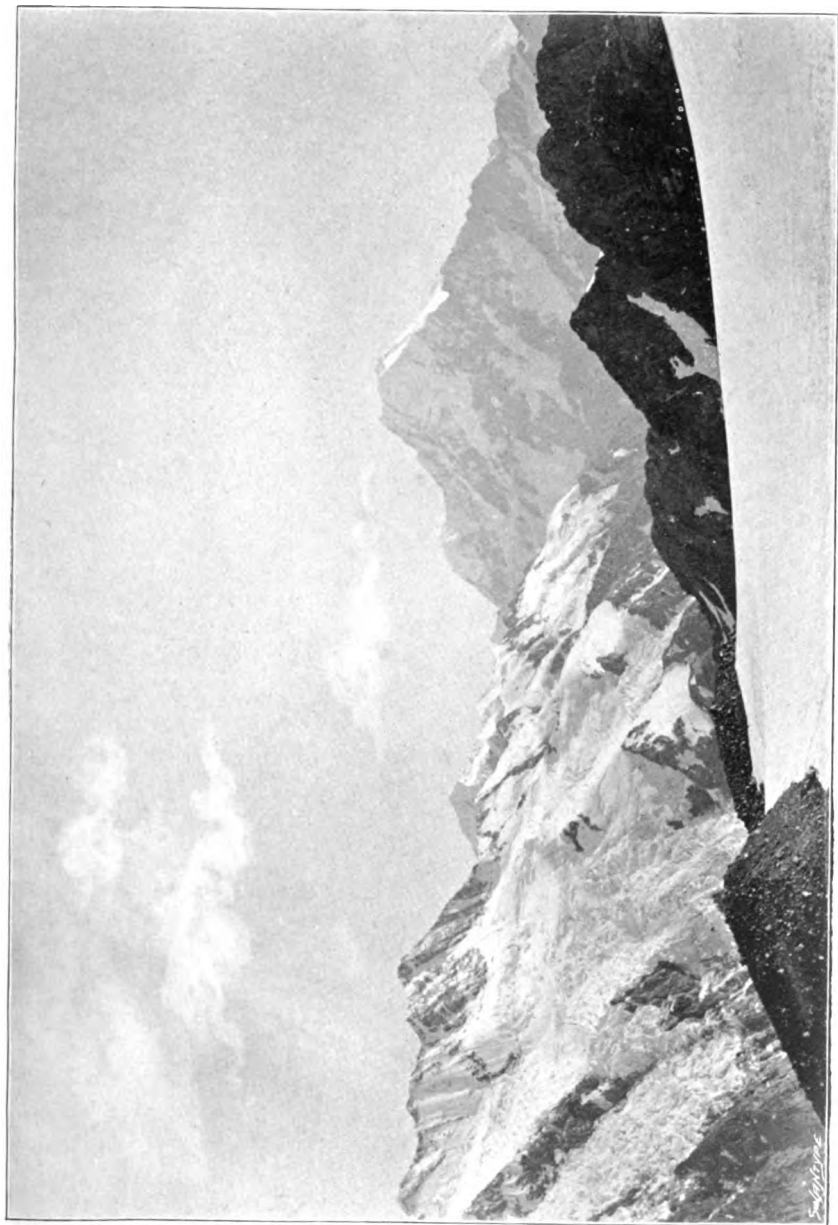


Photo by O. J. Bainbridge.

MT. COOK AND THE FOOTSTOOL FROM THE SEALY RANGE.

[*Swan Electric Engraving Co.*]

satisfactorily until we came to the snow col which leads to the last bit of steep rocks. Here the arête was so sharp and the snow so hard that we found it convenient to negotiate the difficulty astride, using our hands on the arête for motive power. A rope was thrown to me as I reached the rocks on the other side. A steep chimney brought us to easy ground, and we sat on the summit at half-past eleven. Unfortunately, the camera had been left at the col. It is a Snappa, holding twelve plates, and rather heavy, and as we feared the plates were all fogged in changing at the Hermitage, I was not very enthusiastic in taking photos. But the view from Sealy is one of the finest I have ever seen. A blue haze marked the sea over the southern end of the Mueller Glacier, while Sefton, Cook and the Tasman Peaks showed well to the North. Lakes Pukaki and Ohau formed a striking contrast to the South, while a panorama of minor peaks could be seen in the direction of Mt. Aspiring. It seemed a simple thing to make a traverse of the mountain and across the Metfield Glacier lower down, but this was out of the question, as the provisions and axes had been left at the col. I donned the rope for the descent, as this was not one of the occasions when a rope is an added danger. We reached the col again without mishap, and congratulated ourselves on the ascent in another breakfast. Tennant made a ferocious enquiry into the constituents of an orange.

Needless to say the four miles of snow slope and débris were very tiresome, and the final knee-breaking descent from the ridge to the Hermitage was none the less so, but though our arrival was not heralded by the strains of an orchestra, and though no bier-halle was present to ease the thirst of the weary mountaineer, there was a very useful bar and a beer barrel, into which now, as on many other occasions, we made a very creditable excursion. We had been out thirteen hours.

The Tasman Glacier. Mt. Darwin.

Bishop Grimes had arrived at the Hermitage a day or two before we made our Sealy expedition: he wished to make an excursion to the hut up the Tasman Glacier, and as Monday, the 9th, was fine we agreed to go together. I was feeling stiff from the sharp descent from the Sealy Range, but fortunately we did not have to make an early start. In fact, the day was so hot that we decided to wait, and lunch at the Hermitage: in this manner most of the journey would be made in the shade. For about three miles the way leads

down the valley, then the River Hooker is crossed by a cage on a rope, and the path winding round the southern spurs of the Cook Range takes a northerly direction, following a creek by the side of the lateral moraine of the Tasman Glacier. We took one pony with us: the Bishop declined to ride, as he had heard that the path was unsuitable for equine exercise. The others, accompanied by two ladies who were seeing us off over the river, went on ahead, Clark and I following when everything was ready.

There is nothing particularly interesting in the walk to the Ball hut; no alpine view can be seen from the path, De la Bèche being the only visible mountain. We got in just at daylight. Hans, the Swiss porter, was there; he said he was not thriving on tinned meats, but I fancy he understands the art of doing himself well. 10th.—He accompanied us up to the Maltebrun hut next day. The sky was slightly overcast, so we did not suffer much from the effects of the sun on the ice. There is a great deal of moraine to be negotiated; once on the Tasman Glacier, however, there is an uninterrupted walk on clear ice for several miles. The journey occupies from 4 to 7 hrs., and concludes with a steep scramble up the slopes of the Maltebrun range to the hut; quite short, but rather hard at the end of a day. The Bishop, in spite of a fall or two, was to the fore all the way; he was a very cheerful companion, possessing as he did an illimitable supply of anecdotes.

Both the huts in the Tasman Valley are very creditable pieces of work; they are spacious and comfortable, and the fireplace does not smoke the place out. Bunks take the place of the boarding of the Swiss huts, and there is always a compartment for ladies. They are both well and suitably provisioned, and hold eight people comfortably. The Hermitage tariff includes the use of the huts and the provisions, and indeed at the Maltebrun hut the mountaineer comes nearer Mr. Mannering's description than ever he does in Switzerland. There were books too, and behind the building a veritable 'Shoehorn,' on which it is possible to imitate one's performances at Zermatt. We all rested on the 11th. It was a well-spent day, for it is impossible to tire of the view from this point. Mt. Darwin, which had impressed us as we came up the glacier, was hidden by the northern spurs of the Maltebrun Range. The Hochstetter Dome and Elie de Beaumont, however, were splendid exhibitions of snow-field and ice-fall, but it was Mt. Green that especially attracted us. When we heard that the peak was unclimbed we made a care-

ful examination through a telescope, but so late in the season the apparent route, consisting entirely of ice and snow work, was rendered very doubtful owing to a succession of large crevasses. We thought we saw another possible route in the south arête, but to reach this some difficult-looking rocks would have to be negotiated; and it was doubtful from where we were whether it would be possible to approach these, owing to the existence of an extensive bergschrund which cut off the mountain from the glacier.

As it was, we decided to spend the following day in an attempt to climb Mt. Darwin, as this would enable us to make a more detailed examination of Mt. Green.

The Bishop arranged to return to the Ball hut with Hans Fluckinger.

Mt. Darwin had only been ascended once before, by Dr. Kronecker with Messrs. Fyfe and Clark. The expedition occupied on that occasion over twenty hours.

The Ascent of Mt. Darwin, March 12.

We were awakened on the morning of the 12th at 3.30. What a fearful hour it is! One's boots are hard and difficult to get on, the breakfast more or less repulsive, and one's energy quite unequal to the demand made upon it.

We descended the steep slope to the glacier with difficulty: the moon had disappeared behind the western range, and the candle light was hardly sufficient to guide us among the boulders. Once on the glacier, however, we made good progress.

What a beautiful effect early morning has in mountain scenery! The crisp measured tread of our boots on the ice was the only sound to be heard on that vast snowfield. Refreshed by the cool air, on we went in the direction of the Hochstetter Dome, passing the Darwin Glacier on our right, and then the southern spurs of the mountain itself, not changing our direction till the rocks gave place to a steep broken glacier which led to the col from which we intended to follow the arête. There were a few rather awkward crevasses to be crossed, so we donned the rope, hoping in the afternoon to find an easier way down to the Tasman Glacier.

Shortly before reaching the col we found some suitable rocks for a breakfasting place, and though we had only been going for two hours the pace had been sufficiently brisk to make a rest acceptable. The sun had now risen, but we were

protected, and enjoyed shade for some hours more, and were enabled to dispense with the use of goggles.

It was more of a ridge than an arête we had to follow; much broken in places, but nowhere very difficult. This led to a summit from where we expected a sharp long arête to the top. At a convenient place we made a second breakfast, for the climb was long, and we had a good deal of ground to travel. Occasionally strong gusts of wind caught us and we took as much shelter as we could. As we got higher the rocks became more rotten, and in places it was all we could do to avoid dislodging stones.

There was no shelter from the wind when we reached the point from which the summit can be seen, but our exertions



MOUNT DARWIN AND THE HOCHSTETTER DOME FROM THE TASMAN GLACIER.

had warmed us by this time, and we feared nothing from the cold. The final ridge was rather disappointing; seen from a point on the Tasman Glacier it has a very sharp appearance. As it was we found that we had left the best of the climbing behind us. We had a succession of points to climb, and new arêtes to follow before we gained the summit. This we reached at noon (8 hrs.), and as the wind had abated somewhat we spent an hour and a half enjoying the view. To the North we could see a succession of peaks stretching away for a hundred miles; while nearer, beyond the Hochstetter Dome, the luxuriant vegetation of the West Coast bush formed a lovely contrast. Elie de Beaumont looked especially striking. Mt. Green lost nothing in appearance from our

elevated position, while beyond, the Waiho Bluff introduced a wide expanse of sea. Mt. Cook, towering above everything else, did not form the centre of an extensive panorama as from Sealy; on the other hand, we gained by a view of the unexplored regions to the North and the splendid contrasts provided in the West Coast bush.

After adding our cards to those of Dr. Kronecker, and placing both securely in a jam tin, we prepared for the descent. It was slow work, and we made frequent halts. When at last we reached the col from which a glacier descends to the Tasman, we examined the eastern slopes of the mountain, in the hopes of finding a shorter descent by way of the Darwin Glacier. But the slopes were very steep and there was much ice, so we decided to continue on our old route. The snow was soft, but luckily we were able to avoid the crevasses we had crossed in the morning by a *détour*, and once on the Tasman Glacier we unroped and walked down to the hut (15 hrs.). It was dark when we arrived there. Provisions were getting a bit low and bread was 'off,' but we did full justice to what was left.

On Friday, 13th, we rested. We had been going fairly hard since Saturday, and did not feel equal to attacking Mt. Green at once. I am afraid this was tempting Providence, as five fine days running were most exceptional. Mt. Cook seemed now in fair condition, but it was so late in the season that moonlight was imperative. We expected the full moon in a few days, and we were quite intending to make an attempt on the mountain. We calculated that by sleeping on the snow below the rocks, three hours beyond the Hochsetter bivouac, we should require eighteen hours to reach the summit and get back to the camp. The better route from the Hooker Glacier was out of the question, as the seracs so late in the afternoon were impassable. But unfortunately the fog which rolled up on Friday from the West Coast was the herald of another spell of bad weather. All through Saturday it poured, and on Sunday morning so much snow had fallen that Mt. Green was obviously out of the question.

Sunday, 15th.—We rose at 8 A.M. and determined to go straight down to the Hermitage. We left the hut with a rucksack apiece at 10 A.M., and when we reached the glacier found it in such a glazed condition that progress was very difficult. Lower down, however, the conditions improved and we reached the Ball hut in four hours. We spent an hour and a half there and then continued our journey. Soon we came across a party of tourists who were going up to the hut

for the day. The Cook Range seemed to shelter us from the storm, but when we had crossed the Hooker River by the cage we caught it, and for the last three miles had to make our way against a raging wind. But the lights of the Hermitage were in sight, and at 7.45 we reached the welcome shelter.

Our expedition up the Tasman Glacier was a very pleasant one, and though Mt. Darwin cannot be considered a first-class peak from a climbing point of view, the ascent is well worth making, as it is one of the few which can be comfortably done from the Maltebrun hut.

(To be continued.)

WINTER EXPLORATION IN THE ALTAI, SOUTH CENTRAL SIBERIA.

By S. TURNER.

BY travelling 2,250 miles beyond Moscow you come to Novo-Nicholaewsk, on the Siberian line at the Obi station. The Obi River flows past this settlement. If you follow the river to its source you come to the Kotanski Belki range, 700 miles direct S. from the railway at Obi.

This range is the highest of the Altai mountains. Belukha (14,800 ft.) is the only peak shown on any map, but there are a number of higher mountains in the range. My expedition was to explore the country as far as Belukha, climb and measure that peak (which was the highest one known, and had only been measured twice; the first time it was 11,200 ft., and the second time 14,800 ft.), and measure any other peaks, and make glacier observations and observations on mountain-formation.

I enquired from the Geographical Society, and was only able to gain a few lines, translated from Russian, to the effect that Professor Sopoziukoff, of the Tomsk University, had explored this region and climbed 13,300 ft. up Belukha from the S., and measured it 14,800 ft. There is no English literature on the subject, and only one book in Russian. I saw the Professor at the Tomsk University, and found that he was the only explorer of the district mentioned, and that he had also made an excursion to the N. side and gained 8,400 ft. up the Belukha glacier. He also gave me an idea how to get there, but said it was impossible in winter. He went in the summer. There had been several mountains measured about 14,000 ft., including Iktoo and Irbristoo, also

eight first-class glaciers and about twelve second-class. A map of the country had been made. The country as far as Onguadi was previously known to Siberian traders. The district to the S.W. of Onguadi, which I visited, was only known to peasants and Kalmuks, who are nomads living in bark huts.

Leaving Novo-Nicholaewsk in March, the snow was very thick, and it was quite mid-winter weather, 16° below freezing-point,* which was quite cold enough for the sledge journey to Barnaul, which we reached in twenty-eight hours' continuous travelling, excepting four hours in the middle of the night. We passed through several rich pine forests, and had some good shooting of white hare, and of rapcheek and other birds. Barnaul is one of the most thriving towns in the Altai. Leaving for Biisk the sledge road was very rough. The cold registered 5° below freezing-point. The forests are not so thick or so rich as those we had already passed.

In some places the snow was very deep, while in others the wind had blown all of it away. The track was very narrow, only giving room for one horse. The E. side of the river Obi was hilly and covered with forests, while the W. side was quite flat and bare of vegetation. The birch and aspen trees were the most numerous, with a small percentage of pine and dark brown firs. The ash is very small.

Biisk is a town with a population of 20,000. I found I could get here most things for the expedition, including guns. It is the last of any importance in South Siberia, and is quite up to date in many respects—*e.g.* electric lighting. After leaving Biisk we found that the ice on the river was breaking up, so we crossed on a drosky, but after the first stage we changed to a sledge, owing to fresh-fallen snow making sledging possible. The country is flat as far as Altaiskoye. From here the road to Mongolia goes S.E. We went over the Sheemealoffskya pass, 3,550 ft. to the S.W.

This pass is noted for fierce hurricanes. We came to Barancha, where the snow was very deep in a narrow valley, and soon afterwards we ascended the Yedtogol pass. Near the summit it was 38° and on the summit 40° . The trees were all bent towards the S., and had no branches pointing N., showing signs of severe wind; half-way down it was 42° . It was a steep pass, and there was no snow a little way down. The sledge upset several times on this mountain-side. At

* All references to temperature through my paper will be according to Fahrenheit.

the bottom of this pass there is a junction of four valleys. The village is an active one, and it is the chief market for the Kalmuks.

Close to this village the first Kalmuk camp is situated, on the banks of the Chorny-Anni and Belyi-Anna Rivers. These rivers flow into each other two miles from the village, forming the Chorny-Anni River, after which the village is named. This valley is noted for the terrific havoc caused by the repeated winds. We witnessed one of the blizzards. There was no snow in this valley; the wind evidently blows all the snow away.

Through the next three stations to Abbi we passed fine scenery, and entered what I call the circles. The valleys are quite flat, and the mountains rise straight up, and form one complete circle after another. The first would be about 40 miles in circumference and about 20 miles across. The circle grew less and less as the mountains rose higher. Out of 70 miles between Torack and Abbi we had 20 ascending and descending passes.

Along the valleys were large herds of cattle. When we reached Abbi it grew much colder, 7° below freezing-point. After passing Abbi the more S. we went the warmer it grew. When we reached Ouemon the temperature was 98° in the sun. We had come through eight different circles. The largest one was between Oust-Kam and Koksa, about 40 miles across. These circles were very pretty. The valleys here are as flat as tables, and bare of trees. The trees are on the slopes of the mountains. The height of Biisk is 600 ft. We gradually ascended to Altaiskoye, 850 ft., and on the Sheemealoffska pass to 3,550 ft. Here we were in the mountains. Each valley was higher than the last, until about half-way to Kotanda, near Abbi, where we gained a height of 5,000 ft. Afterwards the valleys were lower, down to 2,760 ft. after Ouemon. We went over the Kotanda saddle, 4,850 ft., through forest.

The temperature on the summit was 39° at 10 A.M. We descended to Kotanda, which is at a height of 3,800 ft., also in a circle about 8 miles long and 4 miles across. The temperature, to a great extent, depended on the direction of the wind. It was always very cold when a N. wind sprang up, and mountains seemed to come much nearer with the clear atmosphere, which is clearer than that on the Alps. The rivers are rapid. The main river draws its water through numerous tributaries from N. and S., and flows between the Altai and Altai ranges. The journey from Biisk was done

by eleven stages with sledge and drosky, the longest stage being 40 miles.

The road attains its greatest height on a pass of 5,000 ft., at Kirlick, over the Korigomskie mountains, where the river Abbi commences. This river flows into the Koksa, which eventually joins the Kotan. The Kotan rises on the S. side of Belukha, from the largest discovered glacier in the Altai. It flows S., then W., and afterwards N., to join the Obi. The direction of its course is due to the peculiar circular structure of the mountains.

The rivers are frozen to the bottom from November to February, but there is an under-current at the end of March,



THE RIVER KOKSA GAVE US THE MOST TROUBLE.

which breaks the ice by the end of April. The river Koksa gave us the most trouble, as it was between fairly high mountains. The summer road was impassable, so we went over the river, although we were not sure whether the water had ice under it or not. We had a most exciting time. The horses were often afraid to go through the water. This was at the end of March. It took us three days and the best part of two nights to get from Biisk to Kotanda, a distance of

248 miles. During the journey S. of Biisk we had varying temperatures, according to the situation of the valley and the direction of the wind.

A N. wind would reduce the temperature 20° to 30° even in the middle of the day, when the sun is shining; for the first hundred miles it varied from 7° to 15° below freezing-point at midday. When we went through deep valleys which were sheltered the thermometer registered 46° , and the weather was warmer until we reached Ouemon, when it registered 98° . On the Kotanda saddle the next morning it was 39° at a height of 4,850 ft.

At Kotanda 2 hrs. later, at 3,500 ft., it was 95° in the sun at 9 A.M. At 2 o'clock the same day on the Saptam ridge, at a height of 9,750 ft., the thermometer fell to 5° below freezing-point. While I was climbing six unnamed pinnacles, 10,000 ft. to 10,050 ft., it went down to $15\frac{1}{2}^{\circ}$ below freezing-point. These pinnacles had never been climbed before, and were covered with snow. The summit rocks could be broken with the fingers. They are a continuation of the Saptam mountain. I named four of these pinnacles—Faith, Hope, Charity, and Love. From the highest summit we had a grand view of the Kotanski Belki range in the S., and the Altai in the E., also the Altai in the W. The view is very fine, but the mountains do not seem as high as the Alps. Eight circles could be seen.

The Saptam is a splendid centre. After 6 hrs.' interesting climbing I returned to the Saptam second summit again, which is 9,750 ft., the highest point at which vegetation grows. I was caught in a sudden gale of wind, which blew from the N. We had some interesting ski work on this mountain. We returned to Kotanda, and after making sure that everything was ready we started next morning for the Akkem valley with two hunters and six horses, two of which were pack-horses. There were no other means of travel, and we had to take snow shoes with us, as the snow was deep.

I particularly wanted to go to the southern side of the Belukha mountain. The Belukha resembles Mont Blanc, except that the corresponding faces look to opposite points of the compass.

As we got nearer to the mountain we found that the road leading to the S. side was blocked with snow, making it impossible for us to travel in that direction. We were, therefore, compelled to take the northern and most difficult approach to the range of which Belukha is the chief peak at Kotanda. We had some difficulty here owing to several

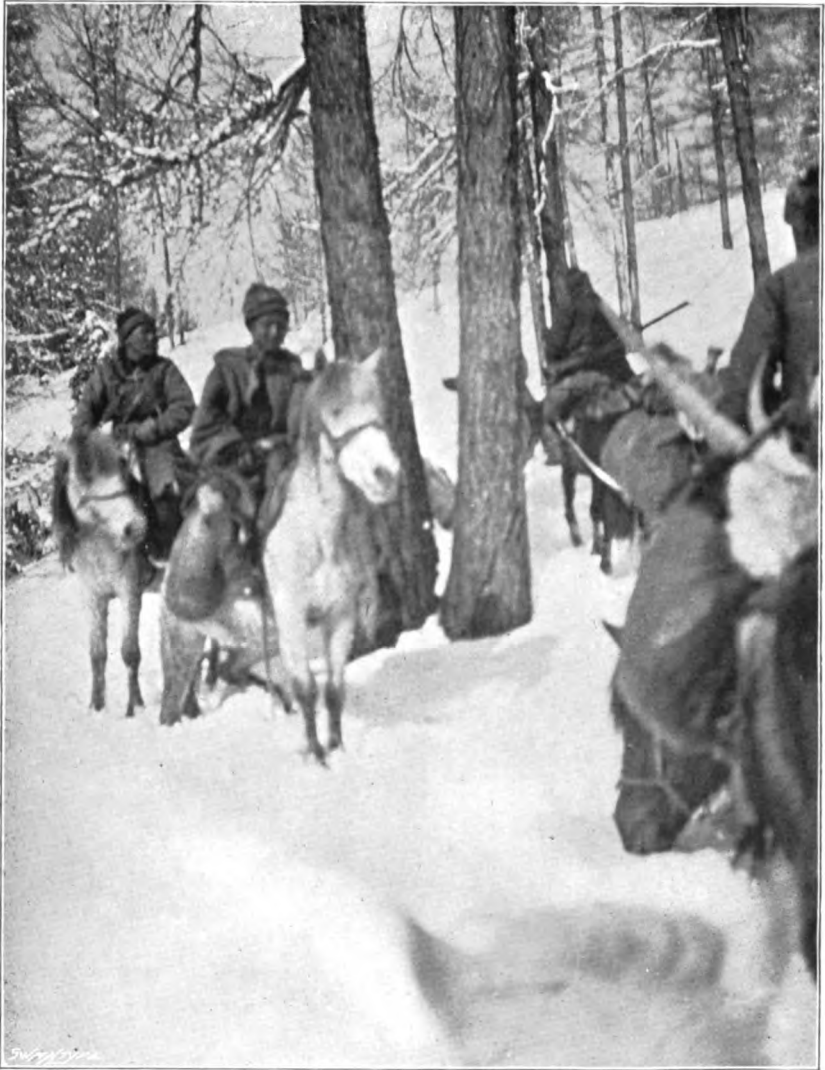


Photo by S. Turner.

[Swan Electric Engraving Co.]

KALMUKS ON THE AKKEM PASS AFTER A SNOWSTORM.

hunters refusing to go on what they considered a dangerous journey.

Taking a road leading in a south-westerly direction, we passed by a small village and a wood. Here we crossed the river Kotan, the ice of which was just breaking up. Reaching the other side, we emerged into a dense forest without a track. It was remarkable how the leading horse went through it. We found it impossible to travel more than three miles an hour, owing to the bad state of the roads, but after some rough climbing our horses brought us to mountains of about 11,000 ft. to 12,000 ft. We had intended to walk up the river-bed, but owing to the breaking up of the ice we had to abandon this idea. After finding our way through another forest we came upon a pass (6,100 ft. high), and while traversing this we were overtaken by a snow storm; we soon, however, reached the summit, where the Kalmuks tie pieces of coloured ribbon to the branches of a tree as a thank-offering for their safe arrival. After a little rest we made a sudden descent into the Akkem valley, the snow storm still raging. Night coming on we made our first halting-place, scraping away the snow and pitching our tent. One of the Kalmuks lit our fire and boiled the water. The thermometer registered 20° below freezing-point.

The height of the Akkem valley, in which we were encamped, was 4,325 ft., the place in which we passed the night being the last Kalmuk settlement situated along the Akkem River. The scenery at this point is very wild and rugged. The river winds its way through the mountains, one bank being composed of steep precipices, whilst the other has a formation of steep slopes, growing on the side of which were forests as dense as a jungle. The echo of our voices resounded as though we were in some vast cavern.

One day's journey of 8 hrs. brought us to this Kalmuk settlement, which is situated in the only open space in this valley. We understood that this settlement was twenty miles away, but it must have been fully twenty-five miles, as we had been going 8 hrs., including half an hour's halt. (I calculated our speed by my watch at an average of $3\frac{1}{2}$ miles an hour.) We stayed at this place for the night, during which there was a continuous snow storm, and started early next morning to travel through a thick forest. We found the forest slopes frozen for twenty miles, and the journey was a very exciting one, as our horses constantly lost their footing. Here we had in places some excellent shooting, following the game on our snow shoes, the snow being soft and deep. With the

exception of a few halts to lift up a fallen horse, or to readjust the luggage, or to follow the game on snow shoes, we stayed on our saddles for 9 hrs., there being no convenient place at hand to make a resting-place.

The trees in this part are mostly fir, and are very tall and majestic, tapering to a fine point, and almost devoid of branches. The shape of these trees at their base was quite peculiar, and their formation was different to any other kind of the same species that I have ever seen, the first 8 ft. or 10 ft. being many times thicker than the next portion of the tree. They do not grow in the valleys, but only on the mountain slopes.

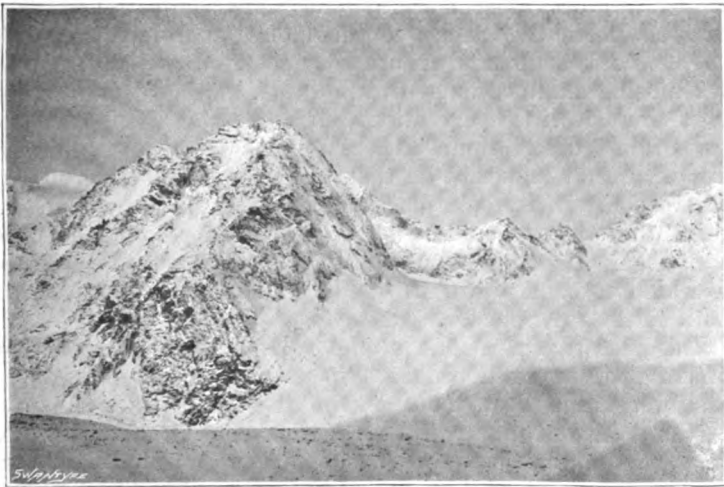
Crossing the Akkem River at a height of 5,650 ft., we had our first close view of the Kotanski Belki range. Reaching the opposite bank, we were compelled to unload our pack-horses, helping them up and dragging up the luggage after us. The trees on this side seemed to have been devastated by a storm, their roots being very thin and loose. The beds in which the trees grew were composed of rock and sand, which may account for their slender roots. Several fell during our progress through the forest, making a dull crashing noise.

We eventually reached the banks of the river Yarlow, which is a tributary of the Akkem. We found this quite dry, owing to the winter's frost being too keen to allow any thaw during the warmest part of the day. This river takes its source in the E. of the Kotanski Belki range, and is a fast-flowing stream in the summer. There is a glacier here which has not yet been explored. I saw it from a hill near where our camp was situated.

We had been on the road two days from Kotanda, 14 hrs. of which had been spent travelling through dense forests. The second evening we encamped 8,150 ft. above sea level at 5.30 P.M., and snow commenced to fall at 8 o'clock, the temperature in the open being 15° below freezing-point. We could see Belukha Mountain rising before us in a direct line about eight miles away, and we were practically in the circle of the Kotanski Belki range.

Opposite our camp was a bank covered with snow to a great depth, a lateral moraine of the Belukha glacier. The glacier had receded four miles, leaving two small lakes to mark its course. The first of these lakes was one mile long and a quarter of a mile broad, the second being about half the size. They were separated by huge boulders. Two streams, together with the glacier, feed these lakes in the summer. At the time of our visit, in April, the lakes and also the river were frozen to the bottom.

Our first day at this place was spent in examining the Belukha glacier, and in getting as near a view of the mountain as we were able from one side of the glacier. On examining the glacier one thing surprised me very much; this was the absence of crevasses. The ice also was very hard. We came across a large number of huge boulders which had been scratched and grooved on the side nearest the glacier. These were situated about two miles from it, and showed how far it had receded. Some of the grooves—of which we took photographs—were half an inch broad and a quarter of an



AN UNNAMED PEAK AT 4 A.M.

inch deep. There were no marks of the glacier's progress on the other side of these stones.

Belukha is a granite mountain, and thousands of great boulders of this rock occur six miles distant from it, so that it must once have been much higher.

The Kotanski Belki group is a circle of mountains, the chief peaks of which have an average height of 14,000 ft. In the centre of this circle there are ranges of mountains branching off N. to S., which, seen from the distance, have the appearance of huge fins. The highest point of the glacier on the northern side reaches 12,000 ft., and the peaks which shed their great rocks upon the glacier tower some 2,000 ft. to 3,000 ft. above.

There had been an exceptionally great fall of rock from a peak on the right side of the glacier, which appeared to have occurred quite recently, and we had the advantage of witnessing several of these rockfalls on our journey, though they made climbing rather risky.

The old moraine is composed of two ridges 200 ft. to 250 ft. higher than the glacier, and there appeared to be more moraine than glacier. In fact this is the largest moraine I have ever seen. I have seen and climbed many in various parts of the Alps, but none of them can compare in magnitude with this one. The glacier was five miles long, but I should think it must have been at one time eight miles. The distance from the glacier to the lateral moraine, including the two lakes already mentioned, covers three miles, both lakes being dammed in by the moraine. Around the second lake there is little vegetation, but what there is here is of the wildest description. There is only one lake shown on Sopolinokoff's map, but he visited these parts in the summer, whereas my visit took place during the winter. I should think these lakes would be a famous place for hunting in the summer, as the animals would find this a very suitable place to which to come down to drink. There are high passes on both sides of the glacier.

I decided to explore one of the valleys, being attracted by one or two very high peaks. We started on our snow shoes and were soon over the snow on the lateral moraine, and across the lake to the right. I might mention here that the snow shoes which we wore were made and bound with fur, which was very useful in preventing our sliding backwards, the fur being so placed as to enable the snow to work in against the grain, and thus taking a firm hold.

We then climbed over some steep rocks, and afterwards tried to climb up a frozen stream, but we found that too difficult, as the ice was too hard for the nails of our shoes to make any impression.

After a zigzag course over the snow slopes and some square-shaped pieces of rock covered with snow we reached a glacier, previously unknown, nearly as flat as a billiard table and almost as hard as rock. This was at a height of 13,000 ft. On this our boots would not grip without stamping our feet, and even with this precaution slips occurred. At the top of this small glacier was a very pretty hanging glacier. The ice was covered a foot deep with snow, as was also a steep slope to the left which was exposed to the N.

The hunter whom I had with me would not climb any further,



Photo by S. Turner.

PART OF THE BELUKHA RANGE. WILLERS PEAK ON THE EXTREME RIGHT.

[Svan Electric Engraving Co.]

so I left him and took a course up a steep slope, but, fearing an avalanche, I changed my course and took a more difficult way over a peak of steep rocks which was similar in construction to the Matterhorn shoulder, but had an outward dip and downward slope. Once on the top of this I travelled along an easy ridge (13,300 ft. high) which led up to the mountain summit. Much precaution was necessary in stepping from one piece of rock to another, as every piece was loose.

This was on the S. side of the ridge. On the N. side there was a sheer precipice, forming semicircular gullies as smooth as glass, varying from 1,000 ft. to 2,000 ft. in depth, and 300 ft. to 400 ft. in width. The last of these semicircular gullies was about 150 yards from the northern extremity, making almost a complete semicircle of the ridge, and this almost isolated the steep summit and required some stiff rock-climbing to attain. On reaching the summit I found that no snow had accumulated on the steep northern slopes, they being composed of loose rocks. From this peak the view of the whole Belukha Mountain was complete. I placed my aneroid on a sheltered rock, and it registered the height of 17,850 ft. * (allowing 50 ft. for the exact known error made the height 17,800 ft.). I took from this point a round of photographs, as well as prismatic bearings. There was $12\frac{1}{2}^{\circ}$ of frost. I named it Willer's Peak.

After placing my name in English and Russian under a pile of stones I began a very careful descent. I was surprised to see that the summit rocks, composed of schist, mainly felspar and hornblende, were so soft that I could break them with my hand. The mountain view was very pretty, but not so bold as the Swiss Alps, as the valleys here were much higher and the mountains are joined by very high ridges. There was ice on the northern side of every peak except those which were too steep to support it.

The Kotan range forms a circle, and Belukha was apparently the highest peak in the circle. To the N. of Belukha there are three mountains which rise like huge fins, parallel

* The aneroid was a compensated one, made by Baker, High Holborn, London, W.C. I had it tested to the satisfaction of the Geographical Society, and also tested on my return to England, and known error allowed. The aneroid agreed with Professor Sopozinokoff's measurements at various heights, and on the frozen lake, as well as on the Belukha, which he measured from the base. The ridge I mention on Willer's peak, 13,300 ft., is at the base of the peak. It took me 8 hrs. to climb to the summit and down again from that ridge (13,300 ft.).

with the glacier, very pointed at the top, ranging from N. to S. The third one, which I had climbed, had a position E. to W. These ridges were too thin at the top and too exposed to the breeze of the Akkem valley to allow snow to remain constantly on their summits. One peak that attracted my attention more than any other lay to the W., on the Kotanski range. It had just the shape of the Matterhorn, but the obelisk of rock was only about 2,000 ft. high. This peak had a coat of ice about 30 ft. thick on the N. side up to its summit.

I descended the peak from which I had made these observations, and joining the hunters on the glacier we returned together to our camp.

The next morning opened up calm, and we decided to climb Belukha. The thermometer registered 45° below freezing-point, and there was every prospect of a good climb. It was my intention to move the main camp as near as possible to the mountain, but the hunters would not go so far as I wished.

We crossed the lateral moraine, going over the lake to the left, and pitched our camp on the further side of the lake. Continuing our way, we rode the horses to the end of the lake, and tied them to the last trees. After going about an hour up the moraine on the left snow began to fall. The hunters wanted to go back, but I persuaded them to continue for another hour. They would not go any further, however, after this time had elapsed, although I wanted to sleep that night at the base of Belukha, and had only covered two miles out of the six that were required to get to this point. It was very difficult walking over the moraine, owing to fresh-fallen snow. I pitched my tent about 1 o'clock, 11,000 ft. above sea level. The hunters, who were complaining bitterly of the cold and snow, turned back. I made myself as comfortable as possible. The snow was soon frozen an inch thick on my little tent, which, by the way, was rather frail, being only 12 lbs. in weight. It took me all my time to keep up the circulation, and I had to depend upon small blocks of methylated spirit, but they were not of much use to me.

Snow fell all the afternoon and night, ceasing about 2 o'clock in the morning. I prepared for a start at 4 A.M. There was a good light, but the hunters were nowhere to be seen, so after taking a round of photographs I started over the ice- and snow-glazed boulders. I have had a good deal of experience in climbing Alpine boulders, but those forming the moraine were all ice-glazed, with fresh snow on



Photo by S. Turner.]

(Swan Electric Engraving Co.
ONE OF THE BELUKHA PEAKS DURING A SNOWSTORM.

the top. They were nearly all covered with snow quite level, and I found it exceptionally difficult to retain my balance. It was necessary to jump from one boulder to another, because in stepping between them one would take the risk of sinking to the hips in soft snow, and very possibly of breaking a limb. I have never found any kind of climbing so difficult as this moraine of the Belukha glacier. I then tried the glacier, but could not make much progress. It was too hard to allow the nails in my boots to grip, owing to my not being heavy enough for the purpose. I changed my course, again traversing the boulders. As I stepped from one boulder to another I loosened them, and it was rather interesting work hearing boulder after boulder which I had just stepped off go tumbling down unseen holes. On many occasions I only managed to save myself by throwing my body forward and catching hold of another boulder to prevent my fall.

While resting on one of these boulders one of the hunters, named Cherepanoff, came in sight, beckoning, as I thought, for me to go back, but I did not heed him. I afterwards learned that he had tried to reach me, but had failed, owing to his having had several nasty falls in the holes which abounded. The other hunter had during this time remained at the camp with my interpreter, and gave as a reason for his not accompanying me, as promised, that the journey was too hazardous, and that though I might be willing to risk my life he was not going to risk his. This man was one of Sopolzinokoff's best men, whom he took with him when he climbed 13,300 ft. on the southern side of Belukha during the summer.

I soon gained the base of a ridge which led up to the Belukha ridge, and after very difficult work (it had again commenced to snow) I reached the top of the ridge. This measured 13,800 ft. I left my card under a rock and proceeded through a slight mist towards the higher ridge, which I found covered with hard ice at a height of 14,300 ft. After taking half an hour to cut a step in the ice I decided that this was too slow, and tried to go round on the shoulder of Belukha, thinking it would be an easier way up the last bit, but I slipped down a slope covered with fresh-fallen snow about 60 ft. in company with the snow, which nearly suffocated me, so that I was very glad to get back to my position on the ridge again. Then the mist cleared, and I was sorry I had left my camera at the base. The N. wind, which had blown the mist away, began to make me feel intensely cold in my damp clothes, and at one time I almost lost the use of my

hands. I began to descend as quickly as possible, intending to complete the ascent on the morrow.

When I consulted my thermometer at the base of the peak, it registered 18° below freezing-point. I had great difficulty in making progress, as the circulation in my hands and one of my feet had stopped. After steady plodding, however, I reached my tent, there to find my hunter wearing my overcoat and sitting with his back to the tent to protect him from the wind. He explained that he had managed to get that far, but the other hunter was afraid to come.

I was feeling very ill, so decided not to spend another night up there. His company was very acceptable during my journey back to the camp, which we reached the same evening. My interpreter remarked that I looked quite green. I attributed my sickness to having swallowed some solder out of the tinned goods we were constantly eating. I have no doubt that the snow water and the ice water we had to drink, and the poor bread we were eating, had something to do with it. I had also inflammation in my eyes. During previous nights, when sleeping in our fur coats in front of a big fire, we kept warm enough, but this night it was blowing a hurricane and the cold was severe—21° below freezing-point.

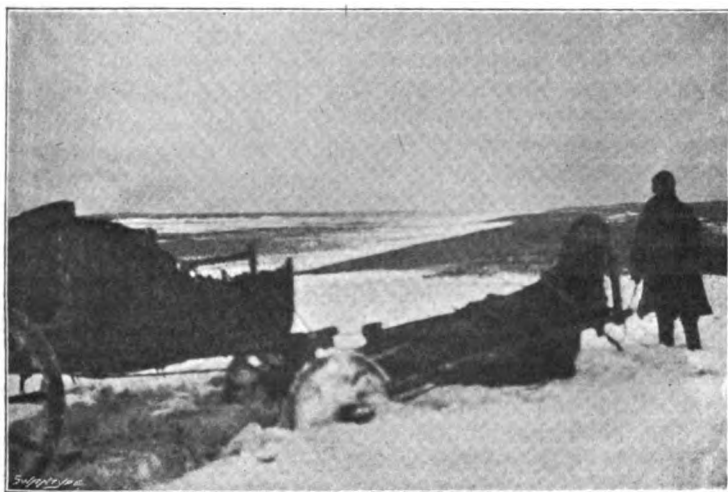
As soon as daylight appeared I gave the order to pack up, which was gladly obeyed. We rode the first ten miles through a snow storm, sheltered only by the trees. Our faces were nearly frozen by the wind. We thought of finding our former track, but the snow had obliterated all traces of this, and so we were very uncertain at times of the direction in which to travel. The horses tumbled down about thirty times during this part of our journey, and it was a pleasure to arrive back at the Kalmuk hut, where we dried our clothes and sheltered. We slept that night in our coats on the floor of the hut.

The Akkem valley is very long and narrow. It leads straight up to the Kotanski Belki, and gradually rises from 3,800 ft. to the Akkem Lake, 8,000 ft.—a rise of 4,200 ft. in forty miles. The road is through forest slopes for about thirty miles. Before my visit nobody had been here in the winter, and, considering the frozen state of these slopes, we were fortunate to get our horses to go there and back without breaking a leg or two. The Russian gentleman (Sopozinokoff) already mentioned is the only man who had been up this valley before, and his expedition was in summer, and any part of Belukha Mountain is thought inaccessible during the winter. After my experience I do not recommend exploration in the Altai Mountains in winter. The cold is then

so intense that every living thing, from bears to birds, is asleep, and we did not come across any animals except a few herds of wild goats, and a few sheep, stags, and rapcheek. I should think that the best time to make a journey in these regions would be in the month of July.

On reaching Kotanda we received quite an ovation. We were invited to dinner in many places, but had to hurry home, as the breaking up of the spring was coming and the roads were getting into a bad state.

I could fill volumes with accounts of our exciting times whilst crossing rivers, which were breaking up, and snow



THE PLEASURES OF A THAW.

heaps just melting. Of course the rivers break up at different times, according to the situation and the district. Our horses had to swim many rivers and pull the drosky after them. In some places the mud was 2 ft. deep.

As we left Kotanda the weather became very hot—up to 110° in the sun. This made the road bad all at once. Seven miles an hour is the average speed on a drosky or sledge. The quickest speed at which we travelled was sixteen miles in 3 hrs., and in one place we only managed to go twenty-three miles in 9 hrs. This was when we were nearing Biisk. From Biisk we went by the post road, and found it in fairly good condition.

The ice in the river at Barnaul was just breaking as we arrived, and was not expected to hold for more than two days. After crossing the river, we continued on the post road from Barnaul, on the W. side, until we reached the last village before arriving at Novo-Nicholaewsk. We experienced great difficulty here, as we had to cross the Obi River twice, and in crossing at Novo-Nicholaewsk we had to take to a drosky to get over the last ten yards of broken ice.

At Kourgan, where we arrived two days later, the ice was flowing down the river, and after another two days' journey we found ourselves in summer weather buying flowers at the stations, with the temperature at 98° to 100°.

There is one thing that I remarked with regard to Siberian weather, and that was that it is most erratic, the weather in one part being no indication of what it might be like in another. The Altai summer was six weeks late and that of the West Siberian district four weeks late last season.

The fauna and flora are very varied, and their examination would repay tenfold any one who would make this trip to the mountain districts. From information I gathered I find that in summer the flora of the S. Altai is magnificent.

The greatest drawback to mountaineering is the extremely hard ice. This must be met with sharper ice axes and nails than those used on the Alps.

The district I visited should become one of the most interesting exploration grounds in the world, and I hope I have led the way to further explorers by showing that even the dreaded winter of Siberia cannot keep an enthusiastic explorer out of this little known country.

NOTES FROM TIBET.

BY DOUGLAS W. FRESHFIELD.

LORD CURZON has recently forwarded to the Secretary of the Royal Geographical Society a set of thirteen photographs taken by Mr. J. Hayden, the geologist attached to the Tibetan Mission, during its stay at Khamba Jong last summer. These views have a double interest. In the first place they illustrate the account given by Sir Joseph Hooker and other travellers of the rolling uplands that extend from the top of the long staircase which leads from the plains of India up into Tibet.

Segnius irritant animos demissa per aurem
Quam quæ sunt oculis subjecta fidelibus.

These photographs should serve to persuade to an honest recognition of things as they are the ill-informed critics of the Indian Government who have imagined facts—*e.g.* 'stupendous passes'—

to fit their political feelings. We have here brought before our eyes extensive, almost level plains, treeless and clad only in parts with sparse herbage, girt and divided from one another by low ridges, off which the rough angles have been rounded by ice. In the absence of definite valleys sluggish streams meander aimlessly across the wide landscape. Dotted here and there on the vantage ground of some hillock are villages often overlooked by the high white walls—pierced with a crowd of tiny windows and crowned by fluttering prayer-flags—of monastic fortresses. It is an open country. To compare small things with great, it bears the same relation to Sikhim that the plateau of Constantine does to the coastward hills and glens of the Kabyles in Algeria, or the uplands of Armenia do to the valleys of Georgia. The horizontal prevails over the vertical in all the main lines of its landscape.

But for the mountaineer and the geographer the chief interest of these photographs lies in the fact that by combining them we can obtain a complete panorama from a novel point of view of the great groups capped by Kangchenjunga and the peak known to the Survey as XV. or 'Mount Everest,' and to Tibetans as Chomokankar. All along the southern horizon beyond the low ridges of the foreground the brown landscape has a silver edging. Kangchenjunga is conspicuous; the round tower of Jannu is just recognisable; then come the summits that encircle Lhonak. Beyond these, unnamed minor peaks stretch westwards to a broad break in the snows—the Arun valley. Further W. Chomokankar shows its unmistakable outline. Again, somewhat N.W. of Chomokankar appears a great group of peaks; one rock and one snowy summit are conspicuous. These are apparently as yet unidentified and unmeasured. They rise at no great distance behind Chomokankar and are probably S. of the Tingri Maidan. The two 'very high snowy mountains' marked on some survey maps N. of the Arun and the Tingri plain do not, I think, come into any of these photographs. They are probably included on the right in the plate opposite p. 124 of vol. ii. of Hooker's 'Himalayan Journals.' Hooker gives the bearing from Bhomtso (near the Kangra La) of their highest peak (vol. ii. p. 169) as N. 55° W.

I have with some difficulty and the help of a magnifying glass combined the different distant views. Unfortunately they were not taken from a single standpoint. It is to be hoped that the surveyors with the expedition have supplemented them by obtaining with a phototheodolite, similar to that employed with such excellent results by Mr. Stein, panoramas of the Tibetan ranges.

The series of photographs sent home includes two near views of Chomiomo (22,385 ft.) and Kangchenjau (22,550 ft.), the guardians of the Lachen valley passes, and a landscape showing what is called 'the south,' but obviously is the N.W. side of the Chortenima La. The Mission seem to have been able to make excursions to a certain distance in this direction on a track followed some years before by Major O'Connor.*

* See *Routes in Sikhim*.

In the 'Geographical Journal' for January last I mentioned that Captain Wood, of the Indian Survey, had received permission from the Nepal Durbar to visit Katmandu for the purpose of ascertaining whether the 29,002-ft. peak, known to the Survey as 'Mount Everest,' was visible from the heights near the capital and forms part of the range there known as Gaurisankar. I wrote, 'It will probably be found that the great peak, if visible at all, is far from conspicuous, and only recognisable—like the Finsteraarhorn from Grindelwald—to those who know where to look for it.'

Writing from Calcutta on January 18, the Viceroy has, in anticipation of a more detailed report, kindly informed me of the results of Captain Wood's mission.

Lord Curzon writes, 'Everest from Kaulia is an insignificant point, just visible in a gap in the main range.' 'The name Gaurisankar,' he adds, 'is given by the officials of Katmandu to Survey Peak XX. The name is not known to any of the Nepalese hill men.' Peak XX. is thirty-six miles from the highest peak, Peak XV., but forms part of what, according to the principle adopted by European orographers, would be considered the same group. Peak XV. is a hundred and eight, Peak XX. about seventy-eight miles distant from Katmandu. The former peak is not visible from the city of Katmandu and has no individual name on this side. It was, as I suspected,* wrongly identified by Dr. Boeck. The peak he took for it is one of the Jibjibia peaks of H. Schlagintweit's panorama (as can easily be seen by comparing the panorama with Dr. Boeck's photograph). These peaks Hermann Schlagintweit identified with Peaks XXII. and XXIV. of the Survey. It seems, therefore, that while, according to Alpine usage and precedent, there is nothing to prevent the name Gaurisankar being applied to the loftiest peak of the group, the lower summit of which, visible from Katmandu, bears that name, the Tibetan name Chomokankar is preferable.

I shall return to this subject when the full report, which I trust will be illustrated by telephotographic views, is to hand.

Under date January 14 Babu Sarat Chandra Das, the only traveller of our generation who has reached Lhasa from the S., writes to me, 'I have read with the greatest interest your book of travels, and I am convinced of the correctness of your finding that my Chatang La is not the same with your Jonsong La. Chatang La is to the W. of the Jonsong La peak. I now remember what my guide told me then, that the Treasure of the Gods lay hidden beyond the La situated to my right-hand side while I was ascending the height of the Chatang La.' This seems to prove that the Chatang La corresponds with one of the gaps seen and photographed by my party at the extreme head of Lhonak, W.N.W. of the Jonsong peak.

The recently published Blue-book on Tibet contains many in-

* See *Round Kangchenjunga*, p. 200.

teresting particulars as to the excursions made by Mr. White in 1902 and by members of the Mission in 1903 in Lhonak and round about Khambajong. Heights of 21,000 to over 22,000 ft. were reached, and on one occasion 20,000 ft. is reported to have been attained on horseback. Mr. White emphatically states that there was no increase of inconvenience from the air above 15,000 ft., either among the Europeans or native followers. He found, as we did, the first ascent from the valleys the most trying. He considers that Chomiomo and Kangchenjhou can be climbed with greater ease than any peaks of similar elevation. It is a pity there was no Alpine party in Sikkim last summer.*

IN MEMORIAM.

HENRY SIMMS.

THE Club lost through death last year, in addition to the three members mentioned in the November number of the 'Journal,' a popular member in the late Henry Simms, Joint General Manager of the National Provincial Bank of England, who died at Newcastle-on-Tyne in August last.

During the last ten or twelve years the writer has enjoyed very many happy days in Mr. Simms's company when scrambling with him over hills in North Wales, Cumberland, and Skye, and when climbing with him in Switzerland. In the Alps the Zermatt district was his favourite hunting ground; but he had also done a good deal of climbing in the Bernese Oberland and the Chamonix district.

His last climbing expedition took place in August 1902, when he paid his first and only visit to the Bernina district, and seemed to be in even better health and condition than usual. On one occasion while there he (accompanied by a friend, and guided by Joseph Marie Biner, of St. Niklaus, and another Zermatt guide whom he had taken to Pontresina) was caught in a terrible snow storm, with lightning, when attempting to ascend the Piz Bernina over the Bernina Scharte. The party were driven back when within a short distance of the summit of the peak; and even Biner subsequently admitted to the writer that their experience during the descent was 'exciting' in the extreme. In fact, the descent was only attempted at the time because it was impossible for the party, without the probability of a catastrophe, either to proceed

* I take this opportunity to ask possessors of my recent volume to correct the following misprints:—

P. 25, line 4 from top, *read* '1902' for '1891.'

P. 178, in middle, *for* 'Thangchen Glacier' *read* 'Ramthang Glacier.'

P. 354, in heading *read* '1903' for '1893,' and in footnote *for* XVI. *read* XII.

P. 358, in foot note, *for* 'W.' *read* 'M.'

P. 360, *read* '1888' for '1868' as date of Sikkim expedition.

with the ascent or to remain where they were. The difficulties upon that occasion were, however, mainly due to the state of the weather, as, about a week later, Mr. Simms, accompanied by the same guides, ascended the peak by the same route, in good weather, without difficulty.

Mr. Simms did not become a member of the Club till 1901; but previously to that time his good fellowship and geniality had made for him numerous friends in the Alps, who will greatly miss him.

C. R. L.

B. ST. J. ATTWOOD-MATHEWS.

ANOTHER of the founders of the Alpine Club has recently passed away. Mr. Benjamin St. John Attwood-Mathews, of Trinity College, Cambridge, and Pontrilas Court, Herefordshire, died on October 4, 1908, in the seventy-fourth year of his age.

Of course he was altogether unknown to the present generation of Alpine men, as he retired from the Club more than thirty years ago; but he was an ardent climber in the old days.

He was present at that historic dinner party which took place at The Leasowes, in Worcestershire, on November 6, 1857, on which occasion the Club was really founded, and he was a friend and contemporary of the late J. F. Hardy and the late Edward Shirley Kennedy. In the company of those two gentlemen and of Mr. Ellis he crossed the Strahleck from Grindelwald to the Grimsel in the month of August 1857, the party a few days later making their memorable ascent of the Finsteraarhorn, recorded in the first volume of 'Peaks, Passes, and Glaciers.' In the same month he ascended Mont Blanc by the St. Gervais route (as then known) under circumstances of exceptional difficulty, reaching the Pavillon de Bellevue on the Col de Voza at ten at night.

He did little or no climbing after the year 1860, his greatest delight being trout and salmon fishing, in which art he attained an extraordinary proficiency; and for many years he passed all the winters in Egypt.

He was first cousin to the late Mr. William Mathews and to Mr. C. E. Mathews, both former Presidents of the Club. His mother was the sister of the well-known Thomas Attwood, the founder of the Birmingham Political Union and the first Member for Birmingham after the Reform Act of 1832.

He was J.P. for the county of Stafford and J.P. and D.L. for the county of Hereford, and was a courteous, high-minded, and honourable gentleman. Although he was known, even by name, but to few of the present members of the Alpine Club, yet he did excellent work in his day, and it must never be forgotten that he was one of the pioneers.

C. E. M.

THE WINTER EXHIBITION OF ALPINE PAINTINGS.

AN endeavour had been made, but unfortunately without success, to form a collection for the Winter Exhibition of the works of two remarkable modern Italian painters—Costa and Segantini. It is much to be regretted that the difficulties of bringing together sufficiently representative examples of the work of these two artists, or of either of them, were found to be insuperable. In both cases the painters would not only have stood the 'one man exhibition' test well, but would have gained largely by it, for the aims and methods of artists of such marked individuality are not seen to the best advantage, and, indeed, can hardly be understood in isolated examples of their work. We still hope that it may one day be found possible to form such an exhibition in the Alpine Club Rooms. There is no place where the work of the two painters named would be more in place, and where probably their works would be more appreciated. A single example of Segantini was, it is true, on the walls, but this was merely a study of a hut half buried in winter snow, and was chiefly of interest in that it revealed something of the artist's method and technique.

Under the circumstances the Art Exhibitions Committee is to be congratulated on having covered the walls with a series of paintings, for the most part by familiar hands, and but little inferior in interest to previous collections. Two paintings by Signor Maggi must, perforce, be considered first, not because they were distinctly superior, but because they were, undeniably, extremely assertive. Notwithstanding the evident efforts of the hanging committee to place these works where they would not kill all other paintings in their immediate neighbourhood the visitor could not but be conscious of their presence on the walls wherever he turned. The more remarkable was a canvas entitled 'Alpine Scenery—Twilight.' The whole work was suffused with a wonderful purple of peculiarly piercing tone. Through the open door of a hut in the foreground the red glow of a fire was seen. The motive of the painting was almost too obvious and delicacy had been deliberately sacrificed for strength of colour. But no one familiar with winter snow scenes in the mountains would deny that he had seen at times similar effects, and still less would he deny the artist's courage in setting down the impression. For this was truly an impression—that is, the rendering of an effect witnessed, but an effect, in its intensity of colour, so transient that the artist must necessarily have depended largely upon his recollection. There was evidence of this in the painting of the sky. The stars, it may safely be asserted, could not have shown through such a sky with the brilliance represented.

Equally striking, not to say aggressive, was a remarkable 'Pizzo Cervino—Sunset,' by the same hand. Here the painter had not scrupled to manipulate the sky in the manner that best suited his composition. A kind of dome of clouds extremely brilliant in

colour was arranged over the peak. The effect was unnatural and unnecessary. Mr. Ruskin once applied the epithets 'morbid and impossible' to such a sky in one of Turner's drawings. Novelty of idea or of execution, such as was abundantly shown in these two works, is very likely at first to be classed as simple eccentricity. From this taint Signor Maggi's works could not be said to be wholly free, but much may be excused in an Alpine artist who shows himself such a determined opponent of conventional methods. The good qualities were overshadowed by carrying unconventionality just too far. It is true enough that natural effects of colour far transcend anything that an artist dares to set down. But natural effects, after all, obey physical laws, and no painter may safely run counter to these. Any suggestion of the artificial or the theatrical is fatal, if he wishes to carry conviction. If he deliberately paints a figure with green flesh and purple hair he must not be angry if even cultivated spectators imagine the one to be due to disease and the other to dye. Meanwhile more of Signor Maggi's highly original and striking work will be very welcome at our exhibitions.

No more delightful and restful contrast to these impressionist works could have been provided than Mr. Adrian Stokes's series of small paintings. Little more than notes, they yet possessed the attractive merit, that almost every one can appreciate and no one can define, of quality. Once again they drive home the lesson so few Alpine painters realise completely, that a mountain can be made to look big on a very small canvas. Perhaps the best of Mr. Stokes's most attractive series of sketches was No. 59, 'Gathering Storm.' The heavy cloud settling down on the mountain was true enough to have satisfied Mr. Ruskin.

Mr. MacWhirter contributed some very charming studies of Alpine flowers. When completely in sympathy with his work an artist hardly ever fails to please. Less satisfactory, because more conventional, was the familiar view of the Aletsch Glacier from the Bel Alp; but in No. 46, 'Alpine Stream, Simplon,' the painter was again absolutely at home. The great mountains and the more striking views of high Alpine scenery make such a profound impression on even the most unimaginative that no rendering will ever wholly satisfy. But the neglected bye-corners of the mountain world and the side-beauties of the Alps require the artist's eye for their interpretation. Here the painter can teach and not simply recall.

Mr. Alfred East's contributions were unimportant, but showed his usual quality. No. 89, 'The Simplon Pass,' gave impression of size. No. 87, 'Mont Revard, near Aix-les-Bains,' was apparently put in to show how easily he can leave or return to his familiar style of composition.

Familiar work by a familiar hand that still preserves its cunning was shown by the *doyen* of Alpine painters, M. Loppé. Once again M. Loppé shows how absolutely he understands the winter atmosphere and the marvellous delicacy of the winter tones; and

once again he shows his curious inability to understand the shape of the Matterhorn.

No more prolific artist than Mr. E. T. Compton has ever worked at mountain subjects, and he leaves himself no leisure to contemplate the mountains from more than one point of view. His principal contribution, as regards size, was No. 13, 'On the Glacier des Bossons.' This work seemed to suggest that the artist had set himself the task of painting an 'important' picture without having first hit on an important subject. As a result the subject did not seem to fill the canvas, and the rather stereotyped form of composition further detracted from the effect aimed at. More satisfactory were some smaller works, in which the suggestion of breeziness and changeful lighting was secured without effort, and with a facility given only to those who live among the mountains. But even in these paintings the baneful effects of over-production and of much work in book illustration were to be felt. Some drawings by Mr. E. Harrison Compton were full of promise, and his work will be the more interesting when he has developed a style of his own.

Mr. Colin Phillip's work is always sound and pleasant to look upon. Two characteristic examples of his art were shown, both excellent in colour and full of admirable qualities of painting, but both curiously lacking in interest.

It is pleasant to note the continuous advance that Mr. Alfred Williams has made since he first became a regular contributor to the Club Exhibitions. Gradually the hardness of manner has been subdued, while atmosphere and feeling have crept more and more into his art. Mr. Alfred Williams always does his utmost, and his work is never hurried nor slovenly. Excellent qualities of technique were to be found in his 'Plains of Lombardy from Monte Generoso.' The distance was quite admirable, showing the most careful appreciation of values; a heavy, uninteresting foreground, occupying too much of the drawing, detracted from the pictorial effectiveness of the work. Space prevents mention of much other work by Mr. McCormick, Mr. Walter Donne, Mr. C. W. Wyllie, and others, which, if not striking, was at any rate pleasing.

The general impression left on the mind by the Exhibition was that Alpine art moves slowly, and is rather prone to work in well-worn grooves. Pictures, of course, like the blunt razors in the familiar story, are primarily made to sell. Artists hesitate to strike out new lines even when they are capable of doing so. The great majority of picture-buyers are intensely conservative in their predilections. They prefer to acquire works that are 'safe,' that will not quarrel with what they already possess and conform with the canons of average taste. The fashion of the moment, the decrees of an accepted authority may decide what is 'safe,' or the unobtrusive character of the work may permit the purchaser to trust to his own judgment. The result is shown in the reiteration of standard themes, and, especially in Alpine paintings, in the repetition, with very trifling variations, of an accepted scheme of composition. The Art Exhibition Committee might do worse than organise

a collection of flagrantly 'impressionist' pictures. Some of this work is preposterous, much simply bizarre. The disciples of the school chafe under the restraint imposed by tradition. In their struggles to get free from the shackles of convention they are prone to kick over the traces. Progress is then irregular and confused. But down in the kernel of the movement there is something good. While the efforts of the extremists may, not undeservedly, excite derision, people overlook the fact that the movement has made its influence felt with advantage on modern art, has banished much that is merely commonplace, and has led people to enlarge their art horizon and consider whether stock ideas are identical with immutable laws.

THE ALPINE CLUB LIBRARY.

THE following additions have been made since November:—

New Books and New Editions. Presented by the Authors or Publishers.

(Foreign works may be obtained through Mr. David Nutt, 57 Long Acre, London, W.C.)

Abbate, Enrico. Guida dell' Abruzzo. 8vo, pp. 558; maps.

Roma, C.A.I. Sezione di Roma, 1903

A very full guide, under the headings:—Topografia, Orografia, Idrografia, Clima, Flora, Fauna, Geologia, L' uomo preistorico, Storia, Costumi, Coltura, Arte, Viabilità, ecc. And in the guide-book part proper, the district is described under mountain-groups.

Afialo, F. G. The sports of the world. Imp. 8vo, pp. viii, 416; ill.

London, etc., Cassell [1903]. 20/

pp. 262-266, Mountaineering, by A. J. Butler.

pp. 266-269, Mountaineering from a woman's point of view, by Mrs. Aubrey Le Blond.

Both these articles are concerned with the history of the sport.

The volume contains altogether short illustrated articles on ninety-one forms of sport.

Alpine Majestäten und ihr Gefolge. Vol. 3. 268 Ansichten aus der Gebirgs-welt mit einleitendem Text von Ernst Platz. Folio.

München, Verein. Kunstanstalten A.-G., 1903. 12 parts, M. 1 each

In its third year this publication keeps up to the excellence of its beginning. Most of the plates are $8\frac{1}{2} \times 6\frac{1}{2}$, some are smaller, and a few panoramic views larger. The list includes mountains in all parts of the Alps, and some in Norway and in South America. The price is low and the quality good. The greater part of the views are of the mountains as seen at close quarters by the climber, while there are some tourist views where the mountains come in only as background.

Arnaud, F. Appendice complémentaire et rectificatif de la carte d'état-major des bassins de l'Ubaye et du Haut-Verdon. Ire partie. 8vo, pp. 77.

Mâcon, Protat, 1904

Presented by Monsieur M. Paillon, accompanied by a letter in which he writes: 'M. Arnaud a mis dans ces pages une somme considérable de travail, en même temps qu'une science consommée; géologie, linguistique, orographie sont des plus sérieusement traitées. Cette monographie de l'Ubaye est approuvée à faciliter beaucoup aux alpinistes le séjour de cette intéressante vallée. Il est donc à souhaiter que la seconde partie de cette étude paraisse bientôt.'

- Baker, E. A.** Moors, Crags & Caves of the High Peak and the neighbourhood. 8vo, pp. 207; maps, plates. Manchester and London, Heywood [1903]. 6/
This is one of a steadily increasing series of books on elementary lessons in the craft of rock-climbing, and is of value as such. The text and illustrations show how preliminary exercises in serious mountaineering may be taken in a district hitherto chiefly known as affording days of pleasant strolling. The book is formed partly of articles from the journals of the various British climbing clubs.
- Baud-Bovy, Daniel.** Le Mont-Blanc de près et de loin. Illustrations de Lacombe et Arlaud, photographes, Genève, 4to, pp. 135.
Grenoble, Gratier Rey [1903]. Boards, Fr. 20
This is a handsomely printed work, with illustrations on every page; similar to 'L'Oisans,' par H. Ferrand, and 'Zermatt et la Vallée de la Viège,' par E. Yung, and others by the same publishers already in the Club Library.
- Bazin, René.** Récits de la plaine et de la montagne. 8vo, pp. 330.
Paris, Calmann-Lévy [? 1903]. Fr. 3.50
There are chapters descriptive of the pedestrian's view of 'Le lac d'Aiguebellette; Un village de Savoie; La Chartreuse de Portes; La Vallée d'Aoste; L'Allée Blanche,' etc. Pleasantly and lightly written. The author's way of expressing the cause that draws us to mountain heights is this: 'Cette attirance des glaciers ne vient de leur blancheur, ni même de la rareté du spectacle, pour nous qui sommes des plaines, mais peut-être d'une idée de repos, de fraîcheur et d'asile, rêve obscur de toute vie.' It may be useful to note this in case of thunderstorm: 'Envelopper le fer de votre piolet dans un mouchoir de soie. Cela ne conduit plus.' Does an indiarubber tobacco pouch do equally well?
- Brandstetter, J. L.** Die Namen der Bäume und Sträucher in Ortsnamen der deutschen Schweiz. Beilage z. Jahrb. d. höh. Lehranstalt in Luzern. 4to, pp. 86. Luzern, Schill, 1902
- Brend, Wm. A.** The Story of Ice in the present and past. Fcap 8vo, pp. viii, 228; ill. London, Newnes, 1902. 1/6
An introduction to the study of ice-work. Many alpine illustrations.
- Bürli, Dr. J.** Taschenbuch für die erste Hülfe bei Unglücksfällen und Erkrankungen. 8vo, pp. iv, 124; ill. Bern, Heuberger, 1903. M. 1. 60
A useful little book.
- Butler, A. J.** Mountaineering, *see* Aflalo, F. G.
- Cane, Col. Claude.** Summer and Fall in western Alaska: the record of a trip to Cook's Inlet after big game. 8vo, pp. viii, 191; plates. London, Horace Cox, 1903. 10/6
A record of hunting bears, white sheep and moose, among fine mountain scenery. There are many plates of the mountains and glaciers of Alaska.
- Correvon, Henri.** Par monts et par vaux. 8vo, pp. 231; ill. Genève, Jullien, 1904. Fr. 5
This is a collected set of papers from the 'Journal de Suisse' on 'Ascensions d'hiver; Glaciers et forêts; Au Grand St. Bernard; A travers les Grisons; Dans la Tarentaise;' and kindred subjects. Affords easy, desultory reading. Apparently one cannot too often repeat what M. Correvon writes: 'Il ne faut pas oublier qu'une course (en montagne) exige de très grandes précautions et des préparatifs sérieux. On ne va pas à la montagne—surtout quand il s'agit de la haute montagne—comme à une promenade.'
- ***Freshfield, Douglas W.** Round Kangchenjunga. A narrative of mountain travel and exploration. Roy. 8vo, pp. xvi, 373; maps, plates. London, Arnold, 1903. 18/ nett
- Glaciers, Commission française des.** Rapport sur les observations glaciaires en Haute-Maurienne, dans les Grandes-Rousses et l'Oisans, dans l'été de 1902; par M. Paul Girardin. Revue de glaciologie no. 2, année 1902:

- par Charles Rabot. Extrait de l'Annuaire du C.A.F. 19. 8vo, pp. 121; ill. Paris, Renouard, 1903
- Observations sur l'enneigement et sur les chutes d'avalanches exécutées par l'administration des forêts dans les départements de la Savoie. 4to, pp. 15. Paris, C.A.F., 1903
- Guide alpiniste et touriste.** Edition entièrement refondue. 8vo, pp. 49. Genève, Stapelmohr, 1903. C. 60
- Haller, A. Benedikt Marti; Aretius.** Ein bernischer Gelehrter. . . 4to, pp. 56; portrait. Neujahrsbl. d. hist. Ver. Bern für 1902. Bern, Wyss, 1901. Fr. 2.50
- Kennedy, Bart.** A tramp in Spain from Andalusia to Andorra. 8vo, pp. viii, 319; ill. London, Newnes, 1904. 10s. 6d.
pp. 62-79, Scaling Mulhacoen, 11,600 ft.
This can be ridden up nearly the whole way.
- Krebs, Dr. Norbert.** Die Nördlichen Alpen zwischen Enns, Traisen und Mürz. Pencks Geograph. Abhandlungen, viii, 2. 4to, pp. 177; ill. Leipzig, Teubner, 1903. M. 4
A monograph on the geology, climate, commerce, people, arts, etc. of an alpine district.
- Kronecker, Dr. H.** Die Bergkrankheit. 4to, pp. 130. Berlin u. Wien, Urban & Schwarzenberg, 1903
- Launay, Adrien.** Histoire de la Mission du Thibet. Société des Missions étrangères. 2 vols. 8vo. Lille et Paris, Desclée de Brouwer [1903]
A valuable book on the exploratory work and travel of the Franciscan, Jesuit and other missionaries in and to Tibet, from the time of Odoric de Perdonone, who reached Lhasa in 1325, to the days of Huc. Copious extracts are given from the writings of Andrada, Grueber, Desideri, Horace della Penna and others. Nearly 800 years elapsed between the visits of Odoric and of Andrada, and in 1792 Lhasa was closed to foreigners. The early accounts here reproduced of crossing the Himalayas are most interesting and valuable.
- Le Blond, Mrs.** Mountaineering from a woman's point of view; see Afalo, F.G.
- *Rey, Guido.** Il Monte Cervino. Illustrazioni di Eduardo Rubino. Prefazione di Edmondo de Amicis. Nota geologica di Vittorio Novarese. 4to, xvi, 287. Milano, Hoepli, 1904. Bound, L. 30; boards, L. 25
A monograph on the Matterhorn. A work superbly printed and illustrated with numerous fine plates, most of which are from drawings of high artistic merit. It is an excellent beginning for the alpine literature of 1904, and will undoubtedly be, if not the chief work, one of the chief works of the alpine year.
- Sandberg, G.** An itinerary of the route from Sikkim to Lhasa, together with a plan of the capital of Tibet and a new map of the route from Yamdok Lake to Lhasa. 8vo, pp. 29. Privately printed, Calcutta, Baptist Mission Press, 1901
- Shand, Alexander I.** Old-time travel: personal reminiscences of the Continent forty years ago, compared with experiences in the present day. With numerous illustrations by A. H. Hallam Murray. 8vo, pp. xii, 426; plates. London, Murray, 1903. 12/ net.
The title of this book promises good matter, and the reader will not find himself disappointed. Chap. 7, pp. 138-173, is the one that will chiefly interest readers of this Journal, for it is devoted to reminiscences of Swiss touring. There is pleasant gossip on the inns of Switzerland in the fifties, and on the charms of mountaineering in its fresh early days. The sketches are excellent.
- *Slingsby, Wm. Cecil.** Norway. The northern playground. Sketches of climbing and mountain exploration in Norway between 1872 and 1903. 8vo, pp. xviii, 425; plates, maps. Edinburgh, Douglas, 1904

* See review in the present number.

- Somerville, D. Crichton, W. R. Rickmers, and E. C. Richardson.** Ski-running. 8vo, pp. 76; ill. London, Cox, 1904. 2s. 6d. net.
 A handbook to the sport. A bibliography of works on the subject from the 12th century onwards is given.
- Zdarsky, M.** Alpine (Lilienfelder) Skilaut-Technik. Eine Anleitung für Jedermann, in einigen Wochen den Ski vollkommen zu beherrschen. 2. Aufl. 4to, pp. 98; ill. Hamburg, Verlagsanstalt A.-G., 1908
 This is a handbook on the method of ski-ing described by Mr. Rickmers in the paper read by him before the Club in June last.

Older Books.

- d'Abadie, Louis.** Trente jours de voyage en Suisse par six écoliers en vacances. Bibliothèque choisie de la jeunesse. 8vo, pp. 156.
 Paris, Fabre Feste et Cie, n.d.
- Ætna.** Unprotected females in Sicily, Calabria, and on the top of Mount Ætna. With coloured illustrations. 8vo, pp. xi, 265.
 London, etc., Routledge, 1864
- Byron, Lord.** Childe Harold's Pilgrimage. Canto the third. 8vo, pp. 79.
 London, Murray, 1816
- In Switzerland. This is a copy of the first edition.
- Chambers's Repository of instructive and amusing tracts.** Vol. xi, 8vo, ill. London & Edinburgh, Chambers (1854)
 no. 81, pp. 32, Mont Blanc and its glaciers.
 no. 85, pp. 32, A visit to the Himalaya.
- de Florian, Jean Pierre Claris.** Nouvelles. 12mo. Paris, Briand, 1810
 Pp. 18-54, 'Claudine: nouvelle saboyarde,' a tale told by François Paccard to the author when he visited Chamonix in 1788.
- **Guillaume Tell, ou la Suisse libre.** 12mo, pp. 94; frontispiece.
 Paris, Briand, 1810
- Geiger, Dr Wm.** Die Pamir-Gebiete. Eine geographische Monographie. 4to, pp. 186; map. Penck's Geog. Abhandl. 2, Heft 1.
 Wien, Hölzel, 1887 [now B. G. Teubner, Leipzig]. M. 8
 This is a very complete monograph on the Pamir district, its history, geography, orography, glaciers, heights, flora, fauna, etc.
- Himalaya;** see Chambers's Repository (1854).
- Kinloch, Colonel (Alexander).** Large game shooting in Thibet, the Himalayas, and Northern India. 4to, pp. 237; plates, map.
 Calcutta and London, Thacker, 1885
- Mont-Blanc, Souvenirs du:** et de la Vallée de Chamonix. Obl. 8vo, 12 lithographs. ? c. 1840
 The plates are poor.
- Mont Blanc,** see Chambers's Repository (1854).
- Muddock, J. E.** 'The J. E. M.' guide to Switzerland. 'The Alps and how to see them.' . . . Special articles on glaciers, avalanches, mountaineering . . . 6th edition, revised and corrected to date. 8vo, pp. 412; maps, ill.
 London, Wyman, 1886
- Olim Juvenis.** Vacation rambles on the Continent: told so as to be a complete guide to the most interesting places in Switzerland. . . . 5th edition. sm. 8vo, pp. viii, 155.
 London, Cook; etc., 1869
- Pallas, P. S.** Travels through the southern provinces of the Russian Empire in the years 1793 and 1794. Translated from the German. 2 vols, 4to; maps, plates, col. and uncol.
 London, Longmans, etc., 1802: 1803
 Vol 1, pp. 279-444: The Caucasus.
- Penck, A. Friedrich Simony.** Leben und Wirken eines Alpenforschers. Ein Beitrag zur Geschichte der Geographie in Oesterreich. 4to, pp. 116; plates and photographs. Pencks Geog. Abhandl., 6, Heft 3.
 Wien, Hölzel, 1898 [now Teubner, Leipzig]. M. 12
 Simony's name is well known in the publications of Alpine clubs, especially for his work in the Dachstein region. In this monograph

we have an interesting review of his work, accompanied by many of his sketches and photographs, and a list of his printed works, pp. 76-87, many of them being on the rocks, glaciers, and lakes of the eastern alps.

P[icquet], J. P. Voyage aux Pyrénées françaises et espagnoles, dirigé principalement vers les Vallées du Bigorre et d'Aragon. . . . Seconde édition, entièrement refondue et augmentée. 12mo, pp. viii, 428.
Paris, Babeuf, 1828.

R., L. N. R. A short account of our trip to the Sierra Nevada Mountains. 8vo, pp. 49. (Privately printed, London, Martin, 1884)

Reflections in a walk round the Lake of Geneva. By an admirer of nature. 8vo, pp. 89.

Printed for the author, Geneva. To be found in Paris at A. and W. Calignani. 1821

The quality of this doggerel verse may be judged from two lines on Mont Blanc:—

‘Midst pyramids of everlasting snow,
The yawning gulphs of boiling waters flow.’

Roscoe, Thomas. Wanderings and excursions in North Wales. With fifty-one engravings, from drawings by Cattermole, Cox, Creswick, etc. 8vo, pp. 364; plates. London, Tilt, etc. [1836]

Rose, T., With descriptions by Westmoreland, Cumberland, Durham, and Northumberland. Illustrated. From original drawings by Thomas Allom, George Pickering, &c. 2 vols, 4to, plates.

London and Paris, Fisher & Jackson, 1833

St. John, M. The Sea of Mountains. An account of Lord Dufferin's tour through British Columbia in 1876. 2 vols, 8vo,

London, Hurst and Blackett, 1877

Somerville, Mary. Physical geography. New edition, thoroughly revised. 2 vols, 8vo. London, Murray, 1849

Vol. 1, pp. 45-207, Mountains of the world.

Vol. 2, pp. 416-428, Table of heights.

Sotheby, William. Italy and other poems. 8vo. London, Murray, 1828.
pp. 196-217:—‘The Convent of the Great St. Bernard,’ ‘Mont Blanc, seen by the Author September 2, 1816.’

Stowe, Mrs. Harriet Beecher (and C. E.) Sunny memories of foreign lands. Author's Edition. 8vo, pp. xvi, 540; ill. London, Sampson Low, 1854
Chamonix, St. Bernard, Oberland, pp. 358-451.

This copy is in the original illustrated boards.

Strutt, Elizabeth. Domestic Residence in Switzerland. 2 vols, 8vo; 2 plates. (London), Newby, 1842

Travel through Switzerland generally

Switzerland. Le conservateur suisse, ou recueil complet des étrennes helvétiques. Edition augmentée. 8 vols., 8vo. Lausanne, Knab, 1813-1817

The first 14 volumes of the Etrennes Helvétiques, begun in 1782, were reprinted as the Mélanges Helvétiques, and again reprinted as the Conservateur Suisse. The following articles may be specially noted;—vol. 1, Glacier de Bondasco; Splügen. 2, Glacier d'Enzeindaz. 4, Avalanches, Chaîne des Alpes; Voyage dans le Grison, 1784; Gesner sur le Mont Pilate; Le Stockhorniade, traduit du latin. 5, Glaciers de Gelten et de la Linck; Voyageur dans les Alpes. 6, Glacier des Ormonts. 8, Course dans les Alpes, 1780.

---- Journal of a short excursion among the Swiss landscapes. Made in the summer of the year ninety-four. 12mo, pp. 132.

Privately printed, Dublin, Barlow, 1803

A four weeks' trip to Lucerne, St. Gothard, Grindenwald, etc.

This copy is a presentation copy by the author. There has been written on the title-page, ‘London, printed for John Murray. Price 3/6.’

- Taylor, Bayard.** Northern travel. Summer and winter pictures of Sweden, Lapland, and Norway. 8vo, pp. xvi, 389. London, Sampson Low, 1858
- The White Mountain guide book.** 10th edition. 8vo, pp. xii, 248; map. Concord, Eastman; etc., 1872

Club Publications. Presented by the Clubs.

C.A.I., Roma: see Abbate, Enrico.

Caucasus Club, Vienna.

Circular 1. 8vo, pp. 5. Okt. 1903

Statuten. 8vo, pp. 4. 1902

Dauphiné, Soc. d. Touristes du: *Annuaire*, 28 (2me série, 8) 1903

The articles are:

- P. d'Aiguebelle, Le Rateau.
 H. Ferrand, Le Dauphiné inconnu.
 M. Goybet, Excursions en Oisans.
 Commandant X., Dans les Vallées de l'Ubaye et du Guil.
 A. Ferrari, Ascensions dans les Alpes Cottiniennes.
 L. Reynier, Ascensions nouvelles.
 C. Cépède, Les serpents des Alpes.
 P. Girardin, Observations glaciaires.
 G. Allix, Une traversée des Alpes au xii^e siècle.

D. u. Oe. A.-V. Zeitschrift, 34. 1903

Among the articles are:—

- E. Oberhummer, Die Entwicklung d. Alpenkartten.
 A. Schiber, Das Deutschthum im Süden d. Alpen.
 H. v. Zwiedeneck-Sudenhorst: Erzherzog Johanns Reise d. d. Ötztal 1846.
 R. Hauthal, Nieve penitente.
 W. R. Rickmers, Kartsch-Chal im Jahre 1900.
 F. v. Cube, Hochtouren auf Korsika.

The Beilagen are:—

- Touristen-Wanderkarte d. Dolomiten, 1; Freytag.
 Adamello- und Presanella-Gruppe; Giesecke.

Oesterr. Alpenklubs, Festschrift zur Feier des 25-jährigen Bestandes des. 4to, pp. 281-322; 3 coloured plates. Forms nos. 648-9 of the Oesterr.-Alpenzeitung. 1903

Pamphlets and Magazine Articles.

Brooks, Alfred H. An exploration to Mount McKinley, America's highest mountain. 8vo, pp. 441-469; ill. In the *Journal of Geography*, Chicago, vol. 2, no. 9. November, 1903.

This is a most interesting article on a mountain which, though the highest in North America (over 20,400 ft.) and visible from the sea, attracted serious attention only so late as 1895, when a prospector named W. A. Dickey was the first to make a sketch of the mountain and to publish an account of it.* Unfortunately, from lack of time to prosecute his attempted ascent, Mr Brooks had to turn back after reaching 7,500 ft. or thereabouts. There are several views of the mountain given in the article.

Cook, Dr Frederick A. America's Unconquered Mountain. 8vo, pp. 230-239; 335-344; ill. In *Harper's Monthly Mag.*, nos. 644, 645. Jan., Feb., 1904. Presented by Messrs. Harper, 45 Albemarle Street, London.

Dr Cook and his party left Seattle on June 10, 1903, and landed on the 23rd at Tyonek, a village on Cook Inlet. It was not till August 14, after a tortuous march of 500 miles through a trackless country, that they got to the base of Mount McKinley. The mountain 'presented a formidable face from our camp. To the

* Mr Brooks, in reply to an enquiry, has kindly written to say that this appeared in the 'New York Sun' of January 4, 1897.

north-west there was a long ridge with a gradual slope, but this ridge was impossible as a route to the summit because of several lesser peaks which absolutely barred the way. To the south-west there was a more promising ridge, also interrupted by a spur, but which we hoped to get round. The western face of the great peak between these ridges, above 12,000 ft., was an almost uninterrupted cliff of pink granite, so steep that snow would not rest upon it. Hence the only way to the summit from the west was along the south-westerly ridge.' A camp near this ridge, at about 7,500 ft. up, was pitched at what seemed a suitable place for beginning the ascent, but a further 1,000 ft. revealed an unlooked-for sudden descent to Peter's Glacier. A retreat was made, and the glacier gained from another point and followed for 18 miles; and on August 29 the assault on the main peak was made, and a camp pitched on the snow at 9,800 ft. Next day, after much step-cutting, a camp was pitched at 11,000 ft., but here the party was confronted by a wall of solid granite, nearly 4,000 ft. above them, up which they were unable to find any route. It was then determined to make an attempt from the east, but the intervening country proved too rough and the season was too far advanced to allow of this. Dr Cook concludes; 'Any attempt to reach the summit is sure to prove a more prodigious task than Alpine enthusiasts are likely to realise. The area of the mountain is far inland, making the transportation of supplies and men a very arduous task. It is surely the steepest of all mountains and arctic conditions begin at the very base. . . . The glaciation is not extensive enough to offer an all-ice route.' The articles are very well illustrated.

- Ferrand, Henri.** *Le Dauphiné inconnu.* 8vo, pp. 17; plate. Reprinted from *Ann. Soc. Tour. Dauphiné.* Grenoble, Allier, 1903
- *Anciens plans de Grenoble.* 8vo, pp. 11; ill. Reprinted from *Annales Dauphinoises.* 1903
- *Essai d'histoire de la cartographie alpine pendant les xv^e, xvi^e, xvii^e et xviii^e Siècles.* 8vo, pp. 55; plates. Grenoble, Gratiery, 1903
Contains many plates of portions of old maps, and portraits of Munster, Merian, Zeiler, etc. A discourse read before the Soc. de statistique de l'Isère.
- *Statistique des premières ascensions des pics du massif de l'Oisans.* 8vo, pp. 35; plate. Corrected reprint from *Rev. d. Alpes Dauphinoises.* Grenoble, Edouard, 1903
- Glaciers.** *Bericht der Gletscherkommission für das Jahr 1902/03.* 8vo, pp. 9. Reprinted from *Verh. d. schw. naturf. Ges.,* 1903. Zürich, Zürcher & Furrer, 1903
A short report of the measurements by H. Wild of the Rhone Glacier.
- Martel, E. A.** *Nouvelles recherches et constatations à Han-sur-Lesse.* 8vo, pp. 157-176. In *Bull. Soc. Belge de Géol.* 12. 1898
- *Les récentes explorations souterraines.* 8vo, pp. 934-947. In *C. R. de l'Assoc. franç. p. l'avancement d. sc. Congrès de Paris.* 1900
- *Les Chouruns du Dévoluy.* 8vo, pp. 49; ill. Gap, Jean et Peyrot, 1902
- *Sur les récentes explorations souterraines.* 8vo, pp. 17-29. In *Bull. Soc. Belge de Géol.* 16. 1902
Reprinted from *C. R. viii^e Congr. géol. internat.* 1900.
- *Rocamadour et Paderac.* 8vo, pp. 16; ill. Reprinted from *Le Monde Moderne.* [c. 1903]
- Mauvif de Montergon, A.** *Les gens d'esprit devant la montagne.* 8vo, pp. 26. Angers, Grassin, 1903
Reprinted from *Mém. Soc. nat. d'Agric. d'Angers.* A charming article, most amusing because of its well-chosen and well-arranged quotations from *Le Pays, Malherbe, Dusaulx, Chateaubriand, Azais, Dumas*: and with quotations too, on the serious side, from *Saussure, Ramond, Victor Hugo, Russell.* Altogether a delightful paper.

- Merkbuch für Bergtouren.** 8vo. München, Prantl, 1903. M. 1
A small pocket-book for entering particulars of expeditions. Of no practical use.
- Monmarché, Marcel.** L'Andorre. 8vo, pp. 27; map, ill. Reprinted from *Le Mois littéraire.* Paris, Féron-Vrau, 1903. C. 60
- Muller, Isabella F.** Een beklimming van der Petit Dru. 8vo, pp. 453-469. Reprinted from *Onze Eeuw*, vol. 3. Aug., 1903
Presented by the author. This is the first addition to the Club library, independent of the publications of the recently formed Dutch Alpine Club, in the Dutch language. It describes an ascent by the author.
- Olufsen, Lieut. O.** The second Danish Pamir Expedition. Meteorological observations from Pamir, 1898-99. Roy. 8vo, pp. 91: maps. (København) Bojesen, 1903
pp. 1-22 give a geographical description of the region.
- Paganini, Luigi Pio.** La fototopografia in Italia. Roy. 8vo, pp. 41; maps, photographs and ill. Reprinted from the *Riv. d. Topografia.* Roma, Civelli, 1889
- Paris-Lyon-Méditerranée Railway.**
The Dauphiné. Pp. 43.
The Alps. Pp. 46.
An ideal tour among the Alps. Pp. 39.
Mont-Blanc. Pp. 35.
These 8vo pamphlets are neatly got up with col. ill.
- Les Pyrénées.** 1^{re} Partie: De la Bidassoa au Gave d'Ossau. 2^{me} Partie: Du Gave d'Ossau à la Garonne. Obl. 8vo, pp. 30 each; ill. Paris, Cie d. Chemins de fer du Midi, 1903
Well illustrated. Each, c. 50
- Russell, I. C.** Volcanic eruptions on Martinique and St. Vincent. 8vo, pp. 331-349; ill. In *Smithsonian Report*, 1902; reprinted from *Nat. Geog. Mag.* 13.
Presented by Sir Martin Conway.
- Sinclair, Rev. Archdeacon Wm. M.** John MacWhirter, R.A. His life and work. 4to, pp. 32; plates, col. and uncol. The Christmas Art Annual 1903: being the Christmas number of the Art Journal, Virtue and Co., London. 2/6
Contains reproduction in colour of 'An Alpine Meadow,' and black and white illustrations of a number of Mr. MacWhirter's pictures of Scotch and of Swiss scenery. Also a list of pictures exhibited by the artist.
- Switzerland.** The Swiss Advertiser. Fortnightly review for the furtherance of English interests in Switzerland. Conducted by C. Lehr-Turnbull. 4to, ill. nos. 1-3, Berne, Jan., Feb., 1904. 2d
The first numbers contain, among other articles: -
Major Grimm, An ascent of the Jungfrau.
J. V. Widmann, A dog's mountain sickness; Mr. Evertruth's ascent of the Jungfrau.
- Weyman, Stanley J.** Through the Pyrenees in December. 8vo, pp. 256-268; ill. In the *English Illust. Mag.*, vol. x., no. 112. January, 1903
- Workman, Mrs. F. Bullock.** The first ascent of the Chogo Loongma. 8vo, pp. 393-400; ill. In *Wide World Mag.*, no. 70, vol. 12. Jan., 1904
- Wundt, Maud.** Quer durch die Montblanc-Gruppe. Folio, pp. 1050-2; ill. In *Ueber Land und Meer*, vol. 90, no. 48. Deut. Verlags-Anstalt, Stuttgart, 1903
An interesting short paper, well illustrated.

Items.

- Karte der Alpenländer**, 1/925,000, aus Stieler's Handatlas . . . aufgezogen in Buchform mit Namenverzeichnis. 8vo. Gotha, Perthes, 1903. M. 3
This is the most convenient general map of the Alps for reference yet published, as it is so arranged that the Index can be consulted

while the map is spread out, and the map is folded and bound in book form. The area lies between Geneva and Graz, Munich and Milan.

Maps. Canada, Department of the Interior. Topographical map of the Rocky Mountains; Banff Sheet and Lake Louise Sheet. 2 miles to 1 inch.

— Kurfisten-Säntisgruppe, von Prof. F. Becker. Herausgegeben vom S.A.C. 1902

Photographs. Verzeichnis der Ansichten aus dem österreichischen und deutschen Alpengebiet. 8vo, pp. 123; ill. 1903

— Von Würthle u. Sohn, Salzburg, 1902
Post-cards. 20 views of the Reichenspitz-Gruppe. Gratis im Interesse des Touristenverkehrs. A. Richter, Neidergrund, 1903

— Six coloured views of Mount Cook and other mountains in New Zealand, issued by the N.Z. Government and presented by the Agent-General. Poorly printed.

NEW EXPEDITIONS IN 1903—*continued.*

NORWAY.

Söndmøre District.

SÆTERTIND (about 4,200 ft.). *July 22.*—Messrs. Wm. Ling, H. Priestman, and Harold Raeburn, after a defeat on the great S. buttress the previous day, started from Kolaas at 7.30 A.M., passed over Standalseidet, and traversed round the S. end of the mountain, ascending the right bank of the Fladdalselv to Fladdalsvand. From there they got upon the glacier which lies upon the E. face, from which the N. peak was easily reached by a short rock scramble. They then traversed the N. and central peaks without difficulty. The N. arête of the S. peak appearing to be too steep to afford much chance of a successful ascent, the party again got upon the ice and descended the glacier for about 500 ft. Crossing the bergschrund by some wedged snow masses, leading to some steep slabs, they attacked the E. face of the peak by a snow-filled chimney. The lower edge of the snow overhung, but a lodgment was effected above by hoisting the leader on the shoulders of the others. Some rather slippery scrambling then led to the arête, which was followed to the top on steep but good rock. The descent to the glacier was made by the same route, and Kolaas regained at 10.10.

This fine triple-peaked mountain is shown in the outline panorama of Rander's 'Söndmøre' as the Standalshorn, but in Rander's map is called Sætretinder. This is the local name.

GRÖTDALSTINDER (about 4,200 ft.). *July 24.*—Messrs. Ling and Raeburn left Rise at 8 A.M., walked up into the 'Botn' of the Lilledal by a good 'kuraak,' and attacked the S. peak by a long narrow rock rib projecting down the glacier from its east face. This gave an interesting rock climb to the summit, which was gained at 1.30 P.M. The ridge was then followed over the central and N. peaks, and gave good climbing. The descent was made at first by the N.E. arête, then by the glacier, where the great quantity of snow this season allowed of nearly 2,000 ft. of standing glissades and running, so

that Rise was gained in 65 min. from the ridge. The S. peak is easy on the west and has a surveyor's cairn upon it, but no trace of previous visitors was seen on either the central or N. peak.

BREKKETIND-GJEITHORN RIDGE (about 5,000 ft.). *July 27.*—This, one of the most extraordinary pinnacled arêtes in Söndmøre, was traversed by Messrs. Ling and Ræburn. Messrs. Corder, Priestman, Ling, and Ræburn left Oie at 6.15 A.M., and ascended up into the Skylstadsbrekke, between Slogen and the Smörskredtinder. Traversing below the glaciers of Brekketind and Gjeithorn, they gained Brunstadskar. From here the whole party ascended the first peak of the Brekketind ridge by an easy rock arête of about 1,200 ft. Corder and Priestman then made the pass into Lange-sæterdal and Urke, between Brekketind and Vellesæterhorn, called Brunstadhorn by Randers. Ling and Ræburn climbed along the Brekketind ridge, traversed the Brekketind, the intervening ridge, and the Gjeithorn, descended the pinnacled S. ridge of the latter some few hundred feet, and then got on to the glacier, which was descended into Habostaddal. They reached Oie at 8 P.M.

SLOGEN BY THE S.W. FACE. *July 28.*—Messrs. Ling and Ræburn left Oie at 7 A.M., and walked down the road to the steamer landing-place. From there they went straight uphill to the foot of the huge slabs, 900 ft. above the road, where the rope was put on. At the height of 1,200 ft. it was thought inadvisable to persevere further, and a descent was effected again. Traversing below the slabs and the waterfall that issues from the great gully cutting off the Klokseggen ridge from the face, the ascent was begun at 9.10 up the face on the N.W. side of the falls. Traversing to the right (S.) again when possible, just above the falls, at about 2,000 ft., a descent was effected into the gully. After half an hour's halt (11 to 11.30) a steep chimney was climbed and access gained to the great ridge that bounds the gully on the E. for about 2,000 ft. From 11.30 A.M. to 4.50 P.M. was spent in climbing this ridge, the party being on two occasions forced off it into a gully or chimney on the E. At 5.0 (height 4,150 ft.) the ridge merged into the face of the final peak and the angle became excessively steep.

At 8.30 the summit was gained about 50 ft. lower and 100 yds. to the S. of the cairn (about 5,200 ft.) by a steep crack, partly overhanging. Great care and labour were required on the last 1,200 ft., as the rocks, besides being extremely steep, were somewhat rotten.

'Kletterschuhe' were used by the leader and proved of great service.

Leaving the top at 9.0 P.M., the road was gained at 10.20, and the hotel at 10.35, standing glissades and running on the glacier helping greatly on the descent.

Lofoten.

KITIND (2,543 ft.), **MOSKENESÖ.**—This hill has been given an undeserved prominence by most of the map-makers for the district, to the exclusion of its more worthy neighbours. On July 31 Messrs. G. T. Glover, H. S. Mundahl, H. Scott-Jones, and T. G. Ouston

proved the above statement by walking up it; they were, however, rewarded in the absence of climbing sport by a panoramic view of the extremely sharp Moskenes aiguilles, which of its kind would be hard to beat anywhere. The ascent was made from a camp at Marken, on the Selfjord.

BRASRAASTIND (2,870 ft.), MOSKENESÖ. FIRST ASCENT.—On August 2 Messrs. Mundahl and Ouston reached the more easterly and higher summit of this characteristically shaped twin-headed peak from the E.

Making for a gully 1,000 ft. above sea-level, which was found to contain ice, a way was forced up this, between impossible rocks of the 'boiler-plate' variety. At this time the party was strengthened by the presence of Mr. G. T. Glover, but weakened by the absence of any ice axe. A 'mauvais pas' was overcome by cutting steps in the ice with a 'tolle kniv,' and an awkward cave pitch by somewhat elaborate engineering procedures with two ropes. Steep snow and scree, followed by fairly easy rocks along the S.E. arête, led to the summit.

In the absence of an ice axe caution suggested a descent on another face of the mountain, if possible, although it entailed moving away from the direction of their camp. Good luck led them along a narrow terrace on the W. face, formed by a fault between two huge 'boiler plates,' the key to an easy descent to Horseid, at which isolated and romantic spot the night was spent after an abortive attempt to turn the mountain and reach their camp.

The following day the W. precipice of the mountain was viewed from a boat on the sea. It was one colossal smooth slate from ocean to summit, a few degrees only out of the vertical; this cliff, with an adjacent enormous cavern into which the breakers roared, surpassed in wildest grandeur of coast scenery anything before seen by the party in Norway or elsewhere. Time: left camp at Marken 12.20 P.M., foot of gully 3 P.M., summit 8.15 P.M., Horseid 10.20 P.M.

STJERNHODET (3,123 ft.), FLAKSTADÖ.—This, the highest summit on the island, is crowned by three rock towers. The N.W. one possesses a surveyor's cairn and is obligingly easy of access. The S.E. one is a little the highest. On August 4 Messrs. Mundahl, Scott-Jones, and Ouston ascended the median tower from Kvalvik, on the Skjelfjord, mistaking it for the S.E. one, owing to mist. The last 200 ft. only afforded real climbing, but the actual finish was sensational.

The mountain affords fine rock and snow scenery and commands an extensive and interesting view.

HAMKORNA, OST VAAGÖ (about 2,700 ft.). FIRST ASCENT.—This, the most shapely of the four main peaks forming the Madmoren group, was ascended on August 12 from the N.E. by Messrs. Glover and Scott-Jones. They encountered no serious difficulty, but great care had to be exercised in places, owing to vegetation covering rocks set at a steep angle. The ascent and descent occupied 7½ hrs.,

from and back to a point on the N.W. shore of the Higraffung, reached by boat from Higraf.

In a previous attempt from the S.E. directly from Higraf a party had reached a subordinate summit with difficulty, and found the S. and E. faces to be impossible precipices.

BLAASKAVEL (about 3,800 ft.—aneroid), OST VAAGÖ.—This peak is the principal summit of a mountain range running roughly E. and W., situated N.N.E. of Ostpollen, a branch of the Higraffung, and which should, from its central situation, afford an excellent view-point for both the Lofoten and Vesteraalen groups.

On August 12 Messrs. Mundahl and Ouston made the ascent from the S.W. Little view was obtained, owing to clouds, and a surveyor's cairn was found on the summit. The ascent was very easy and aided by a snow glissade; 2,400 ft. of the descent was accomplished in 48 min.

KVANDALSTIND (2,773 ft.), OST VAAGÖ. FIRST ASCENT.—On August 17 (after an attempt some days previously from the S.W.) Messrs. Mundahl and Ouston reached the summit without much difficulty by way of a gully 1,000 ft. high in the E. face. This mountain is overshadowed by its finer and more famous N.E. neighbour, Vaage Kallen, which latter has appropriated the former's rightful name, as the petrified gnome is distinctly to be seen from a certain point on the sea, silhouetted against the sky on the eastern ridge of Kvandalstind, like a gigantic scarecrow, with arms (or oars) extended horizontally.*

THE CANADIAN ROCKIES.

MOUNT FAY (10,075 ft.). *August 7.*—Mr. S. C. Thompson, A.C., with Hans Kaufmann, made the first ascent of this peak from a camp at the head of Desolation Valley. We hope in a future number to give a longer account of this climb.

MOUNT HUNGABEE (11,600 ft.). *July 21.*—Professor Herschel C. Parker, of the American Alpine Club, with the guides Christian and Hans Kaufmann, effected the first ascent of this mountain, starting from a camp (c. 7,500 ft.) near the head of Prospector's Valley. About half-way up they encountered a very long and icy chimney, and then followed an exceedingly steep snow slope to the difficult summit arête.

MOUNT DELTAFORM (11,200 ft.). *September 1.*—The same party, with the addition of Dr. August Eggers, ascended this, the highest of the 'Ten Peaks.' From the camp in Prospector's Valley, near the base of the mountain, the climb up and down took 21 hrs. It was a very difficult ascent.

MOUNT BIDDLE (10,700 ft.). *September 3.*—The same party made the first ascent of this peak by crossing the long eastern arête, descending nearly to the next valley, and attacking the mountain from the southern side. Just under the summit they encountered some rather difficult rock work and a very narrow chimney.

* See *Alpine Journal*, vol. xxi. p. 401.

ALPINE NOTES.

'THE ALPINE GUIDE.'—Copies of Vol. I. of the new edition of this work, price 12s. net, and of 'Hints and Notes, Practical and Scientific, for Travellers in the Alps' (being a new edition of the General Introduction), price 3s., can be obtained from all booksellers, or from Messrs. Stanford, Charing Cross.

THE LIBRARY CATALOGUE is now printed, and may be obtained, bound in cloth, on application to the Assistant Secretary, 23 Savile Row. Price 3s.; postage, 4d.

THE ALPINE CLUB OBITUARY.—H. Simms (1901).

SKEEING.—Mr. W. R. Rickmers has made the following arrangements: February 15 to March 7, Iglis, near Innsbruck; March 12 to 25, Feldberg (Schwarzwald); March 28 till after Easter, Fort William (Ben Nevis), always provided a sufficient number of inquiries come in. Address, W. R. Rickmers, Radolfzell (Baden), Germany.

BRÈCHE DE LESCHAUX.—A pass from the Glacier de Leschaux to the Glacier de Triolet, made in July 1877, was briefly described by the late R. Pendlebury under the name Col de Leschaux.* But this is the name of a pass between Anney and Le Châtellard, which is 'traversed by the diligence in three hours.'† I propose therefore, with the approval of Mr. Colgrove, to call our pass by the distinctive and more descriptive name of Brèche de Leschaux.—C. TAYLOR.

THE DECEMBER ACCIDENT ON SCAPELL.—On December 26 Mr. Alex. Goodall, a Keswick journalist, on his way home, after doing a good climb on Scafell Pillar, attempted to glissade down a snow slope, at the head of Deep Gill, and was killed. Mr. Goodall was a competent climber, but unused to snow or the handling of an axe. He seems to have begun slowly and cautiously, lost his footing, and halted in a sitting position, planting the axe firmly in some scree; then, perhaps, in a moment of false security, relaxing his grasp, to have slid away before he could catch hold of the axe again. His body shot down to almost the same spot in Lord's Rake to which Professor Marshall fell in 1898, and Mr. Broadrick last September, each of the three coming in a different direction. It was madness for a beginner to glissade in such a place, and most experts would have deemed it prudent to use the rope.

YERMOLOFF HUT.—The Russian Alpine Club, which has its seat at Moscow, has built, in the summer of 1903, its first club-hut on the spur dividing the Devdorak Glacier from the Chach Glacier, in the Kasbek group (Caucasus). The new hut (3,480 m. = 11,415 ft.) is built of stone, is about 9ft. by 7ft., and represents the simplest type of mountain shelter, without either stove or beds. It was opened on August 23, 1903, and named after the Russian

* See the *Alpine Journal*, vol. viii. p. 337.

† Ball's *Western Alps*, A. C. edition, p. 201.

Minister of Agriculture and Domains, his Excellency A. S. Yermoloff. Notwithstanding its small size, the difficulties and expense of construction were considerable, and its erection speaks well for the enthusiasm of the young society. Every mountaineer who has been to the Caucasus will appreciate the benefit of this new departure, and those who take advantage of the hut will feel grateful to its constructors. It has been found impossible to place the hut in proximity to water and fuel, because trees cease growing some 7,000 ft. lower, and melting snow is to be found only in two places on the whole spur, of which one is too far from and the other too near to the goal (Kasbek). It takes one day from Vladikavkaz to the Devdorak hut (beds and caretaker, sometimes mutton, to be had). From there it takes 6 hrs. to 8 hrs. to the new hut (bedding, cooking-stove, provisions, &c., everything to be carried up). Guides (with books from Russian Alpine Club): The Brothers Moussa, Yam, and Isaak Bezourtanoff.

A. VAN MECK.

REVIEWS AND NOTICES.

Round Kangchenjunga; a Narrative of Mountain Travel and Exploration.
By Douglas W. Freshfield. With illustrations and maps. (London: Edwin Arnold. 1903.)

Though Kangchenjunga, the third highest, so far as is known with certainty, among the mountains of the world, is visible in all its beauty from Darjiling, the most frequented health resort in Bengal, its recesses have been but seldom visited by European travellers since the memorable journey of Sir Joseph Hooker, to whom Mr. Douglas Freshfield most appropriately dedicates this volume. How much readers have gained in the interval may be seen by comparing the lithographic illustrations in the Himalayan journals with the reproductions of Signor V. Sella's photographs, which give us, colour only excepted, the snowy peaks in all their beauty. In a few of the present illustrations the rocks and the foreground generally are often a little too dark, probably owing to unfamiliar conditions of light; but in all other respects they leave nothing to be desired, and the panoramic view of Kangchenjunga, with its link to the main chain and its great western offshoot, shows us the grandeur of the Himalayas. Kangchenjunga (28,156 ft.) is the culminating peak of a great spur running southward from the watershed of the Himalayas, in much the same way, but on a far grander scale than, and in the opposite direction to, the Saas Grat from the main range of the Pennines. Several of its attendant peaks are at least 24,000 ft. high, and the gaps between them not less than 20,000 ft. Thus this district of the Himalayas completely dwarfs the highest groups of the Alps, and here we must not forget that even Mont Blanc would be only a rock peak. The glaciers discharge their waters mainly into the Teesta, a great river

which reaches the plains east of Darjiling, those on the north-western side only taking an independent southward course.

Mr. Freshfield's party included Professor Garwood, Signors Vittorio and Erminio Sella, a guide of Valtournanche, Angelo Maquignaz, and a Piedmontese named Botta, as photographic assistant, and it was joined in India by Mr. Edward Dover, a road officer, whose help was invaluable, by a Pundit named Rinsing, who had already explored parts of the district which they intended to visit, and by half a dozen of the Sikhim Ghurka police. The porter difficulty, with which earlier Alpine climbers were often familiar, is a much graver one in the Himalayas, and will be a most serious obstacle to attacking any of the very high peaks, for men at all accustomed to mountain-climbing cannot be obtained. At about 21,000 ft. the coolies generally collapse, owing to the cold and the unwonted conditions of labour.

The expedition took a cross-country, up and down, route from Darjiling to the valley of the Teesta, so as to avoid its hot and malarious lower reaches. This led them along spurs and over passes 6,000 ft. or 7,000 ft. above sea-level, through very fine scenery, till they reached the Teesta, and went northwards along its valley to about level with Kangchenjunga, when they struck westward to the Zemu glacier. They could not have had a finer introduction to the great peak, for its northern and eastern ridges protect the névé of that ice stream. They passed up the valley from almost subtropical to high Alpine vegetation, finally pitching an advance camp by the side of the moraine, nearly at the level of the top of Monte Rosa. The next day Mr. Freshfield with Maquignaz went up the Zemu glacier to a height of about 17,000 ft. to study the routes to gaps on the north and east of the peak, around which they contemplated making a high-level tour. But the weather changed and snow was falling before they reached their tents. It continued for forty hours and lay a metre thick over everything. They had been in the path of the clouds which had done such mischief at Darjiling, where 27 in. of rain had fallen in a rather shorter period; but a yard or so of snow, though representing only 3 or 4 inches of water, puts an end for some time to attempts on unknown glacier passes and lofty peaks. The snow line, as Mr. Freshfield remarks, had now been brought down quite 4,000 ft., making necessary a complete change of plan. But two 'yak passes' across the spur of Kangchenjunga, north of the lower part of the Zemu glacier, would take them into Lhonak and to the base of the Jonsong La, a snow pass over the main range north of that peak. The first of these, the Thangchung La (16,333 ft.), was reached by starting from about 14,000 ft., and the second, the Thé La (16,752 ft.), after descending to nearly the same level. The fresh-fallen snow made these passes laborious, though ordinarily they would resemble gaps in the Alps from 8,000 ft. to 9,000 ft. lower. The travellers were then in the No-man's Land of Lhonak, close to the Thibetan watershed of the chain, and once more turned west for the Jonsong La. This is a glacier

pass, which, though not difficult, was now very toilsome. On nearing the col Rinsing added a spice of excitement by repudiating it as the one which he had crossed. Be this as it may—and Mr. Freshfield has little doubt as to the identity—they got down safe on the eastern side, with the loss of one coolie, who, as they ascertained two or three days afterwards, had been left by his companions to die.

They were now trespassers in Nepal, which begins at the Jonsong La, and obliged to descend to the first mountain village, to reach a pass which would take them back again into Sikkim. The natives were few and friendly, but an embodiment of the law came up from a lower townlet while they were resting at that village. But it is one thing for a solitary man, and he the reverse of majestic, to give orders, and for a strong, well armed party to obey them: so they rebuked him for interfering with storm-beaten travellers, and before he could have collected police enough to arrest them—supposing him not to have agreed with Dogberry—they had crossed a couple more passes of about the usual elevation and were once more in Sikkim. Keeping on an easterly direction, to get good views of Kabru and the peaks south of Kangchenjunga, they finished their tour by a visit to the Guicha La, about 16,400 ft., which commands a magnificent view of the eastern ridge of Kangchenjunga, and enabled them to complete the observations interrupted by the snowfall on the Zemu glacier. Hence they had a pleasant and uneventful journey back to Darjiling.

Disappointing as was the effect of the unexpected snowfall, Mr. Freshfield is to be congratulated on the results of his journey. It has enabled him to study Kangchenjunga from all sides. The great height will not be the only obstacle to its conquest, for after examining its portraits we are not surprised to read his remark, 'There are few mountains I know of more formidable aspect.' He agrees with Mr. Graham and the late Emil Boss that the ridges or faces visible from Darjiling offer very little hope for assailants. 'The foot of the eastern ridge can easily be reached from the Zemu glacier, but the climb of 9,000 ft. along it will stop ordinary mortals. The southern cliffs are in appearance hopeless.' The northern ridge offers a promising route to the summit, and the best way to reach it is from the Kangchen glacier, though this will not be easy, and possibly dangerous. Indeed, more than one obstacle, viewed from a distance, appears insurmountable. Two nights will probably have to be spent under light shelter, the latter, perhaps, about 1,200 ft. below the summit. Transport will not be the least of the difficulties, for either Alpine porters or specially trained Gurkhas will be necessary. The susceptibility of the climber to diminished atmospheric pressure must also be taken into account, for it affects some men more than others, as Mr. Freshfield's party found. Slackening of pace and increased breathlessness in ascending were most perceptible on reaching an altitude of from 15,000 ft. to 16,000 ft., but no increase in the symptoms was observed on rising to about 20,000 ft. So he is not surprised that

Mr. Graham and his two guides were comparatively unaffected on Kabru, and believes it impossible, after a study of the mountain, that any mistake can have been made as to its identity. In addition to much information invaluable to future climbers a chapter on Tibetan curios by Mrs. Le Mesurier and the accounts by pundits of their travels in these mountains add to the interest of the volume. From Professor Garwood we have a map of the *massif*, the inmost parts of which hitherto had been, for very obvious reasons, only imperfectly surveyed, together with a most valuable account and sketch map of the geology of the whole region, constructed by combining his own observations with those of earlier travellers. The book itself is full of interesting information about the physical geography and denudation of the mountains, the old moraines, and the glaciers, which in the upper parts weather into sharp pinnacles, recalling the *nieve penitente* of the Andes, and in the lower are less crevassed but with more irregular surfaces than in the Alps. It is, in short, a contribution to science, as well as a record of arduous travel, excellently illustrated and admirably written.

T. G. BONNEY.

Climbs and Exploration in the Canadian Rockies. By Hugh E. M. Stutfield and J. Norman Collie, F.R.S. With Maps and Illustrations. (London : Longmans.) Pp. 343.

'To reach the actual sources of the vast river systems of the Saskatchewan, the Athabasca, and the Columbia; to explore and map out the unknown mountain country where they take their rise; to locate, and perhaps to climb, the semi-fabulous peaks of that region; to rehabilitate, if facts permitted, the outraged majesty of Mount Brown . . . '—what mountaineer could refuse the invitation when he heard the West a-calling in such seductive accents? No wonder that Mr. Stutfield could not resist this dainty dish when put before him by Professor Norman Collie after his first journey to the Rocky Mountains in 1897. And so Messrs. Stutfield and Collie joined forces for three more summer expeditions, mainly directed to the exploration of the mountains north of the Kicking Horse Pass from the Waputehk ice-field to the sources of the Athabasca River. The result of these journeys is a delightful book of adventure and of mountaineering in the old sense, with the added charm of many snapshots of characteristic 'bits' taken by the authors, and some really excellent photographs by Mr. Herman Woolley, who joined the party in 1898 and 1902, and by Mr. Sydney Spencer, who went on the 1900 expedition.

Before the making of the Canadian Pacific Railway very little was known of the detailed topography of the Rocky Mountains between the boundary line (lat. 49° N.) and the Athabasca Pass. Dr. Hector had made a careful survey of the usual trade route along the N. Saskatchewan, and along the upper waters of the Athabasca River. He had also traversed the Pipe-stone Pass, the Kicking Horse Pass (where the railway now runs), and the Howse Pass. The sketch map, based on that of Dr. Hector, which is

reproduced on p. 66 (to show what was known of the district in 1896), perhaps hardly does justice to the general map of Palliser's 'Explorations,' but it certainly shows the singular distortion which that map gives to the whole mountain region between Mt. Brown on the N.W. and Mt. Lefroy on the S.E. It is perhaps worth while to draw attention to this fault, as the authors have not specially mentioned it. These two mountains are correctly located, Mt. Brown in latitude $52^{\circ} 30'$ N. and longitude $118^{\circ} 22'$ W., and Mt. Lefroy in latitude $51^{\circ} 15'$ N. and longitude $116^{\circ} 16'$ W. But Mt. Forbes, Mt. Balfour, Mt. Murchison, and their surroundings are shifted some 40 mins. of longitude to the W. In Dr. Hector's journal (September 1858) an even larger error of longitude is made. He places the 'height of land' in the Kicking Horse Pass as situated in longitude $117^{\circ} 20'$ W. (it is really $116^{\circ} 20'$ W.), and the top of the Bow Pass as $117^{\circ} 30'$ W. (it is really $116^{\circ} 30'$ W.). In Palliser's general map a compromise seems to have been made, for the Bow Pass appears exactly on the meridian 117° W. We must bear in mind that Dr. Hector was suffering from the hoof of the Kicking Horse when these observations were made, and he tells us that he could barely move. Had his chronometer suffered too, or is the error due to an arithmetical slip? However the mistake arose, it has had a curious effect on the geography of this interesting range. It is difficult to suppose that the myth of Mt. Brown and Mt. Hooker should have died so hard unless it had been fortified by reports of lofty snow mountains seen in their supposed position. Now, thanks to Messrs. Stutfield and Collie's journeys, we know there is at least one great group of high snow-peaks to the N.W. of Mt. Lyell, and that Mt. Bryce, Mt. Columbia with its huge snow-field, Mt. Alberta, and other peaks find ample standing room in the no longer cramped space between Mt. Forbes and Mt. Hooker. Indeed, Mt. Lyell on Dr. Hector's map occupies nearly the position where Dr. Collie has placed the lofty Mt. Columbia discovered in his second journey. The early mountaineers naturally see their peaks through a magnifying medium, and it is possible to understand how David Douglas guessed that Mt. Brown was 'not less than 16,000 or 17,000 ft. above the sea;' but no mountaineer who reads the account of his ascent (unearthed by Dr. Collie from the 'Companion to the Botanical Magazine') can for a moment doubt that the Mt. Brown he climbed is that determined by Professor Coleman, of Toronto, to be some 9,000 ft. high. But even Dr. Hector gets strangely astray in his measurements. He states that he 'measured' the height of the highest point of Mt. Murchison and found it 15,789 ft.! According to Dr. Collie's mercury barometer it is 11,100 ft.

Those who have ever penetrated any of the Rocky Mountain valleys will sympathise with the troubles of these explorers as they forced their way through burnt forest, muskeg, or tangled undergrowth. Even the resources of chemical science were unavailing to keep off the unrelenting attacks of mosquitoes and 'bulldog' flies. Intending explorers should take to heart their sufferings

along the Bush River, and fight shy of the western valleys of the main chain. But then the delight of getting above timber-line and on to the untrodden snows! If the larger geographical questions are settled, there are still scores of new peaks to be ascended not far from the railway to the N. and S., and Dr. Collie's map shows enticing peaks (yet unnamed) which lie to the northward of the known Selkirk Mountains, and should afford splendid scrambles on their hard Huronian rocks. It will be surprising if this fascinating book does not draw many climbers to our new playground.

Of sport, alas! but little remains that the mountaineer can hope to enjoy. The whole region on the eastern slopes of the mountains where many Indian tribes lived by hunting in 1860, has been denuded of game. Mr. Stutfield had one successful stalk of big-horn, and a few goats fell to the party, but starvation would nearly certainly befall the 'outfit' who depended on their guns. Once the camp was disturbed at night, and turned out to pursue a grizzly. They located and closed on their quarry. It was Herman Woolley changing his photographic plates under a dark bush.

One of the most thrilling things in the book is Dr. Collie's account of how he extricated C. S. Thompson from the crevasse on Mt. Gordon. The story has already been told in our Journal by one of those who hauled on the ropes from above; now we hear what it was like below. On one point the man 'on the spot' is in the wrong. He says he 'descended 60 ft., almost the whole available length of an 80-foot rope.' He could not see that the party above had to tie a second rope on to his, and the knot was well down the crevasse; *teste* Sarbach *cum quibusdam aliis*.

Norway: the Northern Playground. Sketches of Climbing and Mountain Exploration in Norway between 1872 and 1903. By Wm. Cecil Slingsby. Demy 8vo, pp. xviii.-425. Illustrations and Maps. (Edinburgh: David Douglas. 1904.)

This long-expected volume fills a vacant space in the literature of travel. While nearly every mountain region in the world has been explored by Englishmen, and described in tomes which seem to grow more sumptuous as their fields are more remote, the peaks and glaciers of Norway have lacked their *vates sacer*. Men of science, artists, anglers, sportsmen, and simple tourists, have all recorded their impressions of the country, but the mountaineer has been infrequent, and for the most part mute. Until Mr. Slingsby began, in 1872, his long career of discovery and conquest, no first ascent of importance had been made in Norway by an Englishman; and excepting Prof. Forbes in his famous book in 1853, and Colonel Campbell in an interesting *brochure* in 1871, no writer of authority has hitherto published in book-form any general account of Norsk mountain exploration.

Amongst the strayed adventurers who from time to time have felt and yielded to the fascination of the North, no Englishman can vie in knowledge or achievement with the author of the work before us. He is an indomitable climber, whose unrivalled acquaintance with

every mountain district in Norway is balanced by a wide and varied experience in the Alps. He has an artist's eye for the beauties of form and colour displayed in Norsk scenery, and the interest of a naturalist and a sportsman in the flora and fauna. He has a working knowledge of the language, and is an enthusiastic student of the treasures of Scandinavian legend. Above all, every page of his work is animated and inspired by love for Norway and her people. That the author possesses these qualifications for his task is no secret to the readers of the 'Alpine Journal.' The book before us will extend the knowledge to all who are interested in the literature of mountain travel.

To attempt an analysis of the subject-matter of the book within the space at our disposal would be impossible. We must be content with a general indication of its scope. The interest is by no means confined to the writer's own adventures. Sketches of Norsk life in sæter, farm, and country-house; exciting descriptions of bear-hunts in winter and summer, fragments of folk-lore, notices topographical and historical, diversify the page, and form picturesque by-streams and backwaters alongside the main current of the narrative.

The opening chapters contain an outline of the early history of Norsk mountaineering, and of the author's first visits to Norway, in which travel filled a larger space than climbing. Seventeen chapters are devoted to Jotunheim, where much exploration and many new expeditions have been accomplished by Mr. Slingsby. The interest culminates in the first ascent of Skagastølstind in 1876; and this exploit, one of the most adventurous in the chronicles of mountaineering, is described with a wealth of graphic detail in Chapter XIII. The tale will be enjoyed by all readers, but only the few who have followed the same route can justly appreciate the skill and daring which brought the single-handed venture to a triumphant issue. Twenty-four years later, by a happy stroke of fortune, Mr. Slingsby had the pleasure of making the hitherto uncompleted traverse of the Skagastølstinder in the company of the most distinguished of Norsk lady climbers, who had already to her credit the first lady's ascent of the great mountain.

The Justedalsbræe occupies ten chapters of much historical and geographical value. A study of the map at page 248 will show how wide is Mr. Slingsby's acquaintance with this wonderful snow-field and its many glacier arms. The descent, never likely to be repeated, of the ghastly icefall of the Kjendalsbræe, made in August 1881, is an exploit even more remarkable in its kind than the first ascent of Skagastølstind. The present writer nearly twenty years later once found himself in a dense fog at the lower edge of the névé of this glacier in company with Vigdal, who had shared the perils of the earlier venture. He will never forget the alacrity with which his guide, whose courage is above suspicion, turned and made again for the upper snows the moment he realised where he was.

For many years the exploration of the Justedalsbræe was left almost entirely to one man, but others are now beginning to follow

his example. Civilisation is slowly creeping up to the fringes of the mighty Bræ, and, though Faaberg and Greidung are still, in the words of a Norsk writer, 'scarcely European,' there are now clean huts for travellers at Tungesaeter (called Nysaeter on the map) and at Bødalsaeter under Lodalskaupe. The more luxurious can find ample fields for new expeditions within reach of excellent hotels at Fjaerland, Loen, Visnaes, and Olden, or can use as bases the simpler inns at Sperle and Brixdal.

Chapter XXX. describes the exploration in 1885, with Mr. C. Hopkinson and Lars Janssen, of the Aalfoten and Gjegnaland glaciers, now, as then, practically a *terra incognita* to Norskmen and Englishmen alike.

Five chapters recount adventures in Söndmöre, where still lingers in sequestered valleys the primitive simplicity which so appealed in 1876 to the author and his gifted Norsk comrade, the late Emanuel Mohn. The discovery of first-rate rock-climbs on Slogen and Kvitæggen, and the first ascent—again alone—of Kolaastind are only a few of the exploits accomplished in this district.

In Romødal the Horn had fallen to adventurous natives as long ago as 1832. The history of its early conquerors, and the re-discovery of their cairn by Herr Carl Hall after many gallant attempts, are sympathetically recorded. Ungrudging tribute is paid—it is pleasant to notice—here and elsewhere (*e.g.* on p. 208) to the achievements of the Danish climber, the author's only possible rival in the field of Norsk mountain exploration. Amongst other notable expeditions under Mr. Slingsby's leadership, the highest Vengetind was ascended for the first time in 1881; Mrs. Slingsby made the earliest lady's ascent of the Horn in 1884; and Mjølner, one of the most remarkable mountains in Norway, discovered by the author in 1875, was climbed by him in company with Mr. C. Hopkinson and Lars Janssen ten years later.

Chapter XXXVII. touches briefly on Arctic Norway.

The sage and generous words upon Norsk guides, and the pithy advice contained in the concluding chapter, should be well weighed by all who contemplate a campaign in Norway.

The variety of the book is reflected in its illustrations. The whole-page plates include nearly thirty beautiful specimens of the skill of such well-known photographers of Norsk mountains as Herr Carl Hall, Messrs. Howard Priestman, G. P. Baker, Geoffrey Hastings, and T. C. Porter. Two blocks come from Herr Randers' admirable 'Söndmöre.' Two are due to the courtesy of the editor of the 'Norske Turist Forenings Aarbog,' notably the delightful 'Saeter Interior,' by Herr H. Bache. We wish that the fine photograph of the Vettisfos from the same publication could have been also reproduced. The whole forms a good representative collection of some of the most striking mountain scenery in Norway.

The text is also illustrated and adorned by seventy vignettes, the majority drawn by Miss Ecroyd, Mr. T. Gray, and Mr. E. Greenwood, from the author's sketches.

The maps, nine in number, are by Mr. Priestman, and are a most

valuable feature of the volume. The map of the Horunger, in particular, is the only accurate one in existence. It is a drawback that in the sketch-maps of E. and W. Söndmøre no indication is given of the position and extent of the glaciers.

An index is provided, which might with advantage have been made considerably fuller.

Great care has been bestowed upon the printing, and the misprints we have discovered are few and unimportant. The general appearance of the handsome volume is worthy of its well-known publishers.

Much of the substance of the book has already seen the light in the 'Aarbog' and elsewhere, but the vivid first impression forms the best permanent record; and no little skill has been expended in welding the available materials into a homogeneous whole.

The general style of the writing suggests the varied conversation of a well-informed and cultured traveller amongst appreciative listeners, rather than the more formal periods of a literary craftsman. It is fluent, natural, and characteristic. Sometimes, doubtless, condensation would have added strength, and the writer might in parts have laboured to be brief without fear of being found obscure. Occasionally the resolution to retain the original documents has interfered with the clearness of the presentation. It is, for instance, somewhat bewildering at first sight to find successive sections headed, 'the Ascent'—'the Discovery'—and 'the First Ascent'—of Mjölfnir. The digressions and discursions are now and then disconcerting, but, on the other hand, they often supply a happy illustration or an apt comparison. There are some repetitions, but of errors or self-contradictions the critic will find few traces. We are content to leave Thorgeir Sulheim and his English friend to settle between them the question raised by a comparison of page 89 with page 178, as to whether the former is, or is not, able to swim.

To one who in the spirit of discipleship has spent many happy summers in making acquaintance with scenes and personages figured in this book, the reading of it has been a real delight. That delight will be shared by others both in England and in Norway. It is to be hoped that a Norsk translation may soon add to the number. Athletic young Norskmen, who now spend their leisure in bicycling along their new highways, will presently be found shouldering their sacks in Jotunheim and Justedal; and English tourists will discover that there are parts of Norway invisible from the deck of a yachting steamer.

One day 'Old Norway' will come to her own as a field for English mountaineers. They will recapture beyond the North Sea something of the freedom and simplicity long departed from Zermatt and Chamonix; but, however far afield they wander, they will still find the name of Slingsby an 'Open, Sesame,' even should they penetrate perchance to valleys so remote that the inhabitants cannot claim him as a familiar friend.

Il Monte Cervino. Di Guido Rey. Illustrazione di Edoardo Rubino. Prefazione di Edmondo de Amicis. Nota Geologica di Vittorio Novarese. 14 Tavole Colorate, 23 Disegni a Penna e 11 Fotografie. (Milano: Ulrico Hoepli. 1904.)

'Un libro per una montagna.' So S. de Amicis begins his preface to this sumptuous volume, and, as the mountain is the Matterhorn, who shall say that the tribute is excessive? There are some stories that never weary us. Even to a man of peace Mr. Oman's new 'History of the Peninsular War' proved of such absorbing interest as to keep him reading till the small hours of the morning; and this history of the war of man with the Matterhorn has, in its own way, the same sort of overmastering spell. It is a fascinating story that S. Guido Rey has to tell, and, considering the part that Italians played in the conquest of the great mountain, it was surely time that the story should be told by an Italian mountaineer from an Italian point of view, without, be it said, any disparagement of rivals, and with no more than a becoming pride in the part that Italy has played in the long warfare that led finally to victory. Whilst one rejoices in the hard-won and well-deserved triumph of Mr. Edward Whymper, and in the exploits of Professor Tyndall, Mr. F. Crauford Grove, Mr. Mummery, and Mr. Penhall, one cannot but be glad at J. A. Carrel's success in attaining the summit from Breuil, and at the zeal and enterprise shown by J. J. Maquignaz and many another of the Val Tournanche guides. For it is none too often that the dwellers at the foot of a great mountain of their own accord attempt the difficult and the unknown through sheer desire to make themselves trustworthy guides for those who desire the great peak at their doors. We ourselves know Val Tournanche guides of to-day who, unable to learn from others the secrets of the Matterhorn ascent, crossed the mountain to Zermatt without travellers, with a view to qualify themselves as guides. J. A. Carrel's perseverance in continuing the attack on the Italian side after the first ascent from Zermatt had been accomplished stamps him as not merely a great guide but as a man of exceptionally vigorous and determined character. These traits will be found written on his face in the fine portrait of him by S. Leonardo Bistolfi which will be found opposite p. 124. That he died on the mountain he loved so well in saving the lives of his two companions has, if we may say so, lent a consecration to his memory such as no other guide—at any rate no guide who occurs to us as we write—can claim.

We need not here repeat, even in brief, the story which S. Guido Rey, whom we have the honour of numbering amongst our own members, unfolds so graphically and sympathetically in the pages of this long expected work. The book was worth waiting for, for the story is excellently told. The writing, in fact, supplies that warmth of colouring which the illustrations, in other respects excellent, do not give.

The book has all the charm which thorough knowledge of the subjects treated of, warm appreciation of the good points of others, a

genial sense of humour, kindly sympathy, and generous enthusiasm can give.

To turn to the climbing accomplished by S. G. Rey himself, though the risks incurred were at times great* it is impossible not to read S. Rey's account of what he modestly calls his exploration of the Furggen ridge without the greatest interest. The story which was told briefly in the 'Alpine Journal' † is here given in greater detail. The narrative is, indeed, so vivid, the situations so exciting, the climbers' enthusiasm and resolution so graphically set forth that one feels a strong personal sympathy in each check sustained and each difficulty surmounted. And when the party, having attained the point where they could attach themselves to the rope let down from above by Daniel Maquignaz and his comrades (who had climbed the Matterhorn for this special purpose), reached a spot only about 12 m. to 15 m. below their helpers, and *then* found that, owing to the oscillation of the rope over the overhanging rock-wall (which there was no means of preventing), it was impossible to conquer these few feet, one feels their defeat to be quite a personal mortification. As will be remembered, two days later S. Rey and his guides *descended* the overhanging piece of cliff, which had before defied their efforts, by means of a rope ladder, and then reascended to the summit. The final chapter closes with a genial account of the evening of rejoicing with glass and song which followed upon victory.

The book is lavishly illustrated with plates by S. Edoardo Rubino, and with photographic reproductions. There is an appreciative preface by S. Edmondo de Amicis, and a note on the geology of the mountain by S. Vittorio Novarese. We regret the absence of an index, though the table of contents gives the reader some assistance. We have noticed one or two slips—*e.g.* 'Machbeth' for 'Macbeth' on p. 265, and the attribution of the very apt quotation on p. 258 to Ovid instead of Horace.

There are many happy descriptions, many pointed phrases in S. Rey's pages. We will content ourselves with quoting one which well illustrates the intangible, indefinable spell which the Cervin lays upon all mountaineers: 'Il Cervino è invisibile et presente come il Dio.'

Clubführer durch die Glarner Alpen. In Auftrag des Centralcomités des S.A.C. verfasst von Dr. Ed. Naef-Blumer. 1902.

This little volume is the first of a new series of guide-books which is appearing under the auspices of the Swiss Alpine Club, and is intended to replace the so called 'Itinerarium,' a more or less detailed guide to whatever group of Swiss mountains might be for the time the special excursion district of the Club. It was to a certain extent an experiment, and in view of the favourable reception it has met with it has been decided to arrange for the publication at irregular intervals of further 'Clubführer,' of which some will be

* See p. 249, and cf. *Alpine Journal*, vol. xx. p. 19.

† *Alpine Journal*, vol. xx. pp. 17-20.

purely 'Climbers' Guides' and some will deal with natural history and other matters of general interest, while the old system of having a particular 'Club-Gebiet' is to be abandoned.

The 'Clubführer durch die Glarner Alpen' belongs to the former of these categories; indeed the editor has interpreted his instructions so literally as not only to exclude all reference to history, geology, &c., but even to refrain from giving any indication as to which peaks are the best view-points. The book is avowedly modelled on the lines of the 'Climbers' Guides,' edited by Sir Martin Conway and the Rev. W. A. B. Coolidge, and the editor expresses his obligation for the use he has been permitted to make of the latter's 'Range of the Tödi.' The descriptions of the various expeditions are given in greater detail than is usual in the 'Climbers' Guides,' and a new and valuable feature is the insertion in the text of a number of rough woodcuts of the more important peaks, on which the different routes up them are marked. On the other hand the bibliography is much less full than in the English series, being limited in most cases—and intentionally so—to books and periodicals published in Switzerland.

Perhaps the most noticeable divergence from the method of the 'Climbers' Guides' is in regard to the limits and arrangement of the material. While Mr. Coolidge describes the whole range that extends from Andermatt to the neighbourhood of Sargans, omitting the minor chains on the N., the present volume follows, as a rule, the political boundary of Canton Glarus, which is not always a natural or convenient one. Thus the W. limit of the district described is a line drawn from the Kammlilücke to the Piz Valpintga, and the little groups of the Graue Hörner and the Ringelspitz are excluded on the E. It may be said, however, that the latter have already been described in a recent 'Itinerarium,' while the remaining peaks round the Hüfi Glacier will no doubt be dealt with in the guide to the Alps of Uri, which is already promised us. But a really regrettable omission is that of the interesting group of the Brigelserhörner, to the S. of the Bifertenstock, and there is the less reason for this since Piz Mut and Piz Gliems, two unimportant peaks, which constitute the extreme S. outposts of the Tödi, have a page devoted to them, though they lie still further outside the cantonal boundary. In the arrangement of the text too we prefer the system adopted in the 'Climbers' Guides,' which is a geographical one. In the 'Clubführer' the whole district is divided into ten sections, the order of which has the appearance of being purely haphazard. For example, the Kärpf group on the E. side of the Linth valley, is inserted between the Glärnisch and Karrenalp groups on the W., although the latter in reality form only one district, bounded by the Prugel and Klausen Passes on the N. and S. respectively; and the Clariden group separates the Mutsee and Tödi groups, which are also contiguous to one another, their principal peaks rising round the same glacier basin. And within the various sections the peaks and passes are not arranged after any regular geographical system, so that we have generally found it

necessary—or at least a saving of time—to make continual reference to the index.

All these however are minor defects, which detract but little from the real value of the book. Although it will not entirely replace the 'Range of the Tödi,' it will be found an indispensable addition to it by all who intend to climb in the Glarus district. The print is good, and the size convenient for the pocket. Like every other guide-book it is not entirely free from inaccuracies, but we have found the text, as a rule, correct and clear; if anything it errs on the side of too much detail. But, taken as a whole, the book is admirable, and the editor, Dr. Naef-Blumer, is to be warmly congratulated on the successful start he has given to the new series. The guide was originally distributed free of charge to all members of the S.A.C., and was not to be procured commercially; but an enterprising Glarus bookseller has purchased a number of copies from members who did not require them, and we believe there is now no difficulty in obtaining the book at the modest price of two francs. In this respect it has a great advantage over its rival. We heartily welcome this new effort on the part of the S.A.C., and look forward with much interest to future volumes.

PROCEEDINGS OF THE ALPINE CLUB.

THE ANNUAL GENERAL MEETING of the Club was held in the hall on Monday evening, December 14, at 8.30, Sir Martin Conway, *President*, in the chair.

The following candidates were balloted for and elected members of the Club: Messrs. E. A. Aldridge, J. A. B. Bruce, L. W. Dent, C. B. R. Ellis, H. W. Phillips, H. G. Pulling, H. Symons, E. Teichelmann, W. J. Williams, A. F. R. Wollaston.

On the motion of Mr. H. WALKER, seconded by Mr. A. G. SOLLY, Sir Martin Conway was unanimously re-elected *President* for the ensuing year.

On the motion of Mr. C. T. DENT, seconded by Mr. G. H. MORSE, Mr. J. H. Wicks was unanimously elected *Vice-President*, in the place of Mr. Walter Leaf, who did not offer himself for re-election.

Mr. Leaf took this course for the following reason. The committee consider that it would be in the interests of the Club if a new *Vice-President* commenced his term of office in each of the years in which there is no change in the office of *President*, instead of a change of all three officers taking place at once, as has been the case hitherto. The object of Mr. Leaf's retirement was to start a rotation which would produce this result.

On the motion of Dr. WILLS, seconded by Mr. A. B. W. KENNEDY, Messrs. L. W. Rolleston and J. J. Withers were unanimously elected new members of committee, in place of Messrs. W. Pickford and F. W. Newmarch, whose term of office expired.

On the motion of Mr. C. E. MATHEWS, seconded by Mr. H. WALKER, Mr. H. Woolley was unanimously re-elected Vice-President; and on the motion of Mr. A. G. TOPHAM, seconded by Mr. G. YELD, the other members of committee being eligible—viz. Messrs. S. Spencer, C. Schuster, A. V. Valentine-Richards, R. N. Arkle, and C. Hopkinson, and the Hon. Secretary, Mr. A. L. Mumm—were unanimously re-elected.

The PRESIDENT said that it was customary first to refer to the losses sustained by the Club during the year. He would specially name Mr. Broadrick, who was killed on Scafell, a climber of great promise and great performance, and much beloved by his friends; the Rev. J. Robertson, elected in 1864, who would be remembered as having almost formed one of the party who made the first ascent of the Matterhorn; and Mr. W. D. Freshfield, elected in 1858. And one of the original members, though not a member at the time of his death, had died—Mr. St. John A. Mathews. The Club had also lost an honorary member, Dr. Radde, director of the Tifis Museum, who was always ready to assist members travelling in the Caucasus, all of whom spoke of his helpfulness and thoughtfulness. He was sorry to say that Sir Leslie Stephen was lying on a bed of sickness, but it was pleasant to know that he had shown his thoughtfulness for the Club by offering to present a very early form of alpenstock and two early ice-axes, which the Club would be glad to have both for their historic importance and for the kindly interest shown in the Club by the donor, whose memory was ever held dear by members. He thought that it would be the wish of the meeting that he should write to Sir Leslie Stephen to convey to him their thanks and their sympathy and a message of hearty goodwill from his many friends at the meeting. The President further said that he had to explain that the committee had had under consideration for some months the question of the revision of the rules. It had long been recognised throughout the Club that the rules stood in need of revision. The committee had approached the task in a most thorough and laborious manner, and had produced a new set of rules which they hoped would meet in general with the approval of the Club. As it was impossible to consider them on the night of the annual general meeting, it had been thought well to set aside the first meeting of next year for the purpose of considering and, if approved, of adopting the new rules.

Mr. J. NORMAN COLLIE read a paper, entitled 'Rock-climbing on the Lofoten Islands,' which was illustrated by lantern-slides.

Mr. SLINGSBY said that there was a great charm in the scenery and the climbing in the Lofotens. There were some peculiar features about the rocks. One was that after every difficult pitch a ledge was reached where one could rest comfortably, and nearly always on such ledges marsh marigolds were found. Then there was a delightful uncertainty as to whether one was going to succeed or not; in the ascent of the W. peak of Rulten this was prolonged to within 5 min. of the top. It was within a week of London, and

there was no difficulty about provisioning. The climbing is very safe, as the steeper the rocks became the firmer they were.

Mr. WOOLLEY thought that the paper read did not really show how difficult the ascents were. Great smooth slabs of rock were found everywhere in the Lofotens, and on Rulten they were unusually long, steep, and unbroken. Nature had meant them not to be ascended, but to be very rapidly descended. With regard to the W. peak of Rulten, the party had probably found the only possible route up. He only regretted that he had not been sitting on a neighbouring peak watching Slingsby's exuberant enjoyment of the slabs.

Mr. PRIESTMAN could only say that all who went to the Lofotens found it difficult not to make their descriptions too glowing.

Mr. C. PILKINGTON congratulated Mr. Slingsby on the way in which his son was treading in his father's steps.

Mr. BRYCE thought that no one who had not visited the Lofotens could understand their extraordinary fascination. If Mont Blanc should be taken and the mountain submerged, leaving only the Aiguilles, something of the Lofoten scenery would be obtained. The only parallel which he knew to the fjords were the sounds running from the Straits of Magellan. The sea, combined with peaks and the mists on the islands, made the charm. The place was full of romantic mystery. He wished to bear testimony to the attractions of the mountains, and to the fact that they are almost always more difficult than they look.

Mr. OUSTON had never seen a stone detached nor an avalanche fall in the Lofotens during two years' climbing, but on the day of the ascent of Rulten he noticed a huge mass of rock come down, and had felt some anxiety till he found that the party had returned safely. He thought that Mr. Collie had, if anything, underrated the slabs.

The PRESIDENT congratulated Mr. Northall Laurie on taking the beautiful photographs which had been shown by Mr. Collie. Mr. Bryce had pointed out the resemblance between the Lofotens and the channels and islands to the S. of South America. He had himself been only a few days in the Lofotens, but long enough to see the beauty of the scenery. The channels from the Straits of Magellan possess something of the same quality, and the mountains that rise from them had something of the same charm. But he had seen the Lofotens bathed in sunshine, whereas the mountains of South America were generally in the highest degree gloomy and tragic, as dark clouds brooded eternally over the region, out of which fell dark showers of rain, hail, and snow. Nevertheless, the scenery was remarkably fine. He hoped the members of the Club who liked a winter season would go to South America and bring back interesting tales of climbing.

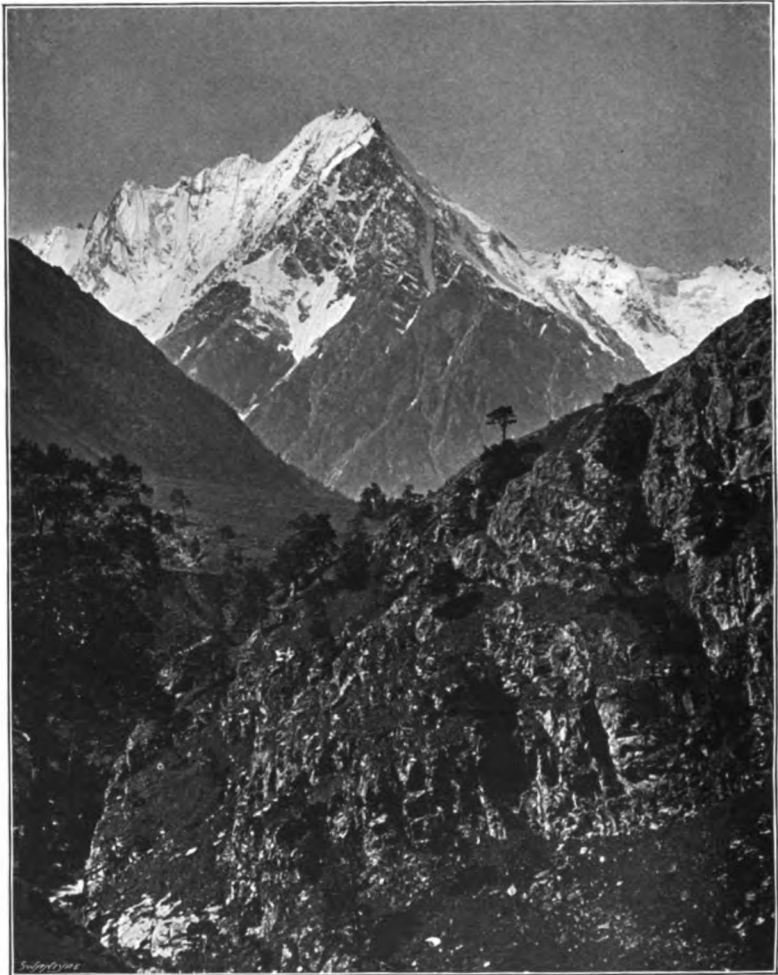
A hearty vote of thanks to Mr. Collie for his paper brought the evening to a close.

AN EXHIBITION OF ALPINE PAINTINGS was held in the Hall of the Club from Saturday, December 5, to Saturday, December 26, and

was attended by about one thousand persons. Refreshments were provided on the afternoon of December 15.

THE WINTER DINNER was held in the Whitehall Rooms, Hôtel Métropole, on the evening of Tuesday, December 15, at 7 p.m., Sir Martin Conway, *President*, in the chair. Two hundred and seventy-eight members and their friends sat down to dinner. Among the guests were:—Surgeon-General Sir William Hooper, K.C.S.I.; Mr. John Tweedy, President of the Royal College of Surgeons; Professor J. W. Judd, C.B., F.R.S.; Professor H. Turner, F.R.S.; Mr. Marcus Stone, R.A.; Major Moore; Dr. H. R. Mill; Dr. Ormerod; Mr. J. B. Carrington, Prime Warden of the Goldsmiths' Company; and Messrs Leonard Borwick, W. J. Corbett, Edmund Gosse, F. Carruthers Gould, B. F. Hawksley, Anthony Hope Hawkins, Wynne Hooper, and Frederick Sternberg.

Mr. F. Ormiston Smith gave a representation of his biograph views of ascents of the Jungfrau and the Matterhorn and of other Swiss scenes, in the Hall of the Club, on the evening of Wednesday, December 16. It was witnessed by an amused and interested audience of members and ladies numbering about two hundred and thirty, and the expression of thanks by the President at its close was cordially endorsed by all present.



H. Woolcy, photo.

Swan Electric Engraving Co.

TIKTENGEN FROM THE NORTH.

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CLIMBING IN SUANETIA.

By L. W. ROLLESTON.

(Read before the Alpine Club, March 1, 1904.)

LAST spring Mr. Rickmers very kindly asked Longstaff and myself to join in a great Caucasian expedition that he was organising. We jumped at the idea, but found that his party was leaving Europe much earlier than it was possible for us to get away, and were therefore compelled to be independent. His offers of assistance we gratefully accepted, and he took a tent and some supplies into the country for us.

I know there is much to be said against two as a party, but in the Caucasus the climbs are so long that the greater speed with which a party of two can move counts for much, and may even turn an otherwise dangerous expedition into a safe one.

I must acknowledge our indebtedness to Mr. Woolley for the information and advice he gave us before leaving England. Had we followed all his hints, we should have avoided the few troubles we did meet with.

Luckiest of all were we in that the weather in the Caucasus last summer was probably the finest on record. Out of twenty-eight days we were in Suanetia, only four were utterly bad. In consequence the various parties climbed in all about eighteen new peaks, of which six were over 14,000 ft. in height. We ourselves climbed seven peaks, of which five were new.

All our climbing was done in Suanetia—the district which lies to the S. of the western end of the main chain of the Caucasus, and is so guarded on its S. by the Leila range that to enter it, it is necessary to cross a pass of over 9,000 ft.

We left London on July 16, and went to Odessa by train

in 72 hrs. and spent a day there shopping; thence to Batoum by the steamer which calls at many of the Northern Black Sea ports, and takes four days; from Batoum, after another day's shopping, we reached Kutais by train in a few hours, and then one long day's driving, one on horseback, and one walking brought us to the foot of the Leila range on July 27. This makes eleven days in all from London, nine of which were actually spent in travelling.

On July 29 we entered Suanetia by the Leila route over an easy glacier pass of 11,800 ft., and climbed the highest of the three peaks on the way: this peak is 13,400 ft., and is an easy snow walk. The day was cloudy, and not until we had almost reached the tree-level on the descent did we get our first view of Ushba, which emerged gradually from the clouds into the sunshine—a wonderful sight. For months we had thought of little else but the S. peak of Ushba, and we hurried down to Betsho that night, but only to find that five members of Mr. Rickmers' party had just returned from their successful ascent.

We proved that we were not jealous by taking their photographs.

On July 31 we spent a long day strolling up the beautiful Kuish valley to a bivouac just below the snout of that glacier. From this bivouac—and, indeed, on the whole way up to the valley—we got wonderful views of Ushba from the W., which enabled us to realise what a magnificent expedition was the traverse of the two peaks made some days later by Herren Distel, Leuchs, and Pfann.

The next day we made the first ascent of Lakra (12,185 ft.), following the ridge from the pass between Lakra and Leirag. On the ridge we had one very steep ice bit, covered with about six inches of unsafe snow, and a very steep and delightful rock scramble to the summit.

The day was perfect and the views so fine that for the moment we forgot our disappointment over Ushba.

Next to a wild hope of making the first ascent of Ushba the goal of our expedition was Tiktengen (15,267 ft.), after Ushba the finest unclimbed peak in the Caucasus. We felt that we were hardly fit for it yet, but, as the conquerors of Ushba also had designs on it, we hurried off the next day while they were safely engaged in attacking Little Ushba.

From Betsho we rode up the valley through Mestia to Mulakh. We arrived long after dark, and slept in the Cancellaria, or court-house, where we suffered from the



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TIKTENGEN FROM THE SOUTH.

Photo by C. Sella.

Engraving

plagues, only too familiar in Alpine literature, which are always found in these shelters.

The next morning we went on to a spot about a mile above Jabesh on the track of the Zanner pass.

It was raining hard, and our porters and horse-owners, who had been grumbling without apparent reason all the morning, struck absolutely, deposited our baggage on the wet ground, and left with the horses for Betsho. We were endeavouring to hide our misery and struggling with our tent when (from the clouds, perhaps) appeared a hunter. He watched us curiously for a while, as do all the natives, and then began to help us with the tent: that man remained with us till we left the country. How can I tell of his virtues? He could carry any weight, he could climb rocks, he could cut steps in ice, he could cook beautifully, buy provisions cheaply, kill and dress a sheep or a chicken, could get tea ready within ten minutes of our shouting to him from our Mummery tent at high bivouacs, and, however bad the weather was, never wanted to come inside. His name is Arraman Cordiani.

On August 4 we started for Tiktengen, and, after some difficulty with a very talkative and incapable porter, bivouacked on the rocks on the left bank of the Upper Zanner ice-fall, at a height of about 10,500 ft.

Rain the next morning delayed our start till 3.30.

We crossed the glacier towards the foot of the peak in 2½ hrs. Here we had a violent hailstorm, so we dug a hole in the snow, covered ourselves with thin mackintosh sheets, which we carried in case we should be benighted, and had our first breakfast.

The weather seemed so bad that we only hoped to reconnoitre; but it improved suddenly, so we decided to go on, and began to discuss the route.

The accompanying illustration, by S. Sella, was taken from the Latpar pass, a distance of seventeen miles.*

In 1893 Messrs. Woolley, Cockin, Solly, and Newmarch climbed the western ridge to within a few hundred feet of the summit, and their account convinced us that this ridge was impossible; but we had hoped to find a direct way up the S. face, if not to the summit, at any rate to the deep cleft E. of it. But the face looked too steep, and was obviously swept by falling stones. The only alternative was to get on to the

* We struck the ridge just to the left of the well-marked rock tower from which a vertical patch of snow descends.

great rock-wall connecting the eastern ridge of the mountain with Salynan-bashi, and to follow it to the summit if we could.

We crossed the bergschrund, and going very quickly on a rather rotten but easy rock rib, reached the top of the ridge in about 2 hrs., and got our first view of the northern side, which made us glad we had chosen Suanetia as a centre, so barren and inhospitable did the valleys look after the trees and flowers of the South.

Here we had another hailstorm, but a milder one; and as we could see the valleys below full of sunshine we determined to go on.

This eastern ridge of the mountain along which we now started is a very fine one; there are tremendous ice precipices on the N., and on the S. steep cliffs broken by stone-swept couloirs.

We tramped over some snow to a great rock tower. This we tried, first directly, then on its S. side, and finally managed it by a very difficult rock chimney on the N. Then came a descent into a gap and another great rock tower, and then ice and snow ridges, generally rotten snow on hard ice with rock teeth projecting at intervals, until we reached the tower, which is separated by a deep gap from the final peak.

It was now midday, and we had been climbing for 8 hrs., 9½ hrs. of which had been spent on this ridge. If the descent into the gap could be managed the peak was ours, but it looked worse than anything we had done.

As we faced the peak there appeared to be two possible courses—to our right, a very steep and narrow ice ridge which looked terribly forbidding at first, but ended in a gentle snow-slope; to our left, steep and rotten rocks terminating in an ice-slope. If we could descend these rocks and traverse the ice-slope to the right on to the ice ridge, its difficult upper part would be avoided. We tried this, but on the worst bit of the rocks; the only two handholds came away—together with the leader.

We climbed back, and after a consultation again examined the top of the ice ridge. It certainly looked very difficult, and the weather becoming worse we were on the point of turning back, but decided to have one more try at it. This time we managed to hack the necessary steps on to the ridge, and soon to our great delight it was possible with face to the slope to kick steps and descend fairly rapidly. A few more feet of ice and we must have failed, so steep was the slope.

The descent of about 120 ft. had taken us nearly an hour, but, as we had hoped, the worst of our difficulties were over.

The final climb—a mixture of snow, ice, and rock—was fairly straightforward, and in about another hour, after 5½ hrs. on the ridge, we reached the summit.

It was misty, but we could just see another rock peak looming up to the N., and began to doubt if we had really reached the highest point. In a few minutes, however, it cleared, and we were able to convince ourselves that the N. peak was lower than the one on which we stood. The views which we had from other summits later on confirmed us in this opinion, though I am bound to say the 1-verst map makes the northern peak the higher.

There would probably have been no great difficulty in reaching the other summit, but it was late, the weather was still doubtful, and we had had enough.

We descended by the same route in 6½ hrs., and crawled into our tent very wet and cold at 9.30 P.M. The night was a wild one, and in the morning rain was falling in torrents, so that we reached our main camp in the forest wet to the skin.

Every mountaineer who has been in Suanetia must have felt that Tetruld ought to be climbed. It stands in a wonderful position, and surely is one of the most beautiful of mountains. So we decided that this should be our next expedition.

On August 8 we slept on the right bank of the Nageb Glacier, very near to, if not actually at the spot where Mr. Freshfield camped for the first ascent.

Starting at 2.15 we reached the S. ridge of the mountain without much difficulty, and there found traces of an ascent from the opposite or Adish side by some of Mr. Rickmers' party. This was a disappointment, for we had hoped to make the first guideless ascent.

The sunrise, I remember, was particularly gorgeous, and to turn and look at Ushba made many an excuse for a halt.

The great S. ridge, which we followed all the way to the summit, may be compared to the Bionassay ridge of Mont Blanc on a larger scale. It is sensational, for there is a sheer drop of thousands of feet on the W., and exceedingly steep slopes on the E., but an ideal climb for crampons, and we had only to cut a few steps on the whole length of the ridge. We went slowly for the last thousand feet, both feeling the effects of the altitude (Tetruld is 15,918 ft.). A hailstorm on the top spoiled what is said to be the finest view in the Caucasus, but we had had it lower down. The ascent took

7½ hrs., and the descent to our bivouac 3¼ hrs., so it is evident that the climb is an easy one.

The two porters we had for this expedition (of course they came to the bivouac only) were Arraman Cordiani, and Bitta Zourabinai. Arraman I have already spoken of. Bitta was also a hunter, and distinguished by having a breech-loading rifle, which he kept permanently loaded and at full cock. He had crampons, and on the way down from the bivouac, having our crampons in his sack, he suggested that the best way was by the glacier. He led at a great pace, and we were left hopelessly behind, frequently having to cut a step or two where he walked with comfort, and this pleased him immensely. He is a very intelligent old fellow, and we managed to have much talk with him, though his knowledge of Russian was almost as limited as ours. Among other things we had a long discussion on the various sorts of Francos, as they call all Western Europeans. He was greatly relieved to hear that the Germans were Christians. Much to our regret, he had to leave us the next day, having business elsewhere. Though not so strong or energetic as Arraman, he could go on any reasonable rocks or ice.

That evening Rickmers came up and called on us, giving us all the latest news of his party, and suggested that we should pay a visit to the Leksur. So the next day (August 10) we all lunched with the priest of Mujal, rode to Mestia in the afternoon, and on the following day said good-bye to Rickmers, and pitched our main camp on the left bank of the torrent which comes from the Leksur Glacier, just opposite the Chalaat Glacier. It was an ideal place for a main camp. Our last had been too close to the village, and the people came in shoals to stare at us.

On August 12 we made a high camp on the left bank of the Leksur Glacier at the foot of Margyan-Na. Here we slept four nights, and were never tired of the wonderful views which Mr. Freshfield has described in his account of the Mestia pass.

On August 13 we climbed the W. peak of Latsga (13,790 ft.). Starting up the right bank of the westernmost of the two big gullies under Gumachi, we traversed to the right across the small glacier at its head to the col between Gumachi and Latsga, and then followed the N.W. buttress of the latter to the top. There was good rock scrambling for the last 500 ft.; the rest was quite easy.

Latsga is an enormously long ridge (about 1 mile) with

an E. and W. summit. We climbed the W., which Merzbacher makes the higher and calls Ullu-tau-tschana; but the eastern peak certainly looked higher than ours. The most striking view from this summit was to the west, a sea of peaks extending southward from Elbruz, about the sources of the Kodor, each one a Viso.

On August 15 we climbed Bashil-tau (19,685 ft.), a bold rock peak with two great ridges, on the southern of which is a very remarkable rock tower.*

We left our bivouac at midnight, thanks to a mistake in setting an alarm watch at 11.15 instead of 12.15, which we did not discover until we had started; but unless this had happened we should probably have been benighted, as the climb is a very long one.

For 3 hrs. we walked slowly up the glacier by moonlight, taking the line of the Mestia pass, and then halted for breakfast and daylight. The way to our peak now lay to the right, over a rather complicated glacier with some of the most enormous crevasses we had ever seen. At 7.20 we reached the col at the foot of the great N.W. ridge, the ridge which we followed to the summit. The lower rocks were steep and so rotten as to be dangerous, and in one place we had to traverse on to the ice of the eastern face. Just before the final rocks the ridge turned to very steep ice. The quickest way appeared to be to cut across the ice slope and strike a secondary rock ridge which led directly to the summit. This we managed to do, but the ice was very hard and the slope so steep that for absolute safety enormous steps were necessary. You know the sort of thing. When you put your foot in the step the ice above pushes your leg outwards, so that you have to remove a large portion of the slope after the step is cut. But once off the slope we had our reward; rocks as firm as those in Chamonix, and as difficult, I think, as anything but the exceptionally severe climbs there, led us to the summit. It was 12 o'clock. We had been 4 hrs. coming from the col. The view of Tiktengen was splendid, and again satisfied us that the S. peak is the higher of the two.

On the descent we avoided the very objectionable rocks at the foot of the ridge by a long traverse on the western face, and reached the col in 3 hrs. It was absolutely necessary

* This peak has a fine position at the head of the Leksur Glacier. We were unable to satisfy ourselves that the peak marked just to the N. of Bashil-tau on the Russian map, and called Sarikol-bashi, has any existence.

to get off the upper glacier by daylight, so we allowed ourselves only 15 mins. halt, and reached our bivouac at 7 o'clock, just after dark, in drenching rain.

We examined the southern ridge and think it could be climbed. If so, the traverse of the two ridges would make a magnificent expedition. Personally, I got more pleasure from this climb than any I have ever made, though the descent varied so little from the ascent.

On August 18 we bivouacked for Svetgar beside the lower Asmashi Glacier. We had carefully reconnoitred the mountain, and, I think, had found the proper line of ascent; but the weather, which had been perfect, changed suddenly in the night, and snow fell heavily till well into the afternoon. Though it was fine the next day, the mountain would not have been fit to climb for at least three days, and we thought it best to spend these in travelling to another district. So on the 20th we rode over the Uguir to Ipari, and on the 21st to a camp above Ushkul. Ushkul is a village close to the source of the Ingur river, and is 6,762 ft. above sea-level.

Our plan was to climb Nuam-Quam, and on the 22nd we reconnoitred, but could find no way that looked at all practicable. So we turned to the S. face of Shkara for consolation, and found a ridge leading up to the W. peak which we thought might be climbed. The W. peak is 16,592 ft., according to the 1-verst map—that is, 400 ft. lower than the E. or higher point; but from Ushkul the W. peak is very much the finer. The only previous ascent was that of the E. peak from the N. by Mr. Cockin with U. Almer and C. Roth in 1888, and, so far as I know, no attempts have been made on the mountain from the S., or on the W. summit from either side.

On August 23 we bivouacked at the base of the subsidiary peak marked 14,140 ft. (Merzbacher), on the S. side of the western Shkara Glacier, at a height of about 10,500 ft. It was not high enough, but it seemed impossible to take the porters higher.*

It was a lovely evening, and from our camp we had a wonderful view over Racha to the mountains of Ossetia. Arraman, to be more in harmony with his surroundings, discarded the ruffianly looking hat he usually wore, and arrayed

* This subsidiary peak is well seen in the plate opposite, lying just to the E. of the glacier between Shkara and Janga, and separated from the broken rock ridge by which we ascended, by a well-marked hanging glacier.



Sewan Electric Engraving Co.

JANGA & SHKARA FROM THE SOUTH.

Photo by T. Sella.

S. S. S. S.

himself in a bashlik, the well-known picturesque headgear of the Caucasus.

Next morning the weather was doubtful and delayed the start until 5 o'clock. We descended to the glacier, traversed snow slopes at the foot of the subsidiary peak, rounded the corner, and then ascended rapidly, at first on very easy rocks, and then on snow slopes, towards the hanging glacier which separates the subsidiary peak from the main southern ridge. To gain this ridge we had to descend into a very deep ravine and cross under the hanging glacier. For a few seconds



OUR CAMP ABOVE JABESH.

only were we in danger; stones and ice must fall here, but we saw none going or returning.

After this we scrambled up snow slopes and easy rock to the ridge. The lower part was steep and broken, but the climbing was for the most part easy, the difficulty being to find the best route and to avoid dislodging loose stones.

Higher up we came to an extremely narrow snow ridge which gave us much trouble. It was about 250 ft. long, sloped rather steeply downwards from each end, and was slightly corniced in places. We took it most of the way

astride, breaking down the cornice where necessary. We had been climbing very fast till now, but this cost us so much time that we began to fear that we should be benighted, or at any rate should have to return along the ridge at a late hour in the afternoon, when it would be in a very dangerous condition.

This was followed by more rocks, easier snow ridges, and two or three short bits of ice-work, until we got above the level of the subsidiary peak. Above us rose the sloping ledge which leads on to the great final S. ridge, and which from below had looked so easy; but we found it a vile mixture of rock, ice, and snow, set at a steep angle and dripping with water. We got up with considerable difficulty, and it was nearly 2 o'clock when we seated ourselves on some warm and comfortable rocks at the foot of the final ridge.

We then tried to talk seriously about turning back; if we went on we should undoubtedly have to spend the night high up on the mountain, so prudence called for a retreat. On the other hand the peak was certainly ours, the weather was perfect, and in fact the question whether we should be benighted or not had been decided long ago; for it was far too late in the day to attempt that snow ridge two or three hours below us. So we started up the ridge, which was very narrow in places and had a tremendous drop on each side. Fortunately, the snow was in perfect condition nearly all the way, and we were just able to kick steps, the axe being rarely needed.

After climbing for about an hour we came to ice, and our spirits sank terribly, but it only lasted for about 100 ft., then it turned to snow again. But the summit was further off than it seemed, and it was not until 5 o'clock that we reached it.

Though the summit was corniced to the N., we had a splendid view of Dychtau, rising up in a sheer cliff from the Bezingi Glacier at an enormous depth below us. But we could not wait to admire it. As we came down the ridge the sun began to set, and so wonderful was the effect as we looked right across Georgia to the mountains on the Turkish frontier, with Ararat itself in the distance, that each of us in turn kept calling for halts, though every minute was of importance to get us down to the rocks before dark.

The light failed just as we were on the awkward traverse down from the ridge; the dripping water had frozen on the rocks and made their descent very difficult. The snow ridge which leads down from the traverse was easier, but it was

quite dark when we reached the rocks immediately below it. We lit the lantern and tried to find a comfortable place for the night, but the rocks were too difficult to explore by candle-light, and we had to be content with an uncomfortably narrow ledge. We could not hitch the rope anywhere, and were much too insecure to think of trying to sleep—the height of our bivouac was at least 14,500 ft. Neither of us had been benighted before, and up till midnight we endured the experience fairly well; afterwards we found it horribly cold, while clouds gathered, and a little hail fell. We kept our feet from frost-bite by putting them in the rucksacks together with the lighted lantern; but when we tried to improve matters by adding our aluminium stove, we had more heat than we had bargained for, and destroyed a rucksack and a pair of stockings. We should have been wiser to remember our Shakespeare :

O, who can hold a fire in his sack
Though shivering on the frosty Caucasus ?

However, the morning proved fine and we started down, very stiff, at 5 A.M. The snow ridge was in good condition, and the passage under the hanging glacier safely effected. We had a splendid glissade off the mountain, and reached our bivouac just before midday. Arraman had heard our shouts, and soup and grilled mutton were ready for us.

We rested till 4.20. Arraman absolutely refused to let us carry anything, and though almost hidden under his great load of tent, sleeping-sacks, cooking-pots, burkha, &c., led us at a great pace down to the Ingur valley and our main camp.

The next day the weather had broken absolutely, and on the following morning we started in the rain from Ushkul and rode out of Suanetia over the Latpar.

This ended our climbs for the year. But as there are only a few members of the Club who know the Caucasus, it may be worth while to say a little about our general impressions of the country.

The difficulties of travel and transport proved much less than we expected. It is a great advantage to be a small party: to get two or three horses is easy, but if more are wanted the time and trouble are multiplied tenfold.

The climbing, on the other hand, was decidedly more difficult than we had anticipated. Rocks, I suppose, are the same all the world over; but the ice and snow conditions were much more trying than anything we had experienced in the Alps. Wherever a sound snow slope might reasonably be

hoped for, we found some inches of snow on the hardest of ice ; or, again, the snow took the form of a ridge, such as is generally found on the ordinary route up the Weisshorn or on the Gabel of the Gabelhorn. Crampons were a great help, but even with them much step-cutting was often necessary.

On Mr. Woolley's advice we worked hard at Russian before leaving England and on the journey out, and picked up enough to enable us to do without an interpreter. Arraman used to teach us Suanetian by the camp fire, but the pronunciation is extremely difficult, and the natives on whom we tried it did not always understand us. Fortunately, Arraman could also speak Russian, and was extraordinarily intelligent in making out what we meant by our words and gestures.

As to provisions, we found no difficulty in buying (and very cheaply) sheep, chickens, eggs, and the bread of the country—such as it is. Raspberries, blackberries, and strawberries we got by the bushel. We could generally get a sort of cream cheese in the villages, but only on two occasions could we get potatoes, and only once butter and milk. We took from England some soup squares and 30 lbs. of jam in tins of various sizes. This sounds a lot, but it proved none too much. Biscuits, chocolate, cocoa, &c., we bought in Odessa and Batoum. It is very important to take a good supply of biscuits, as the unleavened, half-baked black bread of the country is pretty sure to disagree at first, though in time we learned to like it very much.

We were everywhere most hospitably received by princes and priests, but the princes' entertainments are not quite the thing for men in strict training.

Only those who have been in the country can realise how beautiful are the villages, the trees, and the flowers, and we would urge every climber who finds himself with two months to spare in the summer to go to Suanetia. He will never regret it.

Note on the Route from Kutais, over the Leila Pass.

Start very early from Kutais and drive in a phaeton through Alpana to Orbeli in about 10 hrs. Cow carts or pack horses take the luggage from Orbeli to Tsageri in about 2 hrs. From Tsageri ride or walk to Lentekhi in about 6 hrs. with pack horses. If a very early start is made from Kutais Tsageri may be reached on the first day, but probably the first night will be spent at Orbeli.

From Lentekhi, with porters, follow the Kheledula river for

about 2 hours to a village called Khelade, and in 2 hrs.' time another village, where two rivers meet, is reached (Freshfield's map inaccurate).

Follow the left river for 2 to 3 hrs.' easy walking to a very small collection of buildings in an opening with flat maize fields called Djudari. From Lentekhi to Djudari is an easy and delightful day's walk.

From Djudari turn sharply to the right up the Skimeri valley, which has the Leila visible at its head, and follow it to its end by rough path on right bank of torrent. Then scramble through a wood to an obvious grass ridge which leads up the Leila pass, and bivouac at the top of this ridge at a height of about 10,000 ft. The day will have been spent amid most gloriously beautiful forest scenery.

From here the way is clear on Freshfield's map (the village marked 'Tobalt' is generally called 'Schomari') and the three peaks of the Leila may be traversed—in which case the ascent of pass No. 2 is avoided—and Betscho reached easily in one day.

It would be quite possible to reach the Ingur valley in two days from Lentekhi, but if the Leila pass is not reached very early the view may be spoiled by clouds, and on this account it is better to take three days.

AN ASCENT OF THE ORTLER BY THE S.W. RIDGE.

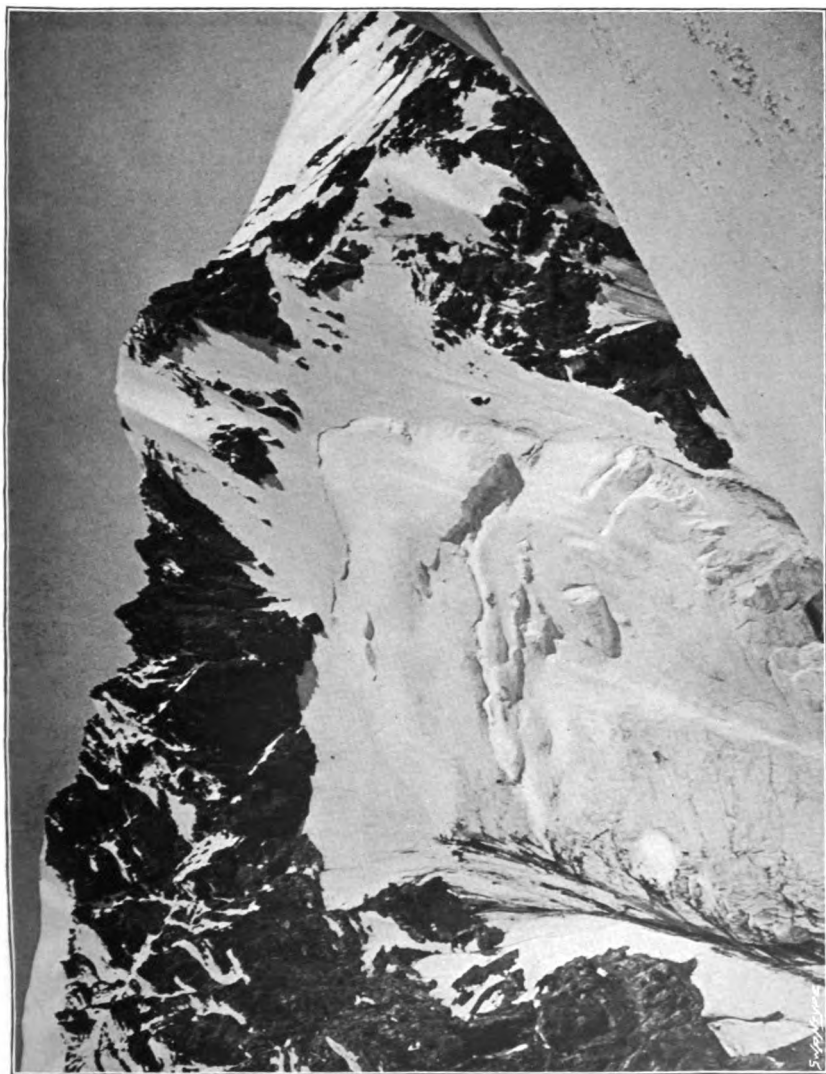
By OLIVER K. WILLIAMSON, M.D.

IT was, if I remember rightly, during a traverse of the Grosse Eiskogele in 1901 that the idea of the possibility of an ascent of the Ortler by the S.W. ridge occurred to my friend A. W. Andrews. The rugged ridge in question extends from the Ortler Pass to join the Hochjochgrat, which connects the Hochjoch with the summit of the mountain. To the south-east of it steep snow slopes descend to the névé of the Zeburu glacier, whilst north-westwards it rises in an even more formidable wall from the lower Ortler glacier. To any one who has looked at this ridge it will be obvious that it is in reality continuous with that portion of the Hochjochgrat which connects the point 3,631 m.* with the summit of the Ortler, the snow arête extending from the Hochjoch to this point being merely a connecting link from the pass. The south-west ridge, as seen from the west, is well shown in the accompany-

* See map of the Ortler in Richter's *Erschliessung der Ostalpen*.

ing illustration, taken from the Thurwieser Joch; the snow arête on the sky line about $1\frac{3}{4}$ inch from the right-hand side is the portion of the ridge close to its junction with the Hochjochgrat, whilst the photograph from the Hochjoch shows the upper part of the ridge (to the left) and the Hochjochgrat connecting it with the summit (to the right), the snowy arête in the centre of the sky line being the point of junction of the two ridges.

Having spent some days in various excursions from Rinaldo Buzzi's excellent hotel at the foot of the Forno glacier, on July 17, 1902, our party, consisting of Andrews and myself with the guides Jean Maitre of Evolena and Joseph Lochmatter of St. Niklaus, accompanied by a porter to carry provisions and wood, left the Cedeh hut and strolled over the Passo del Zebbru to the Capanna Milano, an Alpine hut finely situated close to the Zebbru glacier, and, I may add, an admirable centre for excursions. Andrews had most good-naturedly toiled down the valley that morning in order to fetch the key of the hut from Buzzi's hotel. As the result of an attempted short cut the same energetic mountaineer arrived at our destination a quarter of an hour after the rest of the party. The weather was bad, and rain fell during the latter part of our walk. On awaking next morning, however, we were glad to find the sky clear, and we all (with the exception of the porter) left the hut at 4.50 A.M., and reached the Ortler Pass by the easy snow slopes of the Zebbru glacier at 6 A.M. Here the climb began. Turning a 'gendarme' on the Zebbru side, we traversed below a second great pinnacle on the steep Trafoi face, at first on rock. It was necessary here, and in fact throughout this climb, to test every rock carefully before trusting any considerable part of one's weight to it, and the leader in the course of these investigations treated any loose rocks most unceremoniously and started them in a rapid descent to the Lower Ortler glacier. In fact it is probable that the motto 'Quieta non movere,' whether or not applicable to the more usual phenomena of human life, is hardly appropriate when dealing with rotten rocks. After this slopes at first of ice, then snow, brought us again to the ridge, which we again crossed and took to the Zebbru side. A horizontal traverse was made for a short distance, and Lochmatter, who was leading, then climbed straight up the steep rocks, which were distinctly difficult and not remarkable for their soundness. The customary enquiries as to the nature of the work made by those waiting below elicited merely the usual evasive remarks from the leader, and as soon as the latter had reached safe anchorage the rest of the



from photo by O. K. Williamson

Swan Electric Engraving Co.

HOCHJOCHGRAT AND S.W. RIDGE OF ORTLER, FROM THURWIESER JOCH.

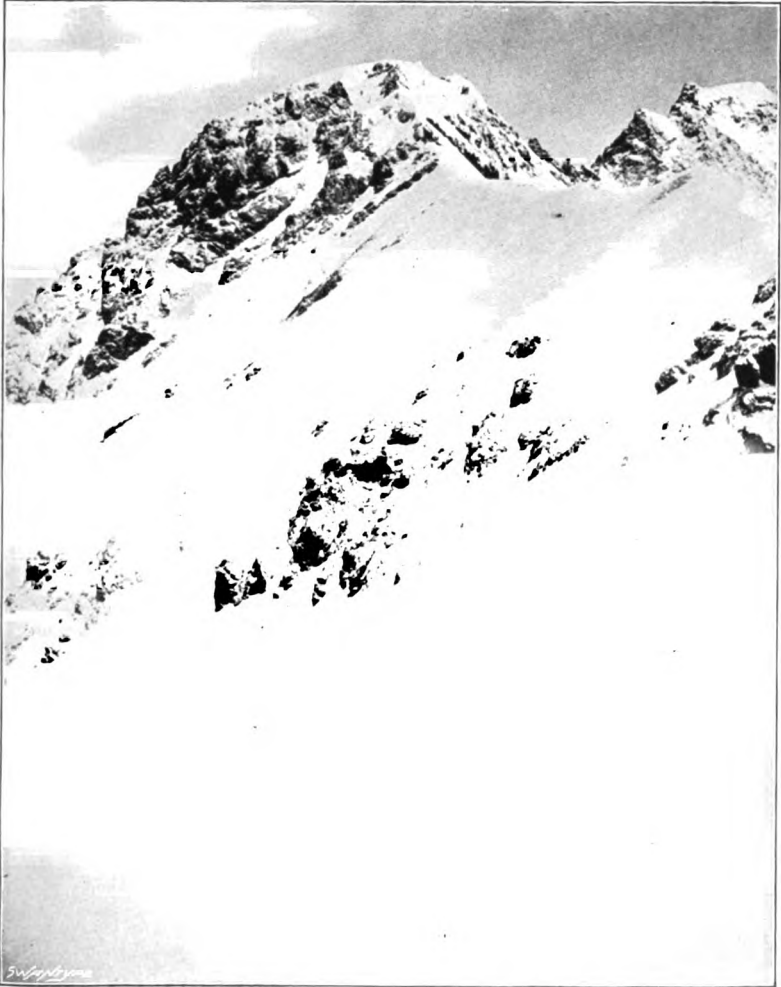
party followed. Again turning on to the Trafoi face for a short distance, the ridge itself was followed for a few yards. A small 'gendarme' about six feet high could not be turned on either side, and, rotten as the rock was, each of the party in turn had to climb over it. A great tower here barred further direct progress. The only obvious way of proceeding was again to take to the very steep slope leading down to the Lower Ortler glacier. Lochmatter traversed out to the left at first on ice, and after this on rock partly covered by fresh snow. Reaching a ledge, which afforded comfortable standing room, he proceeded to climb straight up again towards the ridge, the nature of the work being, to judge from his rate of progress and from certain remarks which escaped him, decidedly difficult. At length he reached a spot some twenty feet above the ledge, where the slope eased off and he was able to obtain firm anchorage. Andrews, who was second on the rope, followed, and duly reached a position near the leader. Jean and I then proceeded as far as the ledge, and the former then started carefully to scale the wall. For some six feet this was vertical and the rock composing it decidedly insecure. When three or four feet up it a rock on which his weight was resting came away and crashed down to the glacier, whilst Jean landed abruptly on the ledge. A second attempt was more successful; he soon joined the other two. I followed, but although by dint of great care and a distribution of one's weight over the maximum number of insecure protuberances one was able to get up without any more than the 'moral' support of the rope, yet I felt that for the leader the matter must have been serious. The ridge above the tower was now reached without further difficulty, and we were able to follow it, at first over easy rocks. These, however, soon gave place to a snow arête, and a few steps more and the point of junction of our ridge with the ordinary Hochjochgrat route, overlooking the Sulden glacier, was reached at 8.25 A.M., or in about $2\frac{1}{2}$ hours from the time of leaving the pass. The weather had become less settled and mists were swirling round the fantastic pinnacles of the Hochjochgrat, adding not a little to the striking character of the scenery.

The rocky summits, split and rent,
Formed turret, dome, or battlement.

As much work still remained to be done ere the summit could be reached the climb was proceeded with almost at once. A few yards on snow followed by rock and we reached a formidable-looking 'gendarme,' which it seemed advisable

to turn on the Sulden side, even if it would have been possible to climb it direct. In order, however, to allow our judgment on this important question to mature it was considered desirable at this point to rest a few moments for food. We then carefully descended a few steps, on the Sulden side, the rather steep slope consisting of a considerable amount of fresh snow, with here and there rocks jutting out of it. Traversing this for a very short distance we were glad to be able to follow the ridge itself for a time. A second pinnacle again drove us on to the eastern slope, where it was still necessary to tread down the snow carefully, so as to gain really safe foothold. Ascending a rotten splinter of rock one at a time we again reached the ridge. The final tower we turned by a traverse on the Trafoi side, the work being sensational but not of serious difficulty, although after the rest of the party had disappeared round a corner the last man was left alone for some minutes to contemplate nature and 'the great brown slabs bending over into immeasurable space,' and he naturally made anxious enquiries as to what was in store for him. To these questions Jean, as so often, returned the simple but somewhat unsatisfactory answer, 'Venez toujours, monsieur !' Beyond this point a short icy chimney led us again without difficulty to the ridge. A few minutes after and the snow of the Ortler plateau was reached, and a short walk along this brought us at 11.45 A.M. to the summit. A long rest here was spent in enjoying and photographing the somewhat clouded view, and we descended gaily by the ordinary route to the Payer Hütte and Trafoi.

There can be no doubt that the S.W. ridge of the Ortler is decidedly more difficult than the Hochjochgrat. Further it is certain that under favourable conditions it would be easier than we found it, for on July 18, 1902, there was much fresh snow, necessitating great care throughout the climb. Jean Maitre, as always, displayed thorough soundness of judgment, but I believe that our success was principally due to Lochmatter's admirable leading.



from photo by O. K. Williamson

Swan Electric Engraving Co.

S.W. RIDGE OF ORTLER AND HOCHJOCHGRAT, FROM HOCHJOCH.

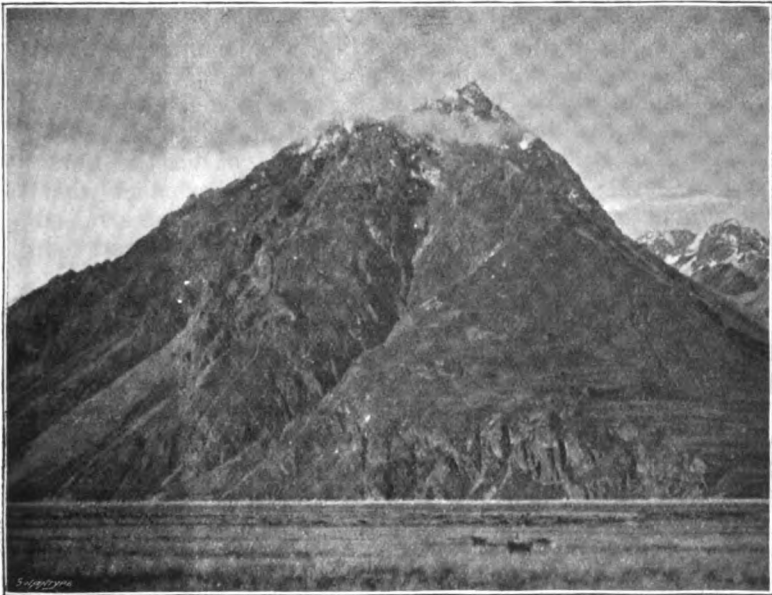
THE NEW ZEALAND ALPS.

BY O. J. BAINBRIDGE.

PART II.

The Ascent of Mount Blackburn and the Climbers' Col.

AN entry in my diary dated March 22 reads, 'The storm that raged when we returned from the Tasman Valley continued for three or four days and the snow line has been considerably lowered. I was glad of a day or two's rest, but



MOUNT BLACKBURN.

though the weather has cleared a little, the wind is still from the N.W. and our chances for to-morrow are rather doubtful.'

We had decided to make an attempt on Mt. Blackburn, or Rotten Tommy, as it is familiarly known. From some points of view this peak has a commanding individuality; it rises over five thousand feet from the Tasman River, and from the point where we made our examination, some three or four

miles away, seemed to present no difficulty. Situated, as it was, outside the region of ice and snow, we had less to fear from the inclemency of the weather. We wished to make an examination of the Nun's Veil, with a view to climbing this peak as well, and Rotten Tommy we knew would give us all the information we required.

The most important consideration with us, however, was that the latter peak had never been previously ascended, and we thought it would be quite wrong to leave the district without making at least one new ascent.

On Sunday, the 23rd, therefore, we started off to ford the Tasman River. The weather was threatening, the N.W. winds tearing across the sky. Besides the pack-horses we had two ponies, and we took Hans Fluckinger to look after them. Clark of course accompanied us. We were making for a stockranger's hut which lies at the side of the river at a point about a mile below the ridge we intended to follow. To one not used to fording rivers the experience was sufficiently interesting, especially as when I got on the horse behind Clark I was subjected to unpleasant movement when the animal gracefully, though with extreme suddenness, raised his hind legs from the ground. No other mishap occurred, however, and we reached our hut in safety.

We set about making arrangements for our comfort, and after dinner climbed up the hill a few hundred feet to see if we could get a view of Mt. Sealy, which looks very well from here. Unfortunately, the mountain was hidden in cloud.

We were very anxious for the morrow, as the N.W. wind was blowing very strongly. In the hut we found it so close that we were obliged to keep the door open all night. We both slept badly, not entirely owing to the warmness of the atmosphere or the sound of the wind beating against the corrugated iron walls of the hut. The cause, I fancy, was a more animated one.

At 6 A.M. on Monday morning it was sufficiently light to start, so we rode up the bed of the river until we came to a convenient place from which to attack the grass slopes which led to the S.W. arête. Here we dismounted, arranging with Hans that he should take the horses further on to the next hut, which we expected to meet by a traverse of the mountain.

We began the ascent at 6.30 A.M. This grass slope was no worse than other grass slopes, but seemed a little longer. The Sealy range of hills was enveloped in cloud, and the Tasman and Hooker Valleys seemed to be enjoying the usual West Coast weather.

Knowing that if we joined the ridge too soon we should have to descend two hundred feet to a col from which the actual climbing began, we endeavoured to traverse along that on the south side of the ridge, but when the grass slopes gave way to shaly and rotten rock we found it more convenient to take to the ridge. When we had reached the point where it was necessary to descend to the col, we had opportunity of making a close examination of the work before us. Beyond the col the arête seemed blocked by huge obstructions in the way of gendarmes. Higher up there was no sharp arête, but the rocks had an extremely rotten appearance; we feared our 60 ft. rope would in many places be worse than useless.

The descent to the col was an excellent example of the work we expected higher up. We each descended the gully in turn, dislodging an avalanche of stones in front of us, and then finding a convenient place for a rest and breakfast. There was no water, but we carried, besides a bottle of whisky, a water-bottle holding a quart of oatmeal and water. The other provisions were a tin of sardines, a tin of herrings, some raspberry jam, bread, butter, and one lemon. An occasional wineglassful of oatmeal and water, whisky, and squeezed lemon proved very refreshing.

Soon after leaving the col we came across the first of the gendarmes which block the arête. Here we put on the rope. For some way after this we found the climbing much more interesting than we had hoped for, but progress was rather slow, as no sooner had we mounted one obstruction than we were confronted by another. To have left the arête would have necessitated unpleasant traverses on very rotten ground, while here at least we had interesting climbing and fairly good rock. On the other hand, we had to face the possibility of finding when one gendarme had been conquered that we could not get down to the next. Such seemed to be the case when after an hour or two we found ourselves separated from what appeared to be the final ridge by a sheer descent of a hundred feet. Clark proposed avoiding the difficulty by going to the left, but, as this would mean a long and uninteresting descent, we determined to try a long steep chimney on the right. I went down to explore with the whole length of the rope, and reported that it would go. Then, unroping and moving out of the chimney to avoid the stones which preceded Tennant's descent, let him pass me to the bottom of the chimney. Then came Clark, with the rope hitched round a rock, and when he had joined me I put on the rope again and continued down the face to safer ground.

This difficulty had caused us some delay and the expenditure of much energy, so we had another breakfast. We were thoroughly enjoying the ascent, as we found it much more interesting than either Mt. Sealy or Mt. Darwin as far as the climbing was concerned, though we did not have the advantage of sampling any snow or ice work. We pushed on again after a short rest, for time was flying, and we could not hope for many hours of daylight so late in the season. We found, too, that we were not on the final slope, as other gendarmes appeared ahead of us. In this way the climbing continued interesting, and when at last the arête gave place to an extremely rotten slope we thought it wise to take off the rope. I made for a snow couloir on the left, Tennant followed Clark to the right, and thus we continued till better ground was reached.

We had mentioned at the Hermitage that we hoped to reach the summit between 11 A.M. and noon; but it was long past that time before we reached a point where our difficulties were at an end. Half an hour along an easy ridge brought us to the summit. We had been 10 hrs. in the ascent. A cairn was erected, and our names inscribed on a piece of slate.

Unfortunately the mountains were in cloud, otherwise we should have seen a panoramic view of the whole chain. As it was, Nun's Veil was the only peak we could see to advantage, and we found that the valley below (details of this part do not appear in the maps), taking a northerly direction, led right up to the base; but an ascent from this side (the S.) seemed rather a tedious matter, as the hut at the bottom of the valley was too far off, and, even if a suitable encamping ground could be found near the mountain, the rocks introducing the glacier which led to the summit appeared extremely rotten.

We finished the oatmeal and water, and had some bread and jam (unfortunately, the sardines and herrings had been finished below), and then, as we had only three hours of daylight left, we confronted the problem of how to get down. To return on our tracks was obviously impossible if we wished to reach shelter that day, for, though there were numerous gullies leading down the northern face of the mountain from different points along the arête, there was one leading direct from the summit which we had no reason to consider was any worse than any other. It was obviously the gully to follow if we wished to descend in that manner. To continue down the N.E. arête would be also inviting delay, as the

rocks were steep and very rotten. We set off, therefore, unroped, going one at a time, at first, as quickly as we could, for fear of dislodging stones; we also kept a sharp look-out for anything that might fall from above. Good progress was made in this way at first, as the ground was so steep that we could almost glissade in the soft shingle. Soon we came to water, which was much needed; but it introduced more difficult ground, for as the water increased so did the size and smoothness of the boulders we had to descend. We were soon brought to a stop by a sheer precipice, which closed the gully as a practicable route for the descent. We traversed out of the gully to the face in the hopes of finding a practicable route elsewhere. We were now among scrub, snow-grass, and a particularly unpleasant growth called Spaniard, which was apt to resuscitate failing energies in a sudden and unlooked-for manner if one chanced to sit down or slip on it. We separated a little to explore, and Clark called out that he thought he had found a way. It was down a precipitous, partly overhanging pitch of rock to a sloping grass ledge. Fifteen feet below this, again, was easy ground, and I went down on the rope to see if there was any way off the ledge. I had to traverse an awkward slab, and then swing for it, which I did in mid-air for an uncomfortable second, getting a sleeve full of water before catching a hold which brought me to comparative safety. There was a vertical chimney leading from the ledge which seemed possible, so I called back that it would be all right if Clark could find a suitable anchorage for the rope. Meanwhile, Tennant came to the edge of the slab and enjoyed a period of extreme thoughtfulness. The result of much discussion was to abandon the scheme, as the only possible rock for anchoring the rope was in an unsuitable position. I was therefore hauled up again, and, traversing still further round to the S., we found ourselves separated from another gully by some steep rocks, which, however, presented no difficulty. When nearly in the gully, Tennant, who was alone and in front, unroped (it was getting dark, and we were neither in the mood for, nor had time to waste in, extra caution), found an interesting ledge-traverse, which brought him to easy ground again. Clark and I were still roped, and we were in the middle of negotiating the traverse (it was about 60 ft. long) when a clatter and a whiz and a sudden jerk on the rope introduced to us the only risk there was in descending down the northern face. One small stone had struck the rope. We crouched against the rock until the interruption

had passed, and then joined Tennant in the gully, where we congratulated ourselves on a difficulty overcome, and finished the whisky.

Perhaps there was not much cause for congratulation, as we had wasted half an hour, and it was quickly growing dark. We left the gully again a little lower down, reaching the grass slopes we had been making for before. All went merrily for a time, but here my bump of locality fails me, as it was almost dark. At one point we would be making use of the tufts of snow-grass to descend steep bits; at another we would be negotiating the boulders in ravines. We were finally brought to a stop by another waterfall and its accompanying piece of precipice.

Half an hour more of daylight and we should at least have been on comfortable ground, as this was the last piece which required any climbing. As it was, in our frantic efforts to get down we only succeeded in landing ourselves in a most uncomfortable position, and we considered ourselves fortunate when we managed to find a place where there was at least sitting room for three.

Here we spent the night. Overhanging ground above provided some shelter, while the rope tied firmly to some scrub rendered our position safe. It was not at all comfortable, however, as there was a grassy precipice below, and our ledge had an uncomfortable slope in the wrong direction. Water was so close that we could feel the spray from the waterfall, which the gusts of wind liberated through the night. But it was now too dark to move, and we had to do without it. Luckily, the N.W. wind was warm, and though the storm was raging in the Hooker and Tasman Valleys we remained protected. Our supper consisted of a teaspoonful of jam and a piece of bread, after which we settled ourselves as comfortably as possible and tried to sleep. We were very fortunate in escaping rain, as we had to remain for 10 hrs. on the ledge awaiting daylight. This came very suddenly at about 6 A.M., and after eating a small piece of bread we looked about for a way to descend. A rock traverse and a long vertical chimney, where the tufts of snow-grass provided suitable hold, brought us to the final slopes of débris, and then we had nothing to do but walk down the valley (this valley joins the Tasman from the E. at right angles) to the hut. I was feeling so empty that a stone in one of my boots provided a suitable excuse for a rest; the others went on to prepare a meal. It was a rough walk down, and occasionally the boulders of the stream had to be relinquished in favour

of the slopes; but the hut was reached at about 8.15, and I followed Tennant's example in throwing myself into the ice-fed stream before enjoying the bacon and eggs which were being cooked by Clark.

It was almost reasonable to suppose that when Hans saw two of the party returning after being out all night he would have shown some curiosity as to what had happened to the third. But it was not, apparently, a matter that caused him the slightest anxiety, as he did not even inquire where I was.

The time occupied from hut to hut was 26 hrs. An hour's rest after breakfast thoroughly refreshed us, and as the rain was coming on we prepared to cross the Murchison and Tasman rivers. The fords were successfully negotiated, and as on approaching the Hooker we found the cage on the other side, Clark took the horses over and brought the cage over for us. We came into the full fury of the storm in the Hooker Valley, which rather spoilt the thirst we were accumulating for the Hermitage, but we did not despise a pint apiece when we got there, and by the time we were re clothed lunch was ready.

Rotten Tommy proved a pleasant surprise, as we found a good deal more mountaineering work than we expected; at the same time there were none of the problems to be found in the Alps or Tyrol, nor was the climb particularly exposed. On a fine day the panoramic view from the summit of the chain of peaks from Mt. Sefton to Mt. Elie de Beaumont would be one of the finest that could be got from the east side of the range; but the expedition is probably too long and troublesome to become a popular one.

On Thursday the 26th the weather changed again, and a cloudless sky invited further expeditions. Meanwhile new visitors had arrived at the Hermitage, and among them was a lady journalist who was most anxious to ascend Mt. Cook. This project unfortunately had to be given up, and an excursion up the Tasman Glacier was arranged instead. Mr. Nanson, from Calgoorlie, formed one of the party, while Tennant was sufficiently energetic to make the third. I found the luxuries of the Hermitage too enticing to undertake the 24 miles journey a second time, perhaps without the chance of making any ascents at the other end, so I arranged to have a carrier pigeon taken up, and if Mt. Green seemed in condition I would go up to the Maltebrun hut in one day. I saw them off as far as the Hooker crossing, while Clark went round to bring the cage across.

The 27th was fine again, and at 5.30 p.m. the pigeon re-

turned from the Maltebrun hut, making the 24 miles across the Tasman Glacier over the Cook Range in under an hour. I was informed that the rocks leading to the col between Mt. Green and the Coronet Peaks were fairly free from snow, that they were going to examine them closely on the following day, and, 'would I bring them some bread?'

Saturday was fine, and I rode down with Smith, who arranged to see me over the Hooker. I took my camera, a loaf of bread, and some butter. The Hooker, curiously enough, was low, and when Smith left me on the other side the way seemed clear enough, but the streams of the Tasman were much swollen, and at one place I had some difficulty. Eventually I found a fordable place and reached the Ball hut in 3½ hours. I was sampling some of the tinned provisions when Hans turned up; he seemed rather annoyed that the horse had escaped and was making his way back to the Hermitage, but I fancy his chagrin was lost in the enjoyment he got from some chops and potatoes which he had managed to raise from the Hermitage.

I left him there (he had come to get more provisions), and made my way up the Tasman Glacier alone. Four hours' walking brought me to the Maltebrun hut, just as the others were returning from their examination. They reported that the rocks seemed good, but very steep, and that small stones had fallen when they were there.

We rose at a quarter to four in the morning, and after a breakfast of bacon and bread and jam we descended to the glacier and began the long trudge in the direction of the Hochstetter Dom. The day was beautifully fine, and the pace was sufficiently easy to allow appreciation of the beauty of the scene around us. The small glacier leading to the foot of the rocks was broken by huge crevasses, but owing to the steps that had been cut the day before our progress was uninterrupted, and we reached the foot of the rocks in two hours and a half.

While breakfasting we examined the snow route, which had seemed from the hut too broken by crevasses to be feasible in March. A closer examination, however, gave us a different opinion on this point. But once at the foot of the rocks we found them too attractive-looking to relinquish, and though, even from where we were, the southern arête of Green seemed sharp and difficult, owing to the huge slabs of rock which introduced the climb, we should have at least on the col the advantage of getting a close view of some of the glaciers and peaks on the W. of the range, while we hoped if

the arête was impracticable to find a route by crossing over on the W. face (from a point on the Tasman Glacier opposite to De la Bèche, a small piece of the western side of Green can be seen; it appears as if a snow-slope led to the summit). There was only one place where the rocks could be attacked, as a bergschrund everywhere else divided the mountain from the glacier.

For 200 ft. the rocks rose almost vertically, and the succession of chimneys we had to follow were subject to a fall of stones. Clark was leading, and patches of hard snow which had to be cut away or carefully proven retarded his progress. Ascending vertically for 12 ft., the way led round for a few yards across the face to the S., introducing a chimney, at the top of which another small traverse was necessary northwards, and then came a long difficult chimney, blocked at the top by a boulder, which had to be climbed before we were in the gully down which the stones had fallen the day before.

Our progress to this point was very slow, one moving at a time, and even then the position of the anchored man was none too secure. Clark left the rucksack and the axes at this point while he crossed into the gully, and when I arrived at the obstacle I offered to put it on (the rucksack). This proved to be none too easy, as my foothold was not sufficiently secure to allow the use of both hands, and the sack was heavy. When at last word was called down for me to follow, my progress was so impeded that I made use of the rope in surmounting the rock and climbing the chimney which followed. The climbing was still steep, but hardly so exposed, but we had left the good rock behind and we found the comparatively short pitches in the gully more dangerous than anything; for, as is generally the case, an unknown route provides difficulties which seem to fade away when the mountain is 'cleaned' by successive parties. Anxious to get out of the gully as soon as possible, Clark traversed over some loose ground (again northwards), and when he was hidden in another chimney Tennant followed. The unaccustomed weight in difficult work made my balance sufficiently insecure, and I was anxious about the position the man ahead of me was in before I made a start; but the possibility of the rope coming off never struck me, and when, after negotiating the traverse, I looked down to find the rope all but free, the position was quite uncomfortable. However, our work for the moment was nearly over, and Clark resuming the sack, we were soon able to leave the gully, and on a ridge which

guards it on the northern side we found a suitable place for breakfast. We had taken 2 hrs. to reach this point, and as the descent over the same ground occupied half as much, it will be seen that our progress was a good deal slower than it ought to have been.

We were now out of the range of falling stones, and had a meal of bread and jam. The rum had leaked and was all gone, but we had oatmeal and water to drink.

The Hochstetter Dom and the snow-fields of the Tasman Glacier looked well from here in the morning light, and the western face of Darwin, still in shadow, stood out in strong relief. The precipices of Maltebrun caught the eye, while far away to the S. could be seen the mountains of the Sealy Range, and the hills which guard Pukaki.

The formidable ice slope leading to the col was still hidden by intervening rocks, but the southern arête of Mt. Green stood sharply against the sky, and the eastern precipices of ice and rock were a sight to be remembered.

The ridge we were on continued for about 50 ft., and then steep rocks again barred the way, and as we had to choose between these and traversing northwards to the col—a feat which would require much step-cutting and loss of time, as there were ice-slopes intermingling with patches of rock—we chose the former.

When the ridge and a short ice slope brought us to the rocks, single movement was again imperative. Our direction was a gradual bearing to the right, and the traverse which ensued was difficult and insecure. After this the angles of the rocks and ice slopes grew easier, but this was counter-balanced by the increased necessity for caution, for the rocks were very rotten. The sun's rays caught us as we rose, and the glare necessitated the use of goggles.

Nothing further however transpired to interrupt the ascent, and we reached the rocks on the ridge above the col at half-past eleven o'clock (6½ hrs.). To cross the col to the arête would have been simple enough, but a glance at the terrible slabs which rose on the ridge proclaimed the ascent by that route out of the question.

The word 'impossible' is a large one to use when one knows what has been done among the Aiguilles of the Chamonix Valley, otherwise I should have had no hesitation in using the word in regard to this arête. Seen from across the Tasman Glacier, the angle of the rocks is inviting, but from the col the appearance is greatly changed. Even had the route appeared feasible, the time taken in ascending to the

col would have made the ascent impossible. With only 12 hrs. daylight it would not do to risk another night out, especially as we were in the midst of the region of ice and snow; nor could we descend with any hopes of working round the western face, for the same reason.

Our efforts were at least rewarded by the splendid view the West Coast gave us. Below was a wonderful array of glacier and serac, which would have made a pass to the West Coast at that time of the year an exceedingly difficult problem.

We could see the River Kellery winding to the sea between bush-clad hills, nor did the bank of silver cloud float up the valley before we had seen the breakers dashing on the western



THE CLIMBERS' COL.

shore. Southwards, beyond the broken ridge which leads to the Coronet Peaks, the upper snowfields of the Franz Josef Glacier showed with startling brilliance. If the eye could avoid for a moment the wonderful southern arête of Green, one could see in almost transparent whiteness the beautiful western arête of Elie de Beaumont beyond.

To the N., again, the Hochstetter Dom looked well, while beyond the snowfields of the Tasman Glacier we seemed to look upon the sea again in the pale blue sky.

We had subsisted for 7 hrs. on bread and jam, so we opened the sardine tin on the col and made a fit repast, after which, as is often the case, it was all we could do to keep

awake. The reaction from hard exercise caused a feeling of languor, of which even the beautiful and varied scenery was unable to relieve us. But an hour and a half was sufficient to put most of our rocks in shade, and we donned the rope again. I was leading in the descent, and the special enjoyment of re-discovering our route was tempered by the condition of the ice slopes, which the sun had not improved.

When we arrived at the point in the ridge which overlooked the stone-swept gully where we had made our first halt in the ascent, one of us proposed a rest. Some jam and biscuits were still left in the rucksack, and we had just got nicely settled when an avalanche of stones descended from above. For a moment we could see huge blocks against the sky, the next we were crouching against the rock, unprotected but unhurt, except for a splinter which caught Tennant in the eye. It must have been merely a speck, sufficient to inflame without damaging the eye. Most of the stones, however, made for the gully, and thence to the glacier, quite blackening it in places.

This gave us a bit of a turn, and as we were obliged to follow the route into the gully we wasted no time in admiring scenery, but plunged *in medias res*. It may have been the cause for haste or the consequence of knowing our rocks which made the descent seem easier than we had anticipated. We had, it is true, a spare rope, which we anchored in convenient places, but it was an unnecessary precaution, though it helped us in our movements.

We threw our axes and the sac down to the glacier from a convenient place, mine reaching the bergschrund between the rocks and the glacier (for even where we left the glacier there was a small schrund), and as this was a trap for falling stones I negotiated the short scramble in double quick time.

It was a relief to be out of danger, and there was nothing left to do but to descend the glacier to the hut. We arrived in darkness at a quarter to eight. Even Hans bestirred himself for once, and the fried sardines, tongue, stewed pears, and coffee which formed our dinner was an excellent conclusion to a very enjoyable day.

Perhaps it would be difficult to defend the 15 hrs. taken on the expedition. Moving on unknown ground is, however, often slow, and our party, in spite of Clark's excellence as guide and companion, comparatively speaking, was not a strong one. As the col is unmarked in the maps, we can hardly claim that the expedition or the photographs which we took of the West Coast mountains are of any particular

advantage to mountaineers or topographers. It gave us, however, the best bit of climbing we had in the district, and I was glad enough that the pigeon had not lost his way.

On the following day, Monday, March 30, we returned to the Hermitage. At the Ball hut we met two ladies whom Clark had been expecting for some days, and who made later with Miss Barnicoat and W. G. Tennant an expedition to the West Coast over FitzGerald's Pass. We took their horses on to the Hermitage, while they continued their journey on foot to the Maltebrun hut. Unfortunately they came into the bad weather we were leaving behind, and were snowed up there for a whole day.

Nothing more remains to be recorded of our experiences of the New Zealand Alps. On Friday, April 3, I left the Hermitage; on the same date Tennant started on his West Coast trip, and it was a fortnight before we met again at Greymouth.

The season was a bad one as regards weather, but in spite of this Clark found his hands full for the greater part of the time.

For twelve weeks, besides the tourists whom, as the representative of the Tourist Department, he was obliged to cater for, there were mountaineers as well; only three of us altogether, Mr. MacDonald for the first six weeks and Tennant and myself for the second, but quite a sufficient number considering there was no one besides Clark at the Hermitage who had done any real mountaineering work at all. If we were unfortunate in the weather, we were fortunate at least in finding in the only guide an enthusiastic climber and a splendid companion. Situated as he is, his opportunities of ascending peaks have in the past been limited, as very few mountaineers have visited the Hermitage. In spite of this he has accumulated a knowledge of the subject which only enthusiasm could give him.

If we had received the impression that he would prove an unsafe companion on a mountain our fears were quickly set at rest.

Perhaps recognising that an occasion had come which he could hope for in few seasons, he did all he could to secure success for the few expeditions we were enabled to make. Combining as he does a very fair knowledge of mountaineering with a facility for carrying heavy weights, we could not have had a better man.

We owe him an expression of appreciation all the more in consideration of the special circumstances of the case,

circumstances which we only happened to discover when we came to examine the tariff for our ascents.

The tariff, by the way, would need revision if much mountaineering work were done in the district, as all high peaks are classed the same, irrespective of difficulties.

We found out in conversation that he gained nothing by climbing mountains, as the tariff went to the Government, and beyond his salary as Government guide he did not receive a percentage on the ascents made. This being so, it would almost have been excusable if he had never climbed at all, instead of being able to claim, as he can, most of the important first ascents (important from a climbing point of view) which have been done in the Mt. Cook district.

HOW TO CLIMB KANGCHENJUNGA: A TOPOGRAPHICAL NOTE.

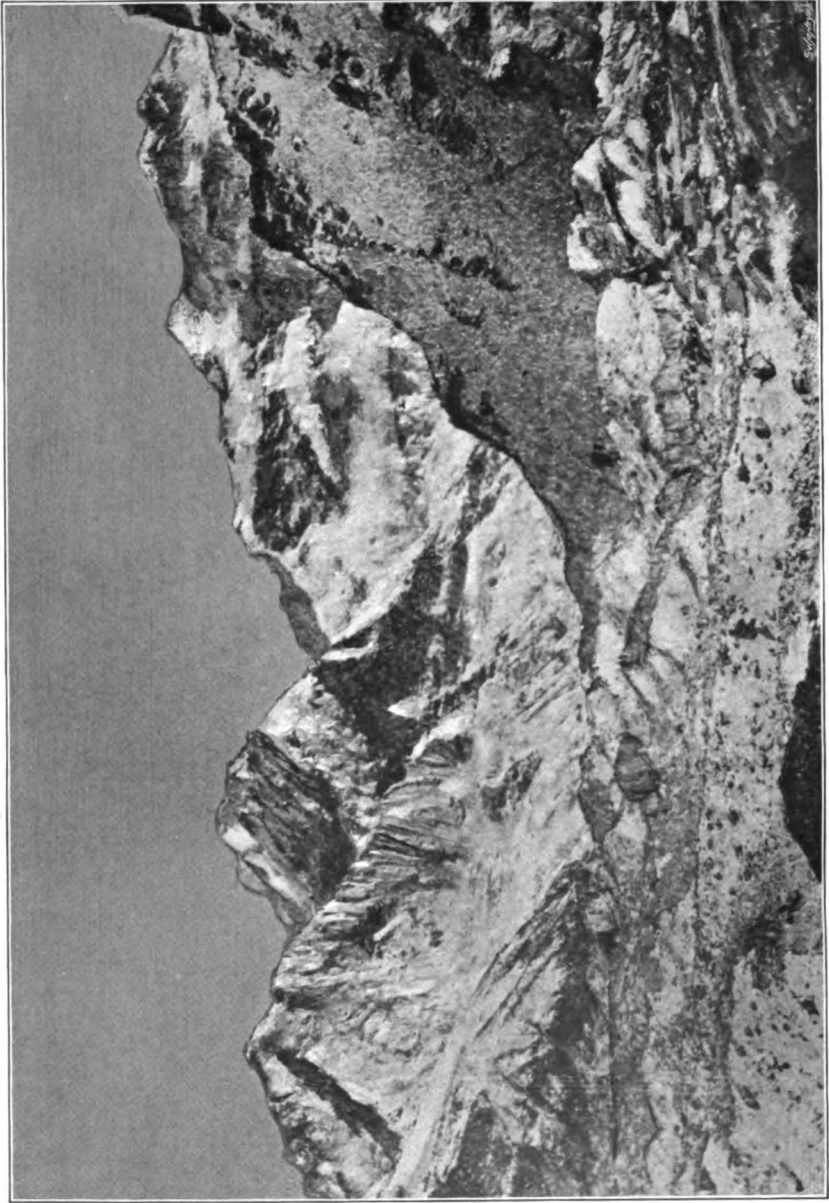
By DOUGLAS W. FRESHFIELD.

IN my recent volume 'Round Kangchenjunga' I referred in somewhat discouraging terms (pp. 171-2) to the possibility of a way to climb the mountain being found on its N.W., Nepalese, flank by the cirque at the head of the Kangchen Glacier. The problem to be faced in any attack on Kangchenjunga from the north is how to reach the gap between it and the peak (23,350 ft.) I have called 'The Twins.' On the Zemu side, unfortunately, this gap is defended by apparently impracticable and avalanche-swept precipices, while the singular buttress which, starting from the northern ridge halfway between the gap and the peak, falls into the upper basin of the Zemu glacier, is of the most repulsive aspect.*

But on the western, or Kangchen Glacier, side it is not impossible that a fairly safe line of ascent to the before-mentioned gap may be discovered. It is true that the centre of the cirque under Kangchenjunga at the head of this glacier consists of a series of rocky cliffs and icy shelves, which, even if practicable, must be too much exposed to avalanches to offer a reasonable or legitimate route to mountaineers. But at the back of 'The Twins,' † and to the left (as one looks into it) of the cirque, lies a recess which deserves a close

* See the illustration opposite p. 114 of my book.

† See panorama opposite p. 173 of my book. On p. 181 of volume xx. of this Journal I expressed myself unfavourably to this route, which commended itself from the first to Garwood.



E. Garwood, photo.

KANGCHENJUNGA FROM THE KANGCHEN GLACIER.

Savan Electric Engraving Co.

inspection. From the site of our Pangperma camp it is not visible, but comes into view for a few minutes as the traveller descends further beside the great trunk glacier. I consequently only had a passing glimpse into it at the time, but none of Signor Sella's photographs show it completely. But by putting together two little photographs of Garwood's I have succeeded in securing an accurate and almost complete representation of this interesting corner—which I offer here for the benefit of future explorers, who can form their own judgment as to its capabilities. The height of the gap must, at a rough estimate, be about 22,000 feet. It is therefore about halfway in vertical height between Pangperma and the top of Kangchenjunga.

There seems little doubt that the climb up the northern ridge above the gap, though stiff at first, would not be impracticable, and towards the summit would grow relatively easy. Those who look at this ridge from Gantok are naturally led to think that it is the obvious route to the top. The difficulties, as I have already shown, lie lower down. Should they prove insuperable, are there no other assailable places on the great mountain? I am not prepared, and it would be rash with our as yet imperfect knowledge, to give any positive answer to this question.

The very long and lofty western ridge of Kangchenjunga might certainly be traversed on or near its crest. The traverse would lie between 25,000 and 28,000 feet and be about three miles and a half in extent. The preliminary climb from the head of the Ramthang Glacier would be steep. As far as we saw the slope is protected by formidable hanging glaciers ending in ice-cliffs. But we failed to obtain any complete view in this quarter.

There remains one other possibility. It is conceivable that the rockwall at the head of the Yalung Glacier might be overcome by the help of a shelf conspicuous to the right of a horseshoe cliff in the plate opposite p. 234 of 'Round Kangchenjunga.' This would be a very direct route up the sun-warmed face of the mountain, but a prodigious climb. Careful study of the face with regard to exposure to rockfalls would be essential. The western ridge would be gained close to the foot of the final peak and not far below it.

Let me add that for explorers not prepared for any such daring adventure as this climb there is no part of the range that offers a more desirable field for exploration than the head of the Yalung valley and its glacier. It is, I think, unlikely that any Nepalese officials would be found to interfere with a

party who confined themselves to this district, which is easily accessible from Darjiling over the Kang La; while a certain amount of provisions might be procured at the chalets of Tseram.

For the conquest of the great peaks of the Kangchenjunga Group I remain convinced that climbers must, like the Swiss conquerors of the southern peak of Ushba, be prepared to carry their own wraps and provisions for their nights out. If they cannot do this, their best chance lies in securing the services of Gurkha soldiers who have been trained by Major Bruce or some equally efficient soldier and mountaineer. With ordinary coolies they can hardly hope to attain a camp of over 20,000 feet.

In conclusion, I should like to use this occasion to repeat an enquiry often made by English mountaineers. When shall we hear of the founding of an Himalayan Club in India, which will encourage and direct mountain exploration and research, and will be in a position to assist climbers coming out from Europe? Why is it only in India that our countrymen, as a body, show little or no interest in mountains except as a background for sport? It is not altogether, as is sometimes alleged, lack of leisure or means, for Himalayan sport requires both. From the Cape we receive the Journal of a flourishing mountain club. New Zealanders have done much towards the conquest of their Southern Alps. I cannot but hope that the improvement in access to one portion of the snowy range consequent on the Tibetan expedition may help to give an impulse towards its exploration, and that some of the Englishmen who have spent a winter at the foot of Chumabhari may be so far infected with mountain fever as to make them qualify themselves to be the founders of an Himalayan Club.

THE MYSIAN OLYMPUS.

By G. PERCIVAL BAKER.

THE ascent of Mt. Olympus of Mysia, Asia Minor, offers a most interesting excursion to anyone who may happen to be in the neighbourhood of Constantinople and to have five or six days at his disposal to devote to the trip. It is reached by Turkish steamer from the capital, the place of disembarkation being Mudania, on the S.W. shore of the Sea of Marmora, whence by rail over the outer barrier of hills which fringe this end of the Marmora the traveller crosses a fertile



G. P. Baker, photo.

Swan Electric Engraving Co.

MOUNT OLYMPUS RANGE FROM THE N.E.

plain to Brusa, the first capital of the Turks. It is a city of 70,000 inhabitants, and is situated on the northern slopes of Olympus, at an elevation of 950 ft. The Olympian range known by the Turks as Keshish Dagħ is elliptical in form, extending from N.W. to S.E. about seventy miles; its ridges reach on the S.W. to the chain of Mt. Ida, and on the S.E. to the Katerli Dagħ, whilst on the S. the sides fall away in gentle slopes, forming plateaux of an elevation of 2,500 ft., and extend to the plains in the neighbourhood of Aizani, on the banks of the Rhyndacus, famous for its ruins of an Ionic temple and theatre.

On the Brusa or northern side the mass comes more or less to an abrupt termination, though supported by lateral ridges with deep and precipitous gorges. Viewed from the steamer the range presents many rounded summits of varying height; snow is in its recesses and on many of its slopes, and the view, with the outer range of hills in the foreground and the sea at its foot, makes a very imposing picture.

Our party consisted of my brother Arthur, Dr. Post, of Beyrout, and myself, and the object of the journey was plant-collecting, with the attendant pleasures of mountain scrambling and camp life. We visited the Governor-General of Brusa, Halil Pasha, to consult him as to the necessity for taking an escort, and although I knew from experience, after many years of travel in Asia Minor, that the country is quite safe and the people peacefully inclined, and although he also assured us that such was the case, it was considered expedient, in view of the sad disappearance of Mr. Macmillan some years ago, to take a couple of zaptiehs. Halil Pasha is one of Turkey's enlightened legislators. He remarked that he controlled the large vilayet of Kandavendghiar, with a mixed population of 1,500,000 souls, consisting of Turks, Jews, Greeks, Armenians, Bosnians, and Circassians, for which purpose he had but 1,500 soldiers.

The prevailing rainy weather of Western Europe during the last year extended into Asia Minor, and during my sojourn in the neighbourhood of Olympus the higher elevations were invariably in cloud. We were, however, not to be deterred by any evil forecasts of the barometer, and on June 6, 1903, our cavalcade of twelve horses, with riders and baggage, wended its way through the city, picking up our escort as we passed the Government House. For the first two hours the route was by a steep zigzag path through a rampant growth of walnut, chestnut, oak of a deciduous species, and beech trees, these latter assuming unusual proportions. In this

beech zone the smaller plant life is very luxuriant, and gave us much interesting occupation as each one of the party made some fresh discovery. Boraginaceous plants were particularly abundant. We passed a Yuruk encampment; these nomads were tending their sheep and goats on a small alp at the mouth of a valley, hemmed in behind the encampment by high cliffs and crags. Higher up the path led along a ridge overlooking a deep ravine (*Goeuk deré*), completely filled in, as it appeared from above, by the vivid green of the forest beech trees. At this stage of our journey, as there was every indication that we were likely to be caught in a tropical thunder storm, we were led to a green sward where were several sheep enclosures. Very hurriedly our tents were erected, as a blizzard of wind, accompanied with hail, swept over the land. We were unable to protect the tents with the usual trench, and in consequence were soon flooded. In the meantime the noise of the thunder and the rattle of hail peppering the canvas of our tent made some of the party feel that it would be best to beat a hasty retreat, to which I was strongly opposed. During the remainder of the day, whenever a break in the weather permitted, we were out seeking plants, followed wherever we went by one of the escort, whose orders were on no account to lose sight of any one of us. At times we felt it a great nuisance, and tried to explain to the men the absurdity of the attention they were paying us. Their orders, however, were clear, and they were not to be dissuaded. We were visited by an Albanian shepherd, who objected to our camping on the alp, which he claimed he rented from the authorities. He ordered us to move up higher, and represented that the horse-droppings would introduce a fly very damaging to sheep then due on the slopes for the summer months. In the early hours of the morning, about two o'clock, we were awakened by shouts and by the neighing of horses. At first I was reminded of an experience in Daghestan, when our horses wandered into a neighbouring plot of barley, and the villagers, learning what was going on from a righteous old Moslem who visited our camp, came out in a body to belabour our men. On this occasion our visitors were soldiers sent by the Governor-General, who, fearing for our safety in consequence of the severity of the storm, which had carried away a bridge and a baker's shop in the city below us, despatched these men, in a howling tempest, with no small amount of danger, to seek us. The sergeant requested to be furnished with a note, to which my brother added our grateful thanks for the tender

enquiries his Excellency had felt it necessary to make on our behalf.

In the immediate vicinity of our camp we found that bulbous plants were very varied and remarkable. At the end of this paper a list of the most interesting will be found.

The path from the first alp continues to overlook the lateral valley on the right bank of the Goeuk deré, and then by a steep zigzag staircase, made, tradition says, by the Romans, we entered a sub-Alpine vegetation. The plants are not quite so abundant in variety, nor yet so interesting, though the fantastic growth and large girth of the pines added very much to the landscape and made up for the plants which in this immediate zone were absent. It is sad to find how the axe is fast devastating these lordly coniferæ. Turkey has no respect for forest laws, and throughout the region, whether in the plain below or on the slopes of Olympus, this ruthless devastation of trees is very marked.

Our second camp was pitched on what is known as the second plateau, which is nothing more than an uppermost slope of one of the many buttresses which support the main ridge on this northern slope. The rock here is granite, and near the path are some huge boulders piled one on another. The abies hereabouts are particularly well-shaped, and the dwarf spreading growth of the juniper imparts a very park-like aspect to the scenery. Geums, with their brilliant scarlet flowers, were plentiful, as was the orchis. From the tuberous root of this plant is made salep, a hot, gummy beverage which, spiced with cinnamon and sugar, is much consumed in winter time by the natives of Turkey.

Vaccinium is another interesting plant found on these hills; its leaves make a tea known in the country as Brusa tea. The Aristolochia is also noteworthy. Its bulbous root was pointed out to us by our native cook as a much-esteemed truffle.

After this we crossed a torrent near the head of a valley which opens out on the eastern side of the city of Brusa. Mounting to another ridge and through a forest of pines, the path makes a slight descent and then emerges into an open country of grass slopes. The final heights of Olympus now come into view, forming an amphitheatre of rocky slopes which tower 700 ft. above the basin at the head of the valley. At a shepherd encampment we were regaled with coffee by the chief of the Albanian shepherds, who had come up the day before with one or two flocks of sheep. Across the wall of a sheep pen we observed the carcass of a sheep which

looked as though it had been mauled, and on enquiry we learned that it had fallen a prey to a wolf the night before.

The shepherd dogs are huge animals about the size of mastiffs, less bulky and more agile. Through their collars, which are two or more inches wide, are inserted long iron spikes, and these must be a great protection against attacks from wolves.

The mysterious disappearance of Mr. Macmillan on Olympus some twelve years since will be in the recollection of the members of this Club. I give the following account of the result of an exhaustive Government enquiry which was instituted at the time on the recommendation of the English authorities: Mr. Macmillan and his companion, Mr. Harding, left their horses with the retainer at the shepherd encampment under the summit ridge, whilst they proceeded to ascend the final slopes. On reaching the ridge Macmillan decided not to go on, leaving his companion to continue alone, it being arranged that Macmillan would await his friend's return. When Harding did return Macmillan was not to be found, and concluding that he had gone ahead, he leisurely descended to the encampment. Finding that his companion was not there, a search was made as far as it was possible. Now it appears that several flocks of sheep were grazing in the neighbourhood, each in charge of a shepherd and dogs, and it was the custom of these men to arrange among themselves the time of their return. Some four or five flocks were out on that day, and each shepherd as he came in was asked news concerning the disappearance of the Englishman. One of the men in particular was very late, and could not give a satisfactory reason for the delay. The generally received theory is that Macmillan, who was much engrossed in conversation when they ascended, had not taken observation of the line of route, and being short-sighted and hearing some dogs in the distance, imagined that they were in the neighbourhood of the shepherd encampment. Accordingly he directed his steps in that direction, and evidently came into collision with the dogs, who probably attacked and killed him. It is then supposed that the shepherd, fearing punishment, concealed the body, preserving absolute silence when cross-examined. Unfortunately rainy weather set in on the morrow, which obliterated all trace of a struggle, if such had happened.

The Turkish authorities immediately ordered a large number of troops to scour the hills, and later on a special commissioner was sent from the capital to hold an enquiry.

The shepherds, on being examined in court, did not all adhere

to the statements they had previously made. One man absolutely refused to answer any questions when he found that his statement was at variance with that of one of his companions. He feigned sickness and was put into a hospital, where it was hoped he might confess to any knowledge of the mystery. It was even suggested by the judge that a little judicious torture would quicken his perception, but it was not sanctioned, and thus to the present day the mystery which surrounds this sad story remains unlifted.

There are two routes to the summit from the encampment in the basin. We elected to climb the eastern ridge. Crossing the torrent and also several patches of snow, we soon reached the main ridge, collecting on our way many familiar alpine plants, such as *Gentiana verna*, *Scillas*, *Fritillarias*, *Violas*, *Chionodoxas*, and at slopes in plentiful supply two varieties of *Draba*. Some fragments of brick and mortar mark the site on the summit of perhaps a chapel or monastery or signal station or an altar. There is, however, nothing in the ruins to indicate the period of its construction. Unfortunately we had no views, the higher slopes being in cloud all the time. We made the altitude to be 7,800 ft.

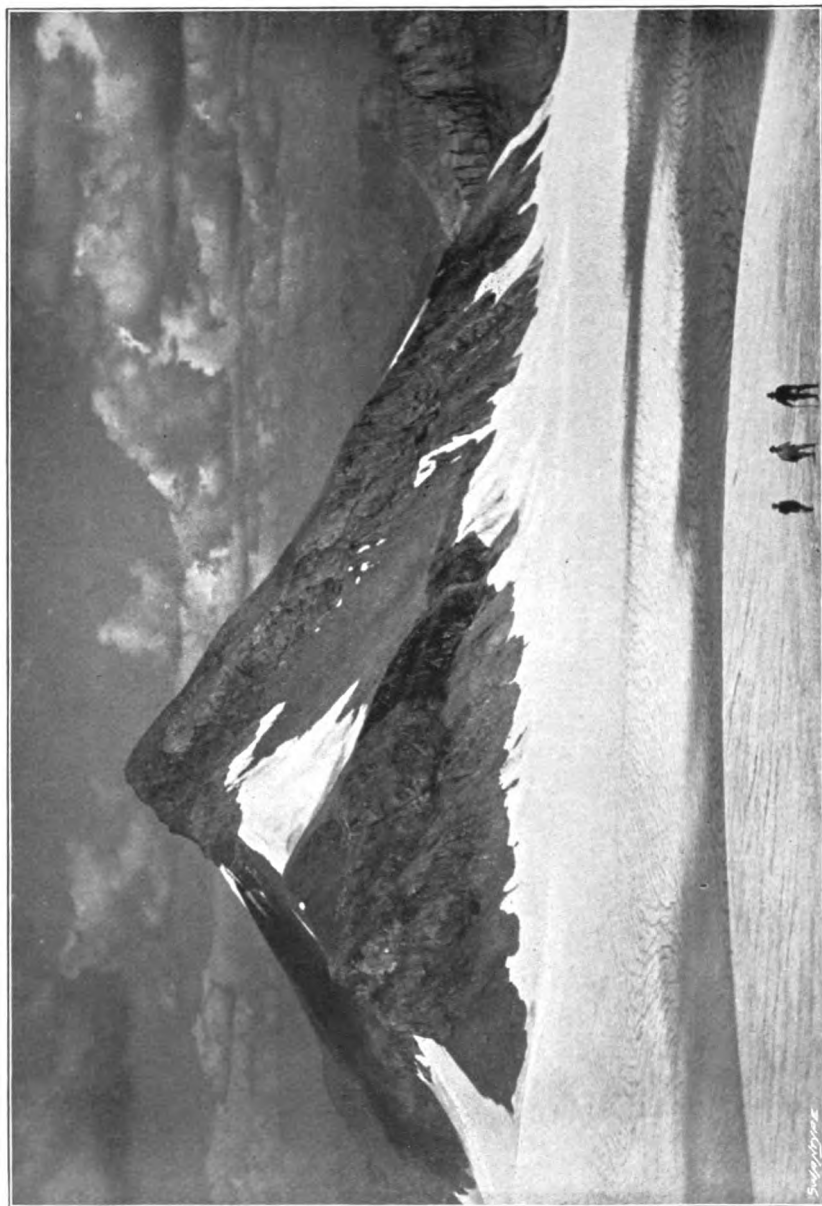
It will be observed that the chief interest of this ascent is the flora. I know of no place in my experience of mountain travel which offers such a varied collection of plant life. The geographical situation lends itself to a combination of the European with the Asiatic flora, and this adds largely to the charm and pleasure of the journey. To all those who are fond of flowers I commend the trip if by good fortune they happen to be in that part of the world.

NOTE.—A list of the most interesting plants found above 6,000 ft. is appended:—At from 6,000 to 6,500 ft.: Three varieties of *Ornithogalum*, various *Scillas* and *Chionodoxas*, two varieties of *Thymus*, *Alchemilla vulgaris*, *Gagea*. At 7,000 ft.: *Violas* (yellow and purple), *Myosotis*, *Trifolium repens*, *Æthionema chloræfolium*, *Alsine*, *Galium coronatum*, *Gentiana verna*, *Primula auriculata*, *Orchis pallens*, *Romulea*. At 7,800 ft.: *Veronica cæspitosa*, *Pedicularis*, *Draba Olympica*, *Alopecurus lanatus*.

A DAY ON THE OLDENHORN.

By GODFREY A. SOLLY.

CLIMBERS who were in the Alps in the early part of the summer of 1908 will long remember the showery weather and the peak-concealing clouds that were so prevalent. About the middle of July I went with a party to the Hôtel des Diablerets in the Vallée des Ormonts. None of the party had been there before, and for the first few days no mountains were visible, though we knew from the picture postcards and a study of the Siegfried map that at least two mountains—the Diablerets and the Oldenhorn—were close to us. At last, on the evening of Wednesday, July 22, the weather was more promising, and Messrs. James Maclay, J. Arthur Hargreaves, and I proposed to start for the Diablerets. At dinner we heard that another party from the hotel, with guides, was going out, so we asked what peak they were going to. They told us the Diablerets, so we decided to go for the Oldenhorn. There is no climbers' guide to the district, and there are very few allusions to the mountain in any English alpine literature since the date of the charming papers by Mr. Hinchliff in 'Peaks, Passes, and Glaciers,' and by the Bishop of Bristol in 'Off the Mill.' All we knew was that if you got to the Zanfeuron Glacier there was an easy way up. We left the hotel at 8 a.m., and, instead of having to stumble along a narrow path by lantern-light, had the luxury of an hour's walk on the splendid carriage-road to the Col de Pillon. Just before reaching the col we turned due S., and, after crossing some very wet ground, began the ascent of the slopes towards the Sex Rouge Glacier. These slopes are steep and tiring. Sometimes we followed the ill-defined path, but until dawn came we frequently lost it. Near the glacier we made our way along a number of terraces, which in places gave us a little scrambling, though apparently there is a simpler way known to guides. We reached the snow before 8 o'clock, and there saw in front of us a large white hare—the first I have ever seen in the Alps—but after turning round twice to look at the intruders it disappeared. We then walked up the glacier to a point where we got a good view of the S.W. ridge of the mountain. There seemed to be no particular reason for not trying it, so we turned sharply to our left, up by the snow and a rather difficult chimney in the rock wall shown on the extreme left of the illustration. Above this we had to mount by the screes, then covered with snow, to the actual



E. Busset, photo.

THE OLDHORN FROM THE ZANFLEURON GLACIER.

Swan Electric Engraving Co

ridge, which we gained near the top of a conspicuous snowy saddle. At the top of the snow we left one of our sacks, and began the actual ascent of the rocky ridge.

It is nowhere very difficult, but we at once saw that it was not the usual route for tourists. There are three noteworthy places. (1) Near the snow there is a large split in the ridge, but you can get up between the split blocks, getting a footing on the lower rock if desired. (2) Higher up there is a horizontal ridge, about 60 ft. long and very narrow. Coming third, I was hesitating whether to straddle it or not, when I heard a shout from a party on the summit, so for the credit of a guideless party I told the others to hold firm, and walked across. (3) The third place of interest was a curtain of rock with no obvious way round it. However, two loose stones seemed to be coming out of a small fissure in it. Maclay knocked away the top one, and then found that the other was part of the solid rock. It stuck out like a joist from a new building about 8 ins. by 3 and 2 ins. deep. It made a perfect step up the rock, and then we had no further difficulty, and reached the summit at 10 A.M.

The view of the Pennine Range was intensely interesting. Thick clouds were travelling fast from E. to W., and the peaks kept appearing and disappearing as they broke and gathered again. Now the top of the Matterhorn or Weisshorn would be visible, then it would be hidden, and for a moment the Arolla peaks or the Grand Combin would be seen, and a moment later perhaps some of the peaks above Saas. It is difficult in words to describe such views of clouds and peaks, but the memory lasts.

Three ridges meet at the summit. The N. ridge, climbed by Mr. Hinchliff's party, looks broken, but on the S.E. ridge there is a well-defined path in the loose shale. Down this we went till we found a place where we could get off the ridge on to the S.W. face, which we traversed mostly through snow back to the snow saddle where we had left our sack. We then went along the ridge to the point marked Becca d'Audon on the Siegfried, as we wished to descend the great rock wall direct to the glacier below. We went down some distance, but fearing that if it proved impracticable, and we had to ascend again, we should be too late in getting home, we gave it up, and going again to the S. face found a way on to the Zanfleuron Glacier. We knew there was a way down the Prapioz Glacier, so we crossed to that glacier and found a way without much difficulty. After leaving the glacier we got wet through in a thunderstorm, but we had had our climb and

reached the hotel at 4.50 p.m. It was not until a few days later that it dawned on us that we had perhaps made a new climb. Since coming home I have had the great advantage of the help of Mr. Coolidge in ascertaining the history of the climbs on the mountain, and it seems clear that the route is new; and to him also I am indebted for the photograph taken by Professor E. Busset, of Lausanne, who has kindly allowed it to be reproduced. The name *Becca d'Audon*, which on the *Siegfried* appears to refer to the top of the great wall which we began to descend, is misplaced. It is really the name given by the French-speaking Ormonts people to the peak called the Oldenhorn by their German-speaking neighbours of *Gsteig*. On the *Dufour* map the name 'Audon' is given as an alternative name to Oldenhorn.

My object in writing this paper has been not so much to describe a very ordinary climb as to illustrate the fact that the Alps can never be played out if properly approached.

A party going without guides to a mountain they have never seen have many of the pleasures of explorers. We had to find a route, using our own judgment. We could vary our route on the descent as we liked, and by doing so we came across several interesting little climbs. Above all, we could take our own time and get the full enjoyment of a long day on the hills.

SOME REMARKS ON THE NOMENCLATURE OF OSSETIA AND ADJACENT COUNTRIES, WITH SPECIAL REFERENCE TO DR. MERZBACHER'S MAP.

By JOHN F. BADDELEY.

KASARA DEFILE.—This name has been applied to the defile cut by the Ardon through the Main Crystalline Range for at least a century and a half, and probably from time immemorial. It is derived from the Georgian 'Kasris' (trough) which appears already at this spot on the map of the Tsarievitch Vakhusht in 1745. Klaproth mentions it in this connection in 1809. Zussermann, to whom the idea of the Mamisson military road is due, names the Ardon defile *Kasara* in his report to Baron Wrewsky in 1856, and at the same time calls the Terek defile *Trusovsky*, and so, with one exception, have all Russian writers since. *Rossikoff*, it is true, speaks of the Terek defile as the *Kasara*, probably because there is a mountain of that name in the vicinity, and *Dr. Merzbacher* follows him; but there is no sufficient reason for this change of name, and there is certainly none whatever for depriving the Ardon defile of the appel-

lation by which it is known not only in literature and cartography, but, to my personal knowledge, to the local inhabitants and to the Ossetines generally.

Unmarked Pass.—There is a footpath over the main watershed from Abano, in the Upper Terek valley, to the Kel Lakes. It is not marked on Merzbacher's map.

'-KAW' (Engl. '-KAF').—This affix is used by Dr. Merzbacher throughout Ossetia instead of '-kau,' meaning 'village.' It is true that here again Rossikoff may have led our author astray, for he uses '-kaf' more than once; but certainly in the vast majority of cases, if not in all, the native pronunciation is '-kau.' Personally I have never heard anything else.

The following mistakes should be corrected:—

Tiumenkaw for Tmenikau.	Gisaldon for Giseldon.
Suarkaw for Dzouarkau. (Dzouar or Dzuar means a god, saint, or holy place, and is a corruption of the Georgian word for 'cross.')	Kureito kom for Kureiti kom (the Many Mills Defile).
Dargavsk for Dargavs.	Sorgom for Suargom. ('Suar' is a mineral spring, 'gom' and 'kom' a defile.)
Kakidur for Kakadur.	Gimarai for Dschimarai (Engl. J, not G).
Chariskin for Charischtschin (Engl. Kharishtshin).	Dalla kaw for Dallag kau (the Lower Village).
Saniwa for Sanibá.	Dargom kom (the 'kom' is redundant).
Midagravin for Midagrabin (meaning 'through the rock,' the torrent having cut its way very deep through the rock, almost in the form of a tunnel).	Tana tsete Gletscher ('Gletscher' is redundant, 'Tsete' or 'Tsiti' meaning a glacier).
Skaron for Skaran.	Charwess don for Charese don (Engl. Kharese don, the main source of the Ouroukh).
Kauridon for Kawridon (Engl. Kavridon).	

I may further mention that Siveraut should, according to my native informants, be written without the 't'—'Siver' (Seever) meaning a bowl, while '-au' is equivalent to 'like.' In the same way Ball ag-au means trough-like, this being the name of a summit whence flows the torrent Oursdon (White Water), which falls into the Ganaldon a mile or so below the now obliterated cure establishment of Karma don (Hot Water). I hear, by the way, that further falls from the great Maili glacier have since last autumn brought the ice tongue down as far as the Oursdon.

SCHAU-KHOKH (Germ. SCHAU-CHOCH).—The 1-verst map has never been published, and, as the surveyors have been very busy on both sides of the Georgian Road, N. of the watershed, during the last two years, it is to be hoped that when it is many corrections will be made. Schau khokh (Black Mountain) is, as Dr. Merzbacher points out, a sad misnomer for a singularly pure white cone, and has been transferred by mistake of the Russian topographers from the neighbouring black, schistose ridge. What the true name of the so-called Schau khokh should be is much disputed. Rossikoff insists that it is the real Djimarai khokh, and for a reason I have myself heard repeated by the natives—*i.e.* that it is nearer in a direct line to the village of Djimara. Moreover 'Schau khokh' is

visible from the immediate neighbourhood of the village, whereas its taller rival is not. The Djimara village on the Upper Terek can have nothing to do with the question, as it is only a comparatively late offshoot of the northern Djimara. But if we transfer the name Djimarai to 'Schau khokh' the former and higher mountain is left nameless. Rossikoff indeed calls it so (Bezeemiannaya), but this, surely, is unworthy of a very grand mountain, only 60 ft. lower than Mt. Blanc? Several of the natives I inquired of gave 'Schau khokh' the name of Mitchin Tsup, meaning 'Snowy Cone.' This is very appropriate, and if adopted would enable us to leave the present Djimarai khokh as it is. I may remark that whereas from Vladikavkaz Djimarai khokh is even more conspicuous than Kazbek, from the valleys and cross passes W. of the Ghizel don 'Schau khokh' dominates the scene to the exclusion of both Kazbek and Djimarai khokh, which are only visible from very considerable heights. I was particularly struck with this fact at the summit of the Korá Pass; and even so far west as the Sgheed Pass, beyond Sadon, 'Schau khokh' was still pre-eminent.

SGHID (SGHEED) PASS.—Dr. Merzbacher marks only one path over this pass, which he wrongly calls the Sadon Pass, and that along the middle of the ridge. I rode myself by a path on the S. of the ridge, descending westwards by the valley of the Dargom (Long Defile). I was informed that another path went N. of the ridge and descended westwards by the valley of the Souargom, and that there was no third path. The natives call the Pass Sgheed Avtzek or Souar Avtzek, according to the path which they take.

AVTZEK.—This is an Ossetine word meaning primarily the neck of an animal. The second vowel is a sound partaking, to my ears at least, of *a*, *e*, and *u*; the *k* is guttural and between *k* and *g*. Avtzek is the nearest, I think, that we can get to it with the English alphabet. Forms such as Wzik, Vzik, &c., are Georgian or Tartar corruptions. Wherever the word occurs it betokens, of course, the presence now or formerly of Ossetines.

The well-known pass between Digoria and Balkaria has been written Stuleveesk (Freshfield, 1869), Shtuluvsek (F., 1902), Shtuluwzik (Merzbacher), and in various ways by Russian writers. I made diligent inquiries last year, when riding westward over it, but found none of my friends on the Digorian side knew any such name as this. They called it simply Avtzek—the Pass, *par excellence*. Descending into Balkaria I found the small lake or tarn was called Astouli Tsad, the latter word meaning 'lake' in the Digorian dialect of Ossetine. At the Karaoulka, where were six or seven Balkarians, none of them knew Shtulu or anything like it, nor did my next hosts at Kusparti. It was not, indeed, until I lodged with the inhospitable giant of Bezinghi that I found the name known.

There were three ways up the first part of the pass from the Digorian side, left, right, and middle, the last being the shortest, but only possible on foot. I followed the left-hand path. All three join before the final ascent.

As the termination in any case means 'pass' I suggest that we adopt Astouli Pass in future to get rid of confusion and redundancy.

Over or alongside the Tana Tsiti is a pass, unmarked on the maps, called Taimaz Avtzek, from one Taimaz who escaped that way from S. of the chain into Digoria, where, at Koussá, his descendants still dwell. The name Avtzek and all have been transferred by the Russian topographers and Dr. Merzbacher to the neighbouring mountain.

Balkaria is said to be the Kabardian corruption of Malkaria, or more correctly Balkar of Malkar, the termination being Russian. This is borne out by the fact that I found the lower-class natives using 'Malkar,' the privileged class 'Balkar,' the latter being comparatively late comers. At Kusparti I found Ghiultshi Tau called Ertzwashki. Dr. M.'s map has this name for the glaciers flowing from it, but without the initial E.

The pass between Kusparti and Bezinghi is called Kafir Avtzek, and on the way up from Kusparti is a place called Zouroust Khala, meaning 'where the enemies fought.' The tradition is of a battle between the Tartars and the Russians, but the latter is probably a misnomer.

The pass between Bezinghi (Tubenel) and Tcheghem is called Tuben-Avtzek, or Tcheghem-Avtzek, according to the side from which you approach it.

Tcheghem in Dr. M.'s map is marked on the wrong side of the river. Numala is correct. Dumala in Freshfield's map is incorrect as the name of a village, correct as the name of an affluent of the Tcherek. The Ossetines call the Tcherek Tsaratch don, and this is doubtless its original name, as Tsarak is an Ossetine family name, and the Ossetines certainly once dwelt in these parts, as proved by many other local words in use.

To return: I find the following mistakes on Dr. Merzbacher's map in the Mountain Ingoosh District, E. of the Georgian Road:—

Saikomb for Gaikomd.
Gargim for Targim.
Fortoug for Fortaoukh.

Niakist for Nakist.
Gumgi for Tumgoi.

Some of these errors have evidently arisen from the difficulty of distinguishing on the badly printed Russian maps the capitals G and T.

A more serious mistake for one who professedly sets out to correct previous writers is the application of the feminine adjective *Krestowaya* to the masculine substantive 'pereval,' 'pass.' *Krestóvaya Gorá* is right (let me here protest energetically against the use of *w* in English to represent the Russian sound *v*; in German, of course, it is quite correct), 'Gorá,' 'mountain' being feminine; but we should write 'Krestóvui Pereval.' In the same way Dr. Merzbacher continually writes 'Tschetschnaya' instead of '-nia,' turning a substantive into an unknown adjective. Mistakes like these make

one suspect that the learned Doctor was not very strong in Russian.

It is unnecessary, I hope, to say that in offering these remarks and corrections I am actuated by no captious spirit. I fully recognise Dr. Merzbacher's great merits and services.

THE ALPINE HISTORY OF MONTE VISO SINCE 1882.

BY WM. ANDERTON BRIGG.

As the last detailed notice of this fine peak appeared in these pages so long ago as 1882* it may be useful to give a summary (for which I am indebted to a well-known authority) of the routes followed by various parties since that date, and thus complete the sketch contained in the new edition of Mr. Ball's 'Western Alps' (pp. 61-4). It may be noted in passing that the summit is not crowned, as there stated, with a cross and a huge bronze statue of the B. V. M., but with a cross of iron lattice work; two *repoussé* bronze plaques (one representing our Saviour and the other the B. V. M.) are fixed among the rocks at its base.

1. *S. Face*.—This, the earliest and still the favourite route, is taken from the Q. Sella Hut, near the Sacripante spring, at the head of the Forciollone glen, and needs no further description.

2. *N.W. Face*.—This route, taken from the new Ballif-Viso Hut (2,474 m.), at the very head of the Guil valley, which has superseded the old Refuge des Lyonnais, was first made by M. Guillemin's party, August 12, 1879,† and September 5, 1879, by Mr. Coolidge.‡ It has not attracted many climbers. Mr. Coolidge took it in September, when the rocks are free from snow, and found but few difficulties; but succeeding parties have encountered serious obstacles. The third party, Dr. Chabrand's, on September 8, 1884, was benighted 160 ft. below the summit.§ The fourth, Sig. M. Gattorno's, with Messrs. Evan and Wm. Mackenzie (the latter a boy of thirteen), on July 17, 1890, took 17 hrs. from a bivouac near the Col de Vallante to the summit.|| M. Piaget, of Lyons, on September 6, 1897, took 11 hrs. from the Refuge des Lyonnais to the summit.¶ Two other parties have probably taken this route, but their notes are vague. MM. D., Ch., and Ed. Revel describe an ascent on September 15, 1892,** apparently by the N.E. route, but really, it would seem, by the N.W. route, as M. D. Revel, in writing to Mr. Coolidge on February 5, 1893, asks for particulars of the latter's 1881 route (see below), as he proposed to attempt it

* See Mr. Coolidge's paper, *A. J.*, vol. x. pp. 453-481.

† *Ann. du C. A. F.*, vol. vi. pp. 9-22.

‡ *A. J.*, vol. ix. pp. 353-4, vol. x. pp. 460-2.

§ *Ann. de la S. T. D.*, vol. x. p. 75.

|| *Riv. Mens.*, vol. x. pp. 179-183; *Ann. de la S. T. D.*, vol. xvii. pp. 133-141.

¶ *Ibid.* vol. xxiii. p. 100.

** *Ibid.* vol. xviii. pp. 189-205.

in the following summer, having already accomplished 'the other N. route.' Sig. V. Valbusca climbed from the Colle delle Cadreghe by the 'Cresta Nord'—*i.e.*, it would seem, by the N.W. route.*

8. *N.E. Face*.—This difficult climb (which is taken from the Piano del Rè Hotel) was first made by Mr. Coolidge in 1881,† and has never been repeated in its entirety. Sig. Guido Rey made (July 28, 1898) a useful variation by avoiding the dangerous couloir which leads up to the depression between the Viso and the Visolotto (the Colle delle Cadreghe).‡ His route was practically followed by M. de Cessole (August 31, 1902),§ and by Messrs. J. J. Brigg, Eric Greenwood, J. W. Firth, and myself, with Claudio Perotti as guide (August 3, 1903). Mr. Coolidge, having seen the tracks of all three parties marked on a photograph, is able to say that each follows a slightly different line in the higher part of the climb, on and near the great upper couloir, which is well shown in Mr. Whymper's fine engraving of the peak.|| Mr. Coolidge's route is marked, as also is Sig. Rey's, on a diagram in the 'Bollettino,' No. 54:—

Sig. Guido Rey's Ascent by the N.E. Face (note addressed by Sig. Rey to Mr. Coolidge, under date of October 17, 1903).— 'I have never published a detailed account of my route in 1898 up Monte Viso. What follows are notes taken from my pocket book:

'July 28, 1898.—Left the Piano del Rè at 2.45 A.M. Mounted by the ordinary Col du Viso track. Halted at the foot of the "Couloir Coolidge" at 4.30 A.M. Left at 5 A.M. Mounted by a little névé, very steep, which ended in a little snow couloir, to (our) left of the "Couloir Coolidge." Mounted straight up the little couloir about 70 mètres, then left it, and took to the rocks on our left, a difficult spot here; then a rock-wall, very steep, but firm, where we climbed quickly. At 6 A.M. we were between 150 and 180 mètres higher than the foot of the little couloir. Crossed the couloir, which comes down from the "gendarmes" on its left side, to its right side, and mounted in the couloir, sometimes cutting steps in the snow and sometimes hugging the rocks on its right flank. Having followed it all its length, at 6.40 A.M. we came to a rock with a rocky promontory ("contrefort") at its head, where we built a "stone-man." Followed along the face of the mountain. At 3,000 m. (about) were overtaken by hail storm, and then by thick snow, and had to halt. Set off again at 7.25 A.M., always in the direction of the big "gendarmes," which we had seen from the foot of the peak. At 8 A.M. reached the base of one of these gendarmes, the most easterly of them—that is to say, looking towards the Viso Mozzo. Made another "stone-man," and set off at once. Mounted about 250 m., and were stopped again by the snow, which fell thickly. Perotti thought we were here 200 m. lower than the

* *Riv. Mens.*, vol. xviii. p. 421.

† *A. J.*, vol. x. pp. 350, 465, 469-473.

‡ *Riv. Mens.*, vol. xvii. p. 293.

§ *Rev. Alpine*, vol. x. p. 37.

|| *A. J.*, vol. x. p. 453.

summit of the Visolotto. At 10 A.M. the sun came out a little; the rocks were all white. We continued the ascent by the rocks of the E. face, very steep, and rather difficult, to the foot of the higher snow-covered glacier. Traversed this glacier in zigzag, as it was very steep. At noon we had cleared the glacier, and reached the rocks forming the great N.E. ridge of the Viso, which comes down from the summit of the Viso. After halting $\frac{1}{2}$ hr. mounted by these easy rocks to the summit (the eastern) at 1.30 P.M. Descent by the ordinary S. face route. Guides: Claudio Perotti, and his brother Francesco as porter.'

M. de Cessole's Ascent of the N.E. Face (summarised from his paper in the 'Revue Alpine,' vol. x. pp. 33-41).

'August 31, 1902.—Left the Piano del Rè (2,019 m.) at 2.40 A.M. by the Fiorenza and Charietto Lakes and the Col du Viso path, leaving the "Couloir Coolidge" on the right, and crossing the vast névé which stretches to the very foot of the N.E. face, reached the point of attack at 5 A.M., near the rock wall which forms the left-hand boundary of the "Couloir Coolidge." Roped and began to climb (2,600 m., about). Instead of taking, above the névé, the little snow couloir which Sig. Rey followed for 60-70 m. we tackled the face of the mountain on our right, which we found, after the first few rocks, very steep ("escarpée"), and in places pretty bad. We thus passed above the "opening" or upper end ("ouverture") of the couloir, and then got into it, and kept by the rocks on the left. Halt for 5 min. at 6.5 A.M. Mounted the higher part of the snow couloir, sometimes a little to the left, sometimes to the right, and followed it up to the top, sometimes keeping to the rocks, sometimes cutting steps in the couloir itself. At the top we left it to turn a gendarme by a truly difficult "rock pitch" ("barre rocheuse"). Noticed on a neighbouring eminence a little pyramid built by M. Rey. Beyond we were met by a rock ridge not less forbidding than the last bit, and rested 15 min. under an overhanging rock glazed with ice (2,950 m., about). We found some water in a crack of the rock, and enjoyed a splendid view of the great Alpine peaks, being favoured with delightful weather. We next came across a rock couloir, and then another of M. Rey's "stone-men." Having crossed another ridge, we turned on to the E. face, almost facing the Viso Mozzo. The great stony ("pierreuse") slope was very easy, and we soon crossed the first snow patch and reached the foot of a vertical rock-face—that where M. Rey had to shelter from a storm.

'We mounted in succession several snow slopes and rock crags ("escarpements"), and halted from 8.35 to 9 A.M. for breakfast (3,250 m., about).

'The climb then began to be truly difficult, by reason of the new snow on all the rocks, and got worse as we went on.

'Arrived at 10.10 A.M. at the upper "Couloir Coolidge," close to its narrowest point. The weather, hitherto fine, began to change, and a light mist from the S. came up. Decided to cross the great ice gully ("coulée") which, starting at the summit of the Viso,

becomes a formidable slope ("rampe"), and ends below in a cascade of séracs—25 centim. of new snow on the surface, which had to be swept off before we could cut steps in the ice. Went cautiously through fear of starting an avalanche. Found at the nearest point, on the opposite side, or true left, of the couloir a little ridge, which we followed, in a thick mist, climbing an interminable succession of ice-glazed rocks, covered with new snow. Hard climbing, cold fingers, frozen rope, with glimpses through the mist of the frightful rock precipices of the N. face, and at last of the cross on the summit. Finally a supreme effort landed us on a snow ridge which "leaned horribly over the abyss," after which we joined the final ridge, and stepped quickly on to the eastern summit (8,840 m.) at 2.20 P.M. Descended by the S. face to the hut, and by the tiresome ("fastidieux") Forciollone glen to the Soulières chalets; and to Castel Delfino next day.'

Note.—'We appear to have followed Sig. Rey's route pretty closely, taking up the first little couloir, and touching the first stone-man, but not the second. We found no ice or snow on the rocks, and the snow slope near the top was in excellent condition, allowing us to go right up it with hardly any step-cutting. Some of the rock pitches were very steep, and some of the handholds very loose, but there was nothing supremely difficult. We were five on the rope, and went slowly. Left the Piano del Rè at 8.50 A.M. (August 3, 1903), reached the summit at 3.20 P.M., and the Q. Sella Hut at 6.15 P.M., whence Perotti returned to Crissolo, and we started down the Forciollone glen for Castel Delfino, but eventually spent the night under a rock $\frac{1}{2}$ hr. above the Soulières chalets.

4. *E. Face and Ridge.*—This route, said not to be difficult under ordinary conditions, and quite safe, was discovered by Sig. G. Rey, with the guide Ant. Castagneri, on August 15, 1887, and has become a favourite with Italian climbers, though it does not seem to have attracted many English.*

This route was varied and taken on the descent on July 16, 1900, by Prof. Mario Ceradini, with the guides Cl. and Giuseppe Perotti, the party keeping always on the E. face, without touching the E. ridge, and joining Sig. Rey's route on the large snow patch shown on Mr. Whymper's engraving † just at the foot of the precipitous bit of the E. ridge. The party took 10 hrs. (including halts) from the summit to the Piano del Rè.‡ Their route was followed, also on the descent, by Sig. Besozzi, Casiraghi, and Cattaneo on August 8, 1902.§

5. *S.W. Ridge.*—This route was taken by Sig. C. Grosso and F. Antoniotti, with the guides Cl. and Giuseppe Perotti and D.

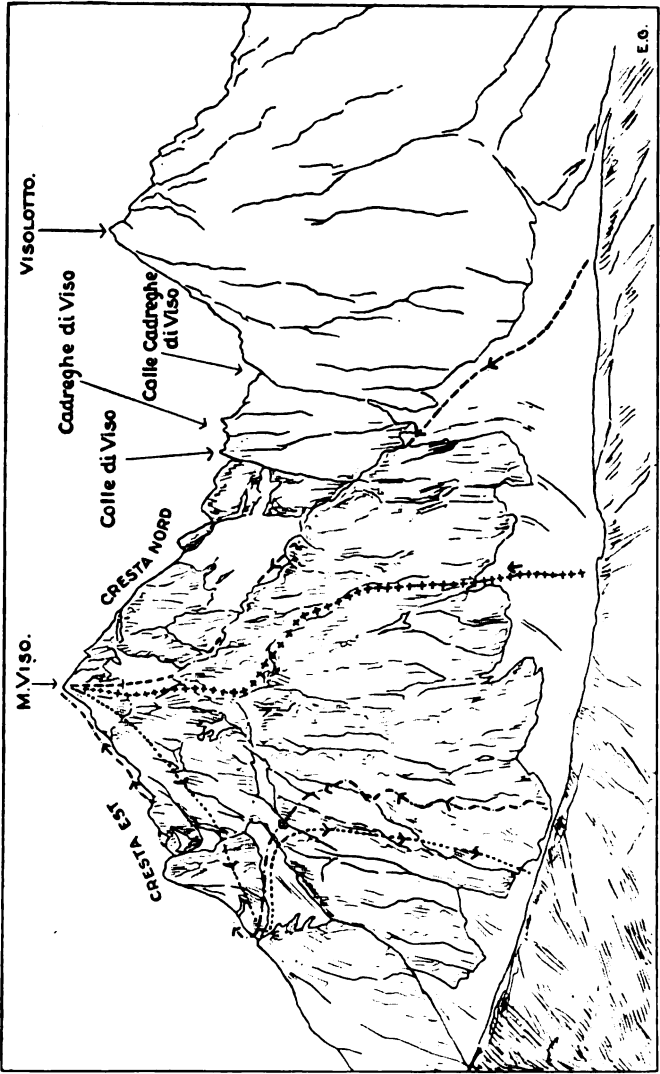
* *Riv. Mens.*, vol. vi. p. 237, vol. vii. p. 308, vol. viii. p. 252, vol. ix. p. 393, vol. x. p. 250, vol. xii. p. 200, vol. xvi. p. 458; *Bollettino*, No. 54, pp. 226-233, with large diagram; *A. J.*, vol. xiv. p. 267; Ball, p. 63.

† *A. J.*, vol. x. p. 453.

‡ *Riv. Mens.*, vol. xix. pp. 378-383.

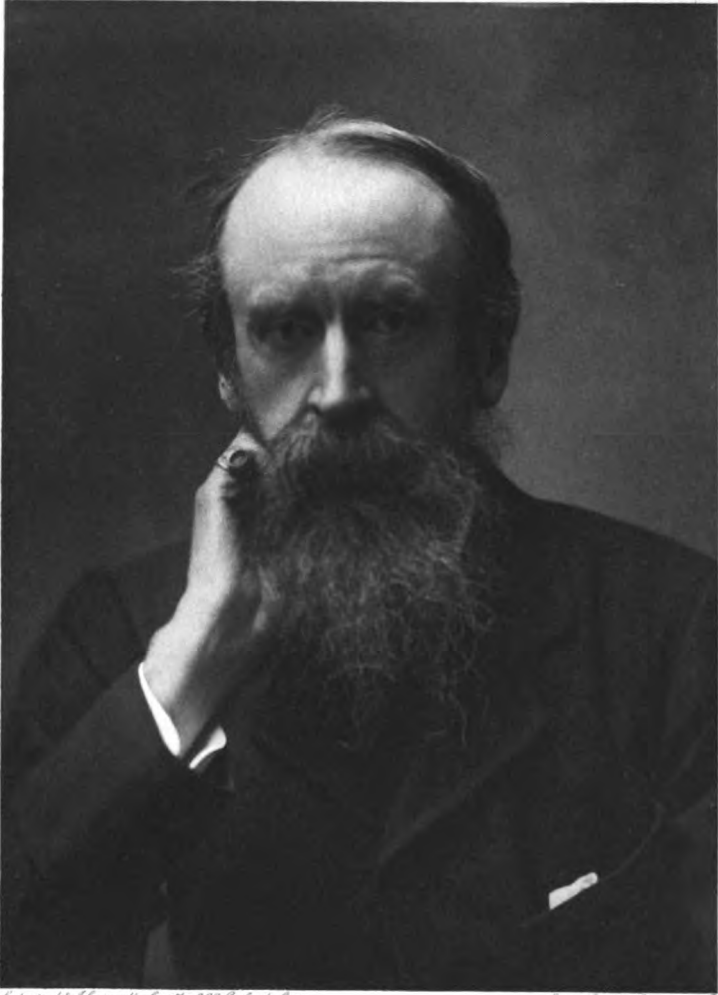
§ *Ibid.*, vol. xxi. p. 15.

Putto, on September 26, 1898. They climbed the Viso di Vallanta (8,672 m.), already ascended by Sig. V. Giordano and P. Gastaldi



in 1891,* from the Q. Sella Hut in 3¼ hrs., descended slightly to a gap on the S.W. ridge of the Viso in 2½ hrs., and then followed

* *Riv. Mens.*, vol. x. p. 296, vol. xi. pp. 2-6, with marked diagram.



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Yours respectfully
L. Stephen

this ridge to the summit in 1½ hr.* Sig. Agostino Ferrari repeated this climb in 1899, and took 2¼ hrs. from the Viso di Vallanta to the summit.†

6. *E. Ridge*.—The upper portion of the E. ridge was climbed for the first time, on August 7, 1902, by Signor A. Kind, his daughter Elena, Signori A. Weber and U. Valbusa. This party, from the spot at which Signor G. Rey's route of 1887 bears to the S., in order to mount the E. face, continued along the E. ridge to the summit of the Viso. This ascent was repeated early in July 1903 by Signor A. Centner, with C. and G. Perotti, while Signor A. Brofferio, with the same guides, July 21, 1903, descended from the summit by this route.‡

The accompanying diagram has been made by Mr. Greenwood from a photograph of the N.E. face which illustrates Signor Ceradini's paper in the 'Rivista Mensile' (vol. xix. p. 378), and shows four of the above-mentioned routes.

IN MEMORIAM.

SIR LESLIE STEPHEN.

SINCE John Ball left us in 1889 Leslie Stephen had been the recognised head of the Alpine confraternity in England. He owed this honour not only to his seniority—for he was one of the oldest members of the Club—but still more to his achievements as a mountaineer, to his literary fame, and to the dignity and elevation of his character, which won for him the respect and affection of all our members.

He was born in 1832 in London. His father, Sir James Stephen, was for a good many years the permanent head of the Colonial Office, and for some years professor of modern history at Cambridge. His grandfather, James Stephen, had sat for a time in Parliament, where he distinguished himself by his strenuous opposition to the slave trade and slavery. His great-grandfather, a native of the district of Buchan, in Aberdeenshire, had an adventurous career, which Leslie has sketched in the interesting notices of his family with which his biography of his brother Fitzjames Stephen (judge of the High Court), opens.

Educated for a short time as a home boy at Eton, and thereafter at King's College School, Leslie was sent to Cambridge, where he graduated as twentieth wrangler in 1854. He was presently elected to a Fellowship at his own college, Trinity Hall, and in due course took college work as a lecturer in mathematics and was ordained. After some years, however, his theological views underwent so great a change that he ceased to consider himself a

* *Riv. Mens.* vol. xii. p. 200, vol. xiii. pp. 147–151.

† *Ibid.* vol. xviii. p. 457.

‡ *Ibid.* vol. xxiii. p. 21 and pp. 49–50.

clergyman, gave up college work, and ultimately, in 1864, settled in London. There he occupied himself in writing, first for the 'Saturday Review,' then in the zenith of its fame, a fame which no journal of our day rivals, and presently for the 'Pall Mall Gazette,' in those days edited with great spirit and success by Mr. Frederick Greenwood. In 1871 he accepted the editorship of the 'Cornhill Magazine,' and in 1882 transferred his energy to the more important and difficult duty of editing the great 'Dictionary of National Biography,' to which he contributed many articles, while giving it that character of accuracy and thoroughness which is one of its highest merits. After years of steady toil failing health induced him to resign the editorial chair, though he still remained a contributor. His first book, 'Sketches of Cambridge, by a Don,' appeared in 1865; his next, 'The Playground of Europe' (1871), was a reprint of articles written mostly for the 'Alpine Journal,' but a few for the 'Cornhill.' Works of a graver and more solid character followed, the most important of which are his 'Science of Ethics,' 'History of English Thought in the Eighteenth Century,' and 'The English Utilitarians.' Besides these he wrote short biographies of Gibbon, George Eliot, Pope, Johnson, and Hobbes, and the longer one of his brother, to which I have already referred. The last forty years of his life were spent in seldom interrupted literary work; nor did he often leave London, except for a summer holiday. However he twice or thrice visited America, the first time during the War of Secession, in which he was (as befitted the anti-slavery traditions of his family) intensely interested, being a warm partisan of the Northern cause. But he did not greatly care for travel as travel—i.e. for seeing the surface of the earth and the cities of men. Quiet was dear to him, and his books dearest of all.

In 1867 his marriage to the younger daughter of W. M. Thackeray gave him eight happy years of life, for she was a singularly winning and attractive person. Some time after he had lost her in 1875 he was married to the widow of Mr. Herbert Duckworth. This union, which also proved one of perfect happiness, was closed by her death in 1895.

Stephen began to climb while living at Cambridge in or about 1858. In those happy days, to which we of 1904 look back with longing and regretful eyes, there were many untrodden peaks and passes of the first order awaiting their conqueror. Some parts of the Alps had been scarcely at all explored. The phantom Mont Iseran, for instance, still held its place upon the maps, there were only one or two small inns in the Upper Engadin, and the greater part of Tyrol, Carinthia, and Carniola was practically *terra incognita*, for the laborious German climber was only just beginning his work. Stephen made good use of his opportunities. No one has a more interesting record of new expeditions. The editor of the 'Journal' has contributed a list of those which are recorded in its pages. They are as follows:—'First Ascent of the Monte della Disgrazia,' with E. S. Kennedy (vol. i. p. 3); 'Passage of

the Jungfrau Joch and Viescher Joch' (*ibid.* pp. 96 and 125); 'First Ascent of the Bietschhorn and Blumlis Alp' (*ibid.* p. 358); 'Lyskamm from the West,' with E. N. Buxton (*ibid.* p. 377); 'First Ascent of Rothhorn' (*ibid.* p. 453); 'Jungfrau from Lauterbrunnen and Scher Pass' (*ibid.* pp. 434-5); 'Col des Hironnelles' (vol. vi. p. 351). This does not include all his first ascents—that, for instance, of the Schreckhorn, which he climbed in 1861, and that of the Mont Mallet, in 1871. After 1871 he did comparatively little climbing. In 1868 he became editor of the 'Journal,' and continued to hold that office till 1872. Three articles from his pen may be found in it during that period—'On Alpine Dangers' (vol. ii. p. 273), 'Round Mont Blanc' (vol. v. p. 289), 'A New Pass in the Chain of Mont Blanc' (the Col des Hironnelles, as above). As we all know, he was President of the Club from 1865 to 1868, and his speeches at our meetings and dinners, both then and in later days, were a continuing source of delight to those who had the good fortune to listen to them. There was a personal quality and peculiar flavour about them which heightened the charm, for Stephen, so careful and measured in his criticisms and his philosophical writings as to let very little of his own character or his special modes of expression shine through, was in talk and in his whole personality the most individual of men, who never reminded you of any one but himself, and by whose idiosyncrasy it was always a pleasure to be impressed.

One of the few occasions when he was tempted away from the Alps was when, in 1866, I persuaded him to come to see what travellers could of the war then being waged between Prussia and Austria. When we reached Vienna the preliminaries of peace had already been signed at Nikolsburg, and, as there were no hostilities to observe, we took the advice of an English friend in Vienna and betook ourselves to Transylvania, then a comparatively wild country, where our only means of travel was on horseback or in peasants' carts filled with hay, upon which we sat or lay. The scenery was often pretty, and the people, Roumans, Saxons, and Magyars (especially the Sekler tribe of Magyars), an interesting study; but we got less climbing than we desired, partly owing to the difficulty of approaching the loftiest summits, as there were sometimes no quarters to be had in their vicinity. The mountains of that region turned out to be rather disappointing, for they are neither so bold and craggy nor so lofty as those of the Tatra, on the north side of Hungary. There is no snow and little opportunity for rock-climbing. Stephen described our experiences and recorded our observations with his usual graphic keenness and dry humour in a paper entitled 'Transylvania,' which appeared in the 'Cornhill Magazine' in 1867 and in the first edition of his 'Playground of Europe.' Three years later he was at Primiero, along with his wife and her sister and John Ball. In deference to his wife's wishes he was abstaining from the more dangerous ascents, but had done some work among the dolomite peaks there, including the first ascent of the summit, which was then named the Cima di Ball.

I recollect that both he and John Ball, after surveying the Cimon della Pala, pronounced it apparently impracticable. It was first ascended three years later. In 1871 he was at Chamouni, and Mr. (now Sir) Courtenay Ilbert and I had one delightful snow walk in his company and that of his (and our) friend M. Loppé, up the Glacier du Tour and over the Fenêtre de Saleinaz, returning by the Glacier of Argentière.

We had no guides, and, as Stephen led during fully half of the way, there were good opportunities for observing his style and method. He was circumspect and cautious, frequently examining his route and cutting his steps with care. Though so swift a walker on level ground that it was hard for others, even fast walkers, to keep up with him, he climbed rather slowly, preserving what is called the regular 'guide's pace,' probably on the whole the best for long expeditions. His long, lithe, spare frame, light in proportion to the length of his stride and his arm-reach, gave him advantages for climbing, and he was apparently as much at home upon rocks as he was steady upon ice. On the other hand his height seemed rather to embarrass him in descending, and it was noticeable how deliberately he came down a tolerably steep slope, not running or springing from one rock or hillock to another, as smaller men do. He struck us as being a master of all kinds of mountain craft, except, perhaps, the forecasting of weather, and especially of what may be called 'distant weather,' the weather of to-morrow afternoon.

Mr. Dent, who tells me that the guides, Melchior Anderegg and others, to whom he had talked about Stephen, deemed him eminently safe, and recognised his mastery of snowcraft, thinks that he himself unduly depreciated his own powers, adding that 'part of Stephen's pleasure on the mountain-side was to watch and appreciate the skill with which the guides did their share of the work. When at his best he must have had equal endurance to almost any one, and power of endurance means that a man is safe from the beginning to the very end of a climb.' As touching snow, I may observe that Stephen, though an excellent rock-climber, loved the snow and ice so much as to care comparatively little for regions where, as in the Eastern Alps, the work is almost all on rocks. He also professed a humorous contempt for volcanoes, however lofty and however long extinct. Volcano-climbing had hardly begun in the days when his climbing was drawing to its close.

After his marriage, though he did not cease to resort to the Alps, he less and less undertook dangerous excursions, moved by the wishes of his wife, who always felt uneasy when she knew he was on the heights. Those persons, men as well as women, who have not practical experience of climbing seldom realise how great a difference skill and caution make, and how much safer a capable and experienced man, like Stephen, may be on the ice-wall of the Schreckhorn than a short-sighted man trying to cross Piccadilly Circus. Nor do they usually know that greater risks are often

run in the walks one takes alone, perhaps at no great elevation, than in the long and serious expeditions. Stephen once told me that never had he found himself in so dangerous a position as when, having one day gone out alone for a mere afternoon ramble, he became entangled, in trying to make a short cut, among precipices which, though not lofty, were quite lofty enough to make a slip fatal. However he yielded to the anxiety it was natural for his wife to feel, and ceased to indulge himself in the old way. Those who recollect his charming paper entitled 'The Regrets of a Mountaineer' (republished in the 'Playground of Europe') will remember the half melancholy, half sportive account it gives of the feelings with which one wanders among the great peaks without scaling them.

This brings me to speak of his writings on mountaineering subjects, writings by which he became known to the world long before his critical studies and his philosophical treatises had won for him an abiding reputation. There is, perhaps, no department of his literary work in which his individuality comes out so clear and strong as it does in these papers. He originated a new way of treating the Alps, and a way by which all who followed him have been more or less consciously influenced. John Ball wrote as a scientific man who was also a man of wide literary and artistic culture, but he was always to some extent didactic, though didactic in the best sense of the word. James D. Forbes, the greatest of Stephen's predecessors since Saussure, added to his remarkable gifts as a man of science a scarcely less remarkable power of brilliant description. No one has left us more graphic and striking pictures of Alpine and of Norwegian scenery. Stephen, though a mathematician, was absolutely non-scientific. He did not even show interest in such comparatively simple branches of natural history as observational geology and botany. But he combined an intense delight in the freedom and variety and grandeur of the Alps with a no less vivid interest in mankind. He was a student of human nature, if not of inanimate nature, and there runs through all his narratives or descriptions a vein of feeling which gives them their peculiar charm. He had a kind of dry, grave humour, which came in sudden flashes when least expected, and he had also a poetical appreciation of the sublimity and solemnity of high mountains which it would be hard to find expressed with equal force and depth in any other writer. The two articles entitled 'Sunset on Mont Blanc' and 'The Alps in Winter' show these qualities at their best, and in the latter they are conjoined with a singularly tender and sympathetic sketch of the life of the Alpine peasantry. Sometimes one feels that Stephen was not only a thinker but also a poet, I will not say a poet without the gift of verse, but rather a man penetrated with so high a sense of what poetry may be that he will not venture into verse lest he should be unable to rise to the standard which verse ought to maintain when employed upon the noblest aspects of nature. Let it be added that his feeling, when he allows it to find expression—for he was generally

restrained and reserved in his writing—is always simple and true. He is never affected. He never poses. He never seems to be trying to soar. He says exactly what he feels, and says it because he feels it. Whoever remembers the speeches he used occasionally to make at the winter gatherings of the Club will know what I mean. No one who listened to the farewell words which he addressed to us in December 1900 is likely to forget the mingled pathos and humour with which, in his own fresh and incisive way, he recalled the joys of a long vanished youth among the great mountains.

Few who were his companions in those early days, when he won fame by scaling peaks theretofore untrodden, are now left to mourn him. But there are happily still many who knew him sufficiently to feel the charm of his character, and who understood how it was that he became to us a model of the virtues which the practice of mountain-climbing ought, as we fondly believe, to engender or develope. Though generally a reserved and silent man, most averse to what are called 'social functions,' he loved the cheerful companionship of a climbing party, and was the most genial and unselfish of comrades. No one did more to form those traditions of good-fellowship which the Club has always set itself to cherish, and which indeed more and more form, to those who are less and less able to bear their share in its active work, a great part of the reason for its existence. Friendship meant a vast deal to him. It meant a constant interest in all that befell his friends, a constant willingness to give sympathy or help, a constant pleasure in being with them, whether on a long Sunday ramble over Surrey heaths or, in later days, when his declining strength was scarcely equal to an hour's exercise, a quiet stroll in Kensington Gardens.

There were three great sorrows in his life, the deaths of those three persons whom he most loved. But on the whole it was a happy and tranquil life, spent in work for which he was admirably fitted and in which he found keen enjoyment. That he excelled both in mountaineering and in letters was to him a secondary matter, for his self-depreciation hardly allowed him to recognise his own excellence. And it is a life the whole of which we, his friends of the Alpine Club, can recall with pride and pleasure, not merely because his distinction reflected lustre upon the pursuit which brings us together, nor because his works have won for him a place of honour in the literary annals of our country, but rather because it was a life of singular simplicity and dignity, animated throughout by a high and worthy spirit.

J. B.

GEORGE SPENCER MATHEWS.

MR. GEORGE SPENCER MATHEWS died at Birmingham on March 25, 1904, in the sixty-eighth year of his age.

He was not an original member of the Alpine Club, but he joined it very shortly after its formation. He was a first-rate climber in the old days, his most remarkable feats being the first passage of

the Eigerjoch in August 1859, in company with Mr. William Mathews and Mr. Leslie Stephen, and the first ascent of Mont Blanc from Courmayeur in July 1865 in company with the Messrs. Walker and Mr. A. W. Moore.

In the first of these expeditions the party took 14 hrs. of actual walking (including severe step-cutting) from the Wengern Alp to the top of the pass, and had to spend the night in the open, in the upper part of the Great Aletsch Glacier.

In the second expedition, so well described by Mr. Moore in this 'Journal,'* the climbers took between 12 hrs. and 13 hrs. from their *gîte* on the Brenva Glacier to the summit of Mont Blanc.

He made many important expeditions in other years, on one occasion making the first passage of the Col de Trélatête with his brother, Mr. C. E. Mathews, when the party were benighted on the open glacier; and on another crossing the Col d'Argentière from Lognon to Orsières, accompanied by the same gentleman only, in the days when climbing without guides was practically unknown.

He retired from the Club many years ago, but his name and his achievements will long be remembered by some of the older members.

He had a distinguished University career, graduating as seventh wrangler in 1859, and being elected Fellow of his college (Gonville and Caius) in the following year.

He was throughout his career intimately associated with the public life of Birmingham, and rendered essential service to the Midland Institute, the Triennial Music Festivals, and other local institutions.

Unassuming in his manner, and simple in his tastes, but having always a high standard of rectitude and honour, he was universally respected both in professional and social life, and it is not too much to say that few men have ever received a warmer appreciation and affection from so large a circle of personal friends. C. E. M.

THE ALPINE CLUB LIBRARY.

The following additions have been made since January :—

New Books and New Editions. Presented by the Authors or Publishers.

(Foreign works may be obtained through Mr. David Nutt, 57 Long Acre, London, W.C.)

Brian, Dr A. Guida per escursioni nell' Appennino parmense. 16mo, pp. ix, 270; map, ill. Parma, Batei, 1903. L. 2

Butterfield, F. W. L. The crevasse. A Dramatic Study. 8vo, pp. 39. Oxford, Parker, 1903. 2/

Scene, the interior of a crevasse. Into this falls Mawrton, the hero and sole character in the piece, and therein, while his guide goes for assistance, records the tragedy of his life. This shortly is, that his mother, during his father's lifetime, eloped with a cousin. The shock killed the husband. The eloping cousin, who had come into

* *Alpine Journal*, vol. ii. p. 369.

all the hero's estates through the mother, has been lost in the Alps. His dead body is discovered in the crevasse by the hero while he is waiting to be rescued; and as he is being hauled out, he finds on an icy ledge a will of his mother's, that places all the estates again in his hands. The plot is grotesque, but, despite a slight touch of the horrible, is not grotesquely worked out. It is scarcely good enough even to be considered (to quote one of Mawrton's exclamations when he first comes to consciousness in the crevasse)—

'A dream no doubt! a mere brain-phantasy,
The due creation of a night's carouse!'

Cadier, Les cinq frères. Au pays des isards. Première partie. De l'Aneto à la Munia par les pics de 3,100 mètres. 2de édition, revue. Accompagnée d'une préface du Comte Henry Russell. 8vo, pp. 104; ill.

Chez les auteurs à Osse, Basses-Pyrénées, 1903. Fr. 3.50

Candler, Edmund. A Vagabond in Asia. 8vo, pp. 294; plates.

London, Greening, 1900. 10/6

Plates of Kangchenjunga and the Himalayas. pp. 167-214; Himalayan Sketches.

Crammer, Hans. Eis- und Gletscherstudien. 8vo, pp. 57-116; 3 plates.

Reprinted from N. Jahrb. f. Mineral., Beilage-Band 18.

Stuttgart, Nägele, 1903

An interesting study of ice-crystals, etc., formation, position, melting.

Presented by Herr Crammer.

Dollfus, Ch. A travers Monts. 2me édition. 12mo, pp. 324.

Paris, Ollendorff, 1900. Fr. 3.50

Reprints. Finsteraarhorn, 1862; Mont Rose, 1868; Un poète de la montagne, Obermann.

Gribble, Francis. The story of Alpine climbing. 32mo, pp. 180; plates.

London, Newnes, 1904. 1/-

A good general history of climbing, instructive and entertaining, at a remarkably cheap price, with very fair plates. It is interesting to find that mountaineering is now so popular that it finds a place in 'The Library of Useful Stories' of Messrs. Newnes.

Guillarmod, Dr J. Jacot. Six mois dans l'Himalaya, le Karakorum et l'Hindu-Kush. 8vo, pp. iii, 363; maps, plates.

Neuchâtel, Sandoz [1904]. Fr. 20

Hervieu, Paul. L'Alpe homicide. Nouvelle édition. 8vo, pp. 282.

Paris, Lemerre, 1903. Fr. 3.50

Gruesome fiction on accidents, etc.

Hess, Dr Hans. Die Gletscher. 8vo, pp. xi, 426; maps, plates.

Braunschweig, Vieweg u. Sohn, 1904. M. 15

Jerosch, M. Ch. Geschichte und Herkunft der schweizerischen Alpenflora.

Eine Uebersicht über den gegenwärtigen Stand der Frage. 8vo, pp. vi, 253.

Leipzig, Engelmann, 1903. M. 8

Das Klima der Alpen: Das Tertiär u. das Diluvium, besonders die Eiszeiten: Die Interglacialzeiten u. die Steppenfrage: Geschichte d. mitteleuropäischen Flora: Die Elemente und die Geschichte d. schweiz. Alpenflora: Literaturverzeichniss: etc.

Johnston, Sir Harry H. The Uganda Protectorate. 2 vols, roy. 8vo; maps, plates.

London, Hutchinson, 1902. 42/ nett

vol. 1, chap. 5, pp. 152-189, Ruwenzori and its snows: with coloured and other plates of the range and its glaciers.

Labroue, E. A travers les Pyrénées. 4to, pp. viii, 255; plates.

Paris, Tallandier [1900]. Fr. 5

Lawson, A. C. The geomorphology of the Upper Kern Basin. 8vo, pp. 291-376; ill. In Bull. Depart. Geol. University of California, vol. 3, no. 15.

Berkeley, University Press, Feb. 1904. 65c.

The Sierra Club held its 1903 outing on the Upper Kern in the Sierra Nevada.

- v. Lendenfeld, Dr Robert.** Neuseeland. 8vo, viii, 186; ill.
 Berlin, Schall [1902] M. 8
 Forms vol. 9 of Bibliothek der Länderkunde, hgg. v. Kirchhoff u. Fitzner.
- Martel, E. A.** La photographie souterraine. 8vo, pp. 70; plates.
 Paris, Gauthier-Villars, 1903. Fr. 2.
 A good handbook on a difficult branch of photography. Well illustrated.
- März, Dr C.;** see Club Publications: Leipzig, Verein f. Erdk.
- Montmayeur, Chas.** Voyage sentimental autour du Mont Blanc. Première partie. 8vo, pp. iv, 498; ill.
 Paris, L. Duc, 1900. Fr. 5
- Nowopacky, Jan.** Alpine Kunstblätter. Obl. fol.; 40 plates in colour.
 Prague, Koci, 1903
 Published in ten parts at M. 2,50 each.
- Penzig, Prof. O.** Flora delle Alpi illustrata. 8vo, pp. xiv, 98; col. plates.
 Milano, Hoepli, 1902. L. 6
 A good handbook, with fair coloured illustrations of 250 species of flowers found in the Alps.
- Rawnsley, Rev. H. D.** Flower-time in the Oberland. With Illustrations from Pencil Sketches by Edith Rawnsley. 8vo, pp. xi, 337; plates.
 Glasgow, MacLehose, 1904. 5/- nett
 A pleasant book, full of the feeling of nature, recalling the beauties of sunrise and sunset among the mountains, and the gentle and the stern characters of Swiss scenery. Each chapter is headed by a sonnet, formed on the study of Wordsworth, one would say, and these with the illustrations give additional pleasantness to the book.
- Reinhard, Prof. Raphael.** Pässe und Strassen in den Schweizer Alpen. Topographisch-historische Studien. 8vo, pp. 203.
 Luzern, Eisenring, 1903. M. 4
 The greater part of this was first published in the 'Jahresbericht über die höhere Lehranstalt in Luzern.' A very full and historical account of the passes, with bibliography.
- Reishauer, H.;** see Club Publications: Leipzig, Verein f. Erdk.
- Sarat Chandra Das.** Journey to Lhasa and Central Tibet. Edited by the Hon. W. W. Rockhill. New edition. 8vo, pp. xvi, 368; maps, plates.
 London, Murray, 1904. 10/6 nett
 Travelled 1881-3. Reports first privately printed by Government in 1890, as 'Narrative of a Journey to Lhasa,' and 'Narrative of a Journey round Lake Palti . . .' Extracts from these appeared in Contemporary Rev., Jy 1890, and in XIXth Cent., Aug. 1885. The first edition was published in 1902 by the Royal Geographical Society.
- Switzerland.** Paterson's guide to Switzerland. With maps and plans. New and enlarged edition. 8vo, pp. xvii, 162.
 Edinburgh and London, Oliphant and Co [1904]. 2/6
 A convenient short guide.
- Taschen-Kalender für Schweizer Alpen-Clubisten, für das Jahr 1904.** Erster Jahrgang. 8vo, pp. 197. Zürich, Sterger & Tschopp, 1904. Fr. 2
 This follows a good deal on the lines of the D.u.Oe. A.-V. Kalender. It contains: Statuten d. S.A.C.: Clubhütten: Adressen d. Alpenen Vereine: Warnung f. Bergsteiger: Führer: Notsignale: Erste Hülfe: etc. A useful book for information on the S.A.C. and its varied work.
- Tibaldi, Tancredi.** Lo stambecco. Le cacce e la vita dei Reali d'Italia nelle Alpi. 8vo, pp. 119; ill.
 Torino, Streglio, 1904. L. 3
- Tibet.** Papers relating to Tibet. Presented to both Houses of Parliament by command of His Majesty. Folio, pp. x, 314; map.
 London, Eyre & Spottiswoode, 1904. 3/1
- Tonneau, Alfred.** Alpages et sommets. Courses en Haute-Savoie. 4to, pp. viii, 161; ill.
 Genève, Labarthe, [? 1903]. Fr. 8

Wähner, Dr Franz. Das Sonnwendgebirge im Unterinntal. Ein Typus alpinen Gebirgsbaues. Herausgegeben mit Unterstützung d. Ges. z. Ford. deutscher Wiss. in Böhmen. 1. Theil. 4to, pp. x, 356; plates, maps.

Leipzig u. Wien, Deuticke, 1908. M. 35

White, James. Altitudes in the Dominion of Canada. . . . Geological Survey of Canada. 8vo, pp. x, 266; maps. Ottawa, Dawson, 1901. 40c.

pp. 233-6: Heights in Yukon, the Rockies and the Selkirks. It is curious to note how greatly underestimated Mt St Elias at first was.

The following are some of the estimates made of its height ;

La Pérouse, 1786	12,672 ft.	Coast survey, 1868	19,500 ft.
Malaespina, 1791	17,851	Admiralty chart, 1872	14,970
Russian chart, 1847	17,854	Duke of the Abruzzi, 1897	18,060
Tebenkof, 1847	16,938	Coast Survey, 1900	18,024

— Dictionary of altitudes in the Dominion of Canada. With a relief map of Canada. Department of the Interior. 8vo, pp. x, 143.

Ottawa, Dawson, 1903

This is a rearranged and corrected version of the 1901 work.

The following are some of the heights given :—

In the Yukon :—		Mt Deltaform	10,945 ft.
Mt Hubbard	16,400 ft.	Mt Lefroy	11,080
Mt Vancouver	15,617	Mt Whyte	10,365
Mt Cook	13,700	Mt Balfour	10,000
Mt Augusta	14,900	Mt Stephen	10,523
Mt Newton	13,860	Cathedral	10,284
Mt Logan	19,539	Mt Huber	11,400
In the Selkirks :—		Mt Owen	10,000
Mt Nelson	10,000	Mt Collie	10,500
Mt Sir Donald	10,808	Mt Thompson	10,700
Mt Bonney	10,205	Mt Mummery	12,000
Mt Rogers	10,528	Mt Freshfield	12,000
Swiss Peak	10,595	Howse Peak	10,900
Mt Fox	10,448	Mt Lyell	12,000
Mt Dawson	11,110	Mt Bryce	13,000
In the Rockies :—		Mt Columbia	
Mt Assiniboine	11,860	overestimated at	14,000
Mt Vaux	10,741	Robson Peak	13,700
Mt Victoria	11,150	This last is called 'the highest known	
Mt Hungabee	11,305	peak in Canadian Rockies'	

The figures represent approximate estimates, not exact measurements. Excluding Yukon, 43 peaks between 10,000 ft. and 11,000 ft. are given ; 20 between 11,000 ft. and 12,000 ft. ; 4 of about 12,000 ft. and 7 a little over 13,000 ft.

Older Books.

Alpen-Führer, Illustrierter. Malerische Schilderungen des Schweizerlandes. Ein Reise-Handbuch für die Besucher der Alpenwelt. 8vo, pp. xlviii, 710; maps, ill. Leipzig, Weber (c. 1857)

First printed 1848.

Alpenpost, vol. 2. 1872

Arnollet, François. Nos Alpes. Isère et Dorons. Guide d'excursions . . . Sm. 8vo, pp. 464; ill. Moutiers, Ducloz, 1895

A good local guide-book.

[B., M. E.] Hofer, the Tyrolese. By the author of "Claudine," &c. 12mo, pp. 156; plates. London, Harris, 1824

A volume of Harris's Original Juvenile Library. Neat plates of scenery.

This was first published, 1823, in one volume, with a translation of Florian's William Tell, also adorned with elegant plates of scenery.

- The author is a lady, giving her initials in 'Claudine,' M. E. B., and signing herself as the niece of W. H. Watts. Can any reader supply the name? An altogether inferior edition, without plates, was published by Griffith and Farran [in 1881].
- Barnard, Rev. M. R.** Sketches of life, scenery, and sport in Norway. 8vo, pp. viii, 312. London, Cox, 1871
- Alpine flora of Dovre Fjeld: Loffoden Islands: Romsdal: Sondmøre: Bears: Ascent of Galdhøpiggen by Mr A. Blytt in 1864: etc.
- Barraud, C. D.** New Zealand: graphic and descriptive. The illustrations by C. D. Barraud. Edited by W. T. L. Travers. Folio, maps, plates uncol. and 12 col. London, Sampson Low, 1877
- Barrow, John, Jr.** Excursions in the North of Europe, through parts of Russia, Finland, Sweden, Denmark, and Norway, in the years 1830 & 1833. 8vo, pp. viii, 380; maps, ill. London, Murray, 1834
- pp. 261-280, Excursions in Norway, 1833.
- Berner Taschenbuch auf das Jahr 1852.**
pp. 148-174, with portrait:—Jakob Samuel Wytttenbach, von R. Wolf.
— auf das Jahr 1854.
pp. 86-125;—Einige Tage in den Hochalpen von Bern, Uri und Bündten. Eine Reiseskizze von G. Studer.
- Bothmer, H.:** see Switzerland, 1892.
- Brooke, Sir Arthur de Capell.** A winter in Lapland and Sweden . . . 4to, pp. xvi, 612; lithographs; map. London, Murray (1825)
- (Campbell, John Francis).** Frost and fire. Natural engines, tool-marks and chips. With sketches taken at home and abroad by a traveller. 2 vols, 8vo, ill. Edinburgh, Edmonston & Douglas, 1865
- On effects produced by glaciers, etc.
- Claray, J. B.** La conquête du Mont-Joly; La Bergère du Mont-Envers, etc. Poèmes, 1815-1818. Reprinted in C. A. F. Sect. Vosgienne, 1903, q. v.
- [Clifford, Chas Cavendish.] Travels.** By 'Umbra.' 8vo, pp. 278; frontispiece. Edinburgh, Edmonston & Douglas, 1865
- Iceland: Ascent and drawing of Popocatepetl: Col du Géant and Théodule Pass.
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pp. 253-402, Pyrenees and Dauphiné, 1785.

Comparing Alps and Pyrenees, he writes, p. 329, 'Attendez-vous rarement dans les Pyrénées, à de fortes secousses, et à un grand essor. La nature n'y fera, ni dresser vos cheveux, ni battre votre cœur d'effroi; elle ne vous y élèvera jamais au-dessus de vous-même; mais vous y aurez souvent des émotions agréables.'

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- Hofer:** see [B. M. E.]
- King, C.** Mountaineering in the Sierra Nevada. New edition, with additional chapter and two maps. 8vo, pp. 308. London, Sampson Low, 1874
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- Leclercq, Jules.** Promenades et escalades dans les Pyrénées. 2me édition. 8vo, pp. 239; plates. Tours, Mame, 1877
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- Lee, Dr Edwin.** Memoranda on France, Italy, Germany, with remarks on climates, . . . , &c. 12mo, pp. xii, 342; plates. London, Saunders and Otley (c. 1845)
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- Livret-guide géologique;** see Switzerland, 1894.
- [McGregor, A. B.]** Ascent of Mont Blanc. 8vo, pp. 215-247; ill. In 'Half hours in many lands. The half hour library of travel, . . . for young readers.' London, Nisbet, n.d.
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- On p. 18 occurs the following ;—'The descent from Honister Crag, on the sharp and rocky ridge of it, is somewhat tremendous ; yet it was descended in 1796 by a female.'
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- see Forester, Thos.
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- Reichard, H. A. O.** *Malerische Reise durch einen grossen Theil der Schweiz vor und nach der Revolution.* Neue Ausgabe. 8vo, pp. xvi, 508 ; panorama. Gotha, Hennings, 1827
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- In the first, 1870, edition, this is entitled, 'A little tour in the Alps,' and in the third, 1903, 'Some notes of a journey in the Alps of Europe and the Rocky Mountains of N.W. America.'
- de la R[oc]he.** *Voyage d'un amateur des arts, En Flandre, . . . en Savoie, en Italie, en Suisse, Fait dans les Années 1775-76-77-78 ; Dans lequel on indique ; . . . 3° une description soignée des Vallées de Glaces du Faussigny, de celles du Canton de Berne, & de diverses autres Curiosités que présentent les Alpes : 4° L'Itinéraire de quelques Passages peu connus à travers ces mêmes Alpes : . . . dont il est utile, & même important d'être instruit pour voyager le moins dispendieusement & avec le plus d'agrémens possible.* Par M. de la R***. 4 vols, 12mo. Amsterdam, 1783
- vol. 1, pp. 287-319 : *Excursion aux glaciers de Savoie.*
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- St. Bernard, Tales of the Great.** 3 vols, 8vo. London, Colburn, 1828
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- A guide-book. Bibliography, pp. 201-217.
- Sazerac, H. ; see Switzerland, Lettres, 1823.**
- Scenes of modern travel and adventure.** 8vo, pp. viii, 342 ; ill. London and Edinburgh, Nelson, 1848
- Contains inter alia ;—
- Lt Taylor, Peter Botte : Parrot, Ararat : Griffin, Vesuvius : Mackenzie, Mt Hecla : Pass of the Simplon.

- Sketchley, Arthur** [ps. i.e. **George Rose**]. Mrs. Brown on the grand tour. 8vo, pp. 152. London, Routledge [1870]
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- Smith, Rev. Alfred.** Sketches in Norway and Sweden. Drawn on stone from the original sketches by Henry Warren. Folio, (pp. 57); 27 plates. London, Maclean (1847)
- Good plates.
- Studer, G.**; see *Berner Taschenbuch*, 1854.
- Switzerland.** *Malerische Reise*, 1827; see *Reichard*.
- **Lettres sur la Suisse.** Accompagnées de Vues dessinées d'après Nature & Lithographiées par M. Villeneuve. Folio, 5 parts. Paris, Engelmann, 1823–1832
1. Par H. Sazerac et G. Engelmann. Oberland bernois. pp. 83; 24 plates. 1823
 2. Par Raoull-Rochette et G. Engelmann. Ancien Evêché de Bâle. pp. 45; 15 plates. 1824
 3. — Lac des quatre Cantons. pp. 61; 24 plates. 1826
 4. Par de Golbéry et G. Engelmann. Lac de Genève, Chamouny, Valais. pp. 89; 22 plates. 1827
 5. — Route du Simplon. pp. 39; 24 plates. 1832
- The letters, in the form of a journey, were written as text to Villeneuve's designs. The lithographs are very good.
- **Sketches**, 1836; see [Cooper, J. F.]
- **Das Schweizerland im Liede.** Eine Anthologie. Zusammengestellt von Heinrich Bothmer. 8vo, pp. vi, 190. Halle a.d.S., Hendel (1892)
- Poems by Matthiesson, Wyss, Vogel, Scheffel, etc. In German only.
- **Livret-guide géologique dans le Jura et les Alpes de la Suisse,** dédié au Congrès géologique international. 8vo, pp. vii, 306; maps, ill. Paris, Alcan; Lausanne, Payot, 1894
- The authors are Jaccard, Renevier, Heim, Schmidt, Baltzer, etc.
- T., H. B.** Rough notes of an excursion to the Soonderdoongee Glacier in the Himalaya Mountains, during the autumn of 1848. 8vo, pp. 47. London, printed by E. Couchman, 1858
- In Kumaon. This is the first visit by a European.
- (Tassin, Nicolas.)** Description de tous les Cantons, villes, bourgs, villages, et autres particularitez du pays des Svisses, avec vne brieve forme de leur République. Descriptio cantonvm, . . . Obl. 4to. pp. 63; 35 plates. A Paris, chez Sébastien Cramoisy, 1639
- Bound with this are 35 plates of towns, with title-page:—
Carte générale de tous les cantons des Svisses & pays circonvoisins.
. . . Par le Sr Tassin, Géographe ordinaire de sa Magesté.
- There is no map in this copy.
- The text is in French and in Latin. Haller, vol. 1, no. 692, gives particulars of a Paris edition of 1635, with maps and 36 plates; and adds that the text is full of mistakes and that the plates correspond with the text.
- Travers, W. T. L.**: see *Barraud*, C. D.
- Umbra**, ps.; see [Clifford, C. C.]
- Villeneuve**; see *Switzerland*, *Lettres*, 1823.
- Wereschagin, Herr u. Frau.** Reiseskizzen aus Indien. Ost-Himalaya, Kaschmir, Ladak. 2 vols, pp. 80, 120; ill. Leipzig, G. Teubner, 1882, 1885
- The authors are the late well-known painter and his wife.
- Wraxall, Sir Lascelles.** Up in the Alps. 8vo, ill. In *The Boy's Own Volume of Fact*, . . . N. S. 2. London, Beeton, Christmas 1863
- Alpine animals, The snow region, Memorable ascents.
- Wyndham, Francis M.** Wild life on the Fjelds of Norway. 8vo, pp. xvi, 273; maps, col. plates. London, Longmans, 1861
- Travels among the fjords, fjelds and glaciers.
- Wyttenbach, J. S.**: see *Berner Taschenbuch*, 1852.

*Club Publications. Presented by the Clubs.***C.A.F. Section Basque, etc.**

Bulletin pyrénéen, nos. 25-42, forming vol. 3. Jan. 1902-Dec. 1903

This valuable publication, on the history, geography and climbing of the Pyrenees, is issued by several sections of the C.A.F. in conjunction with other local societies. Can any member of the Alpine Club supply parts 1-13, which are lacking from the Club set, and are now out of print?

— **Section Vosgienne.** Bulletin, 22. 8vo, pp. 96; ill. Nancy, 1903

The papers in this Bulletin are of purely local interest. There are, however, reprints of some of the poems of a Chamonix schoolmaster, Jean Baptiste Claray, who published a few pages of poems in 1815 and 1818, copies of which are now very rare. The poems show some true feeling for mountain scenery. The titles are:—*La Conquête du Mont-Joly*; *Les montagnes qu'on aperçoit de la sommité du glacier de Buet*; *La bergère du Mont-Envers*; *Le voyageur qui visite les glaciers de la Vallée de Chamonix.*

C.A.I. Sez. Ligure, Genoa. Annuario. 8vo. pp. 69; ill. 1904

Lavori in montagna: Guidi e portatori: Gite: Biblioteca: Refugi: Itinerari delle Escursioni: Tariffa: Elenco dei Soci.

— **Torino.** Esposizione di Arte Alpina. Bozzetti, studi e disegni. Dal 21 Febbraio al 13 Marzo 1904. Catalogo. 8vo, pp. 13.

— **Verona.** Anni 27, 28, 29, 30. 8vo. 1901, 1902, 1903, 1904

Members: guides: accounts.

Caucasian Climbing Club. Ustaf (Rules). 8vo, pp. 15. Sochi, 1902

D. u. Oe. A.-V. Verzeichniss der autorist. Bergführer. sm. 8vo. 1902, 1903

Up to 1901 there were 15 annual editions published by the Berlin section of the Club. The work is now published by the Central Committee.

— **Berlin.** Jahresbericht. 8vo, pp. 184. 1903

Sektionsbericht: Inhalt der Vorträge: Tourenbericht: Hüttenbericht: Mitgliederverzeichnis.

Among the articles are:—

Dr Mühlstaedt, Winterfahrten auf den Ortler.

Herr Wildt, Im Glocknergebiet.

Dr Straussmann, Durch Bosnien.

M. Koch, Um S. Martino di Castrozza.

Dr Bröckelmann, In Jötunheim.

— — — Bücherverzeichniss. 8vo, pp. 108. Berlin, Mesch & Lichtenfeld, 1904

(Previous editions 1887, 1894.)

— **Breslau.** 6. Bericht. 8vo, pp. 27. 1903

— **Cassel.** 1. Bericht . . . für 1897-1902. 8vo, pp. 96; plates, maps of

Rieserfernergruppe. 1903

List of members, of ascents made, rules, library catalogue, etc. The section has built a hut in the Rieserferner group.

— **Constance.** Jahres-Berichte, 29, 30. 8vo. 1902, 1903

List of members, accounts, expeditions.

— — — Katalog über Zeitschriften, Bücher u. Karten der Bibliothek. 8vo, pp. 16. 1904

— **Hannover.** 19. Jahresbericht. 8vo, pp. 20; ill. 1903

— **Innsbruck.** Berichte (4), Annual. 8vo. 1900-1903

— — — Bibliotheks-Katalog. 8vo, pp. 37. 1902

— **Memmingen.** Jahresberichte (7). 8vo. 1897-1903

— **München.** Alpenvereinssektion Bayerland. VIII. Jahresbericht. 8vo, pp. 65. 1904

— **Prag.** Jahres-Berichte (3). 8vo. 1901-1903

Work of section: expeditions by members.

— **Villach.** Jahresberichte, 32-34. 1901-1903

List of members: accounts: expeditions by members

— **Wiesbaden.** Jahresbericht 1903. 8vo, pp. 30. 1904

— **Würzburg.** 27. Jahres-Bericht. 8vo, pp. 43. 1903

- Grazer Alpen-Club, 1888.** Statuten. 8vo, pp. 8. (1889)
This is a small club whose object is the encouragement of Alpine interests and the spreading of information on the mountain regions of Austria. The President has kindly sent three photographs of the Club's latest undertaking, the building of a path up the Bärenschutzhalm.
- Italy.** Club escursionisti di Iesi.
L' Appennino Centrale, Bollettino bimestrale. Anno 1, no. 1. Febr. 1904
- Leipzig, Akadem. Alpenverein zu.** Jahres-Berichte, 2. u. 3. 1901/02, 1902/03
New expeditions, etc.
- **Verein f. Erdkunde.** Beiträge zur Biogeographie und Morphologie der Alpen. I. Höhengrenzen der Vegetation in den Stubaier Alpen und in der Adamello-Gruppe: von Hermann Reishauer. II. Der Seenkessel der Soiern, ein Karwendelkar: von Dr Christian März. 8vo, pp. 314; ill.
Leipzig, Duncker & Humblot, 1904. M. 8
1896 u. 1903
- Lucerne.** Alpina Luzern: Statuten.
'Der Verein Alpina Luzern bezweckt die Förderung der Gebirgskunde.'
One of the many small local clubs of Switzerland.
- Mountain Club, Cape Town Section.** Mountain Club Annual, no. 8. 8vo, pp. 52; plates. 1903
It is a pleasure to read this interesting record of a year's good work in rock-climbing, chiefly on Table Mountain, up which the 45th route was discovered last year. There is a steadily increasing number of members, now 367, men and women, who find—to quote the words of a Club poet—that
' Dame Nature's infallible cure for all ills
Consists in ascending her mountains and hills.'
- The nine plates give a very good idea of the kind of climbing obtained. We must again congratulate the Club on its success.
- München, Akadem. Alpenverein.** XI. Jahresbericht, 1902/3. 8vo, 95. 1904
Contains particulars of many first ascents by members in the Eastern Alps and in the Caucasus.
- The Norwegian Club Year Book.** 8vo, pp. 70. London, Clowes, 1903
Contains pp. 11–20, J. W. Sutton, My first ascent of Stölsnaastind, 1886.
- Russian Alpine Club, Moscow.** Yearbook (in Russian) for 1902. 8vo, pp. 178; plates. 1904
Contains *inter alia* :—
Endrzoewski, The glaciers of the Songuti-don and Sardi-don, in the northern Caucasus.
Nikolski, Across the Pamirs.
Miss Preobrajenskaya, Kasbek and a second ascent in 1902.
N. de Poggenpohl, Across Suanetia; the Baskan valley.
Dr Täuber, The Hölloch cave in the Muota valley.
- S.A.C., see Taschen-Kalendar.**
- Sierra Club, Publication no. 30.** Bulletin, vol. 5, no. 1. Jan. 1904
Among the contents are :—
J. N. Le Conte, Ascent of North Palisades.
G. K. Gilbert, Variations of Sierra Glaciers.
N. F. McClure, Mount Pinatubo.
E. T. Parsons, Notable mountaineering of the Sierra Club in 1903.

Pamphlets and Magazine Articles

- Baldwin, Capt. A. H.** A visit to Thibet. 8vo, pp. 245–249. In Chambers's Journal, 6th ser. part 76. April 1, 1904
A trip from Nynsee Tal in 1863.
- Barnicoat, Constance A.** Through the Copland Pass, N.Z. 8vo, pp. 566–575; ill. In Wide World Mag. 12, no. 72. March, 1904
- VOL. XXII.—NO. CLXIV. M

- Bosazza, F.** L'alpinismo nel 1902. 8vo, pp. 528-537. In *La Rassegna nazionale*, Firenze, anno 25, vol. 34. 1 Dicembre, 1903
A short review of the work of the year. Ascensioni invernali: alpinismo femminile e di fanciulli: disgrazie: letteratura: ecc.
- Coolidge, Rev. W. A. B.** Un pionnier des Alpes françaises: William Mathews. 8vo, pp. 23. Reprinted from *Revue Alpine*.
Lyon, Imprim. du salut public, 1904
- Finsterwalder, S.** Bericht der internationalen Gletscherkommission. 8vo, pp. 161-169. In *C. R. Congr. géol. internat. de Vienne*. 1903
- Franckenstein, Baroness.** A Styrian chamois drive. 8vo, pp. 168-177; ill. In *Badminton Mag.* 18, no. 103. February, 1904. 1/2
- Grieve, J. W. A.** At the gate of Tibet. 8vo, pp. 45-53; ill. In the *Badminton Mag.*, London, N.S. no. 102. January, 1904
- Harrison, Frederic.** Sir Leslie Stephen. In *Memoriam*. 8vo, pp. 433-443. In the *Cornhill Mag.*, Smith Elder, London, N.S. no. 94. April, 1904. 1/
A sympathetic article, chiefly on climbing, by a former member of the Alpine Club, who at times accompanied the late Sir Leslie Stephen in the Alps. Among other remarks, he writes:—'It was indeed a liberal education to a young Alpine climber to spend a few days with Leslie Stephen and his Oberlanders on the crags and the snowfields which he loved, as if they were his native home—as if they were the Delectable Mountains where the Pilgrim might at last find blessedness and rest. The Alps were to Stephen the elixir of life, a revelation, a religion. And we may rank his enthusiasm for nature, and his familiarity with grand scenery as amongst the best influences of our time in teaching us the moral and spiritual force which nature can impress on the soul of man. . . . It was Nature in all its infinite aspects that Stephen loved, not athletic feats, or "record" time, nor the dangerous glaciers and icy crags for any reason but their beauty. . . . A climb or a walk meant always the glory of Earth, the light and air of heaven, health and good fellowship.'
- Henshaw, Julia W.** A record trip in the Yoho Valley. 8vo, pp. 444-450; ill. In the *Wide World Mag.* Newnes, London, no. 71, vol. 12. February, 1904
Good photographs of Mount Stephen, Canadian Rockies.
- Kilgour, W. T.** An original holiday: Ben Nevis. 8vo, pp. 244-248; ill. In *Pearson's Mag.* 17, no. 99. March, 1904
- Le Blond, Mrs A.** Mid-Winter on an alpine peak. 8vo, pp. 19-25; ill. In the *Badminton Mag.*, London, N.S. no. 102. January, 1904
Winter ascent of the Disgrazia.
- Mauvif de Montergon, A.** Souvenirs de Cauterets et du Vignemale. 8vo, pp. 12. Reprinted from *Mém. Soc. nat. . . . d'Angers*.
Angers, Germain & Grassin, 1903
A delightfully humorous paper, only too short. What an excellent description of our English attempts at French: 'une langue qui rappelait le Volapük et présageait l'Espéranto.' The author went in 1893 to the Pyrenees on the advice of a doctor, 'qui s'attache depuis longtemps à conserver un père à mes enfants.' He ascended Vignemale.
- Meyer, Hans.** Reisen im Hochlande von Ecuador. 8vo, pp. 50-61: 132-150. In *Zeits. d. Ges. f. Erdk. Berlin*. no. 1-2, 1904
Ascents of Cotopaxi and of Chimborazo last year. The last previous ascents were in 1880 by Mr. Whympfer.
- Paget, M. C.** Sikhim, the land where the rhododendrons grow. 8vo, pp. 300-316. In *Longmans Mag.* London, no. 256, vol. 43. Feb. 1904
- Pennell, J.** In the Alps on a motor-bicycle. 8vo, pp. 607-613; ill. by author. In *Century Ill. Monthly Mag.* no. 5 of vol. 67. February, 1904
Presented by Messrs. Macmillan, the London agents.
- Simmonds, C. E.** On foot through Thibet. 8vo, 23 pp.; ill. In the *Wide World Mag.* Newnes, London, nos. 71-73, vol. 12. February-April 1904

- Speer, Dr S. T.** Letter to the 'Daily News,' August 7th, 1856, on first ascents of the Wetterhorn.
- Taggart, M. D.** My last climb. 8vo, pp. 362-371; ill. In the Wide World Mag. no. 70, vol. 12. January, 1904
The story of a slip in 1896 on Bowness Knott in the Lake District.
- Tsbyikov, G. T.** The forbidden city of Lhasa. 8vo, pp. 217-222. In the Strand Mag. Newnes, London, vol. 27, no. 158. February, 1904
Photographs of Lhasa are given.
- Wandern und Reisen.** Illustrierte Zeitschrift für Touristik, Landes- und Volkskunde, Kunst und Sport. Erster Jahrgang. 4to, pp. 744; ill. Düsseldorf, Schwann, 1903
24 parts at Pfg 50 each.
This excellent new periodical contains many articles on climbing, all well illustrated; e.g.
G. v. Saar, Erste Besteig. d. Campanile di Val Montanaia.
O. Schuster, Col. d. Rouies im Dauphiné: Besteig. d. Elbrus.
H. Barth, Besteig. d. Guglia di Brenta.
R. v. Lendenfeld, Das Matterhorn.
H. Hoek, Eine Winterfahrt aufs Wetterhorn.
There are also many short notes on climbing, on books, and on the doings of the Alpine Clubs and their sections.

Item.

La nouvelle collection des roches du Mont-Blanc, classées par M. le Professeur Jurine et Brard.

A box of 140 geological specimens, with a printed catalogue of 6 pp. (c. 1820.)

This is of some interest historically, as it used to be fashionable to have geological cabinets, and the Chamonix collections are often referred to in early books of travel in Switzerland. It is about such that Claray writes;—

Las de courir et monts et plaine,
Va chez le marchand de cristaux.
Là, tu vois une chambre pleine
Des plus superbes minéraux;
Loin de toi l'épargne sordide,
Achète, achète un peu de tout,
Et souvent consulte le goût
De tes amis et de ton guide.

ALPINE NOTES.

'THE ALPINE GUIDE.'—Copies of Vol. I. of the new edition of this work, price 12s. net, and of 'Hints and Notes, Practical and Scientific, for Travellers in the Alps' (being a new edition of the General Introduction), price 3s., can be obtained from all booksellers, or from Messrs. Stanford, Charing Cross.

THE LIBRARY CATALOGUE is now printed, and may be obtained, bound in cloth, on application to the Assistant Secretary, 23 Savile Row. Price 3s.; postage, 4d.

THE ALPINE CLUB OBITUARY.—Sir Leslie Stephen (1858).

THE EXPLORATION OF MOUNTAIN REGIONS.—The following very courteous offer of help has been addressed to the Committee for the

Exploration of Mountain Regions by the Director of the Harvard College Observatory, Cambridge, Mass., U.S.A.:—'My attention has been attracted by the report of your Committee in the February number of the "Alpine Journal." It occurs to me to state that this Observatory maintains a station at Arequipa, Peru, at an elevation of 8,000 ft. If the members of its staff can be of service to the Alpine Club by giving advice or assistance in the exploration of the mountains in that region, they will be glad to avail themselves of the opportunity. This station would serve as a base for the ascent of the Chachani Mountains (20,000 ft.), El Misti (19,000 ft.), and other high mountains.'

MR. EDWARD WHYMPER'S GUIDES TO ZERMATT AND CHAMONIX.—We have received the eighth edition of Mr. Whympers 'Guide to the Valley of Zermatt and the Matterhorn,' and the ninth edition of that to Chamonix and the Range of Mont Blanc. From the Zermatt guide we learn that the number of visitors to that centre in 1903 was larger than ever, and that the first ascent of the Matterhorn in 1903 was made on July 10–11. We gather from the Chamonix Guide that the first ascent of Mont Blanc was effected on June 26; that the construction of the electric railway from Chamonix to Martigny is actually proceeding; and that an electric railway up Mont Blanc is projected. We observe also that skis are taking root at Chamonix, and that a 'Club des Sports Alpins' has been formed there.

'CLIMBERS' GUIDE TO THE BERNESE OBERLAND,' VOLUME II.—Mountaineers will be glad to hear that this book will appear on June 7. It is written by the Rev. W. A. B. Coolidge, and comprises the district from the Mönchjoch to the Grimsel.

GRÜNECKHORN (3,869 m.) AND PASS.—Messrs. Frederick Gardiner and George Gardiner, with Rudolf and Peter Almer, left Concordia at 3 50 A.M. on August 8, 1901, and followed the route of the Grünhorn Lucke for about forty minutes, and then turning upwards by a very distinctly marked couloir between the lower Grüneckhorn (3,810 m.) and higher or North Grüneck (3,441 m.) reached the pass between those points. They descended slightly towards the Grünhorn glacier and mounted it to its head. After having ascended the Gross Grünhorn, which was reached at 8.30 A.M. by usual route, the party from the head of the Grünhorn glacier mounted to the gap between the Gross Grünhorn and the higher Grüneckhorn (3,869 m.), and from there by an easy climb reached the summit of the higher Grüneckhorn (3,869 m.=12,694 feet) in about twenty minutes. The return to Concordia was made by the same route.

LOFOTEN ISLANDS. LANGSTRANDTINDER, W. PEAK (about 3,300 ft.). August 10, 1903.—Messrs. Sydney Spencer and J. P. Somers, with Christian Jossi, made the first ascent of the conical peak conspicuous from the Oestnesfjord at the N.W. end of the Langstrandtinder. They ascended from the Oestnesfjord to the snowfield, up which they turned northwards to the small peak first ascended by Messrs.

Woolley and Priestman in 1897. From this peak they descended into a deep notch, from which they ascended by steep rocks to the summit of the N.W. peak, the traverse from one peak to the other taking about an hour and a quarter.

TRAVERSE OF THE AIGUILLES DORÉES.—On August 1, 1903, Mr. J. H. T. Priestman, with the guide Maurice Crettez, left the Cabane d'Orny at 4.30 A.M. in very fine weather. They arrived at the foot of the S.E. end of the chain at 6 A.M., and then climbed in succession the Tête Crettez (6.30), Aiguille Javelle (7), Trident (8), Tête Biselx (8.40), Aiguilles Penchées, No. 1 (9.55), No. 2 (10.10), No. 3 (10.20), Aiguille de la Varappe, No. 1 (10.45) and No. 2 (11.45). They descended on to the Glacier de Trient at 12.45, and reached Orny at 1.30. They found much fresh snow.

EIGERHÖRNLI.—The Rev. H. J. Heard writes as follows:—‘ I notice in the November number of the ‘ Alpine Journal ’ that Mr. G. Hasler assumes that the point ascended by Sir Seymour King on September 2, 1887, and on the next day by Mr. J. Wills and his brother, was the extreme N.E. point and the end of the ridge marked 2,706 m. on the map. This is obviously a mistake, as the parties started on the Mitteleggi route on the snow below the hanging glacier.* By this route it would be impossible to reach the extreme end of the ridge, nearly a mile to the N.E. I have described what, I am sure, was the first ascent of the N.E. point overlooking the Grindelwald glacier † on August 22, 1900, by Mr. E. B. Rodway and myself. The second point (height not given on the map) I had previously ascended with Mr. G. A. Solly and Miss Maclean on August 2 of the same year. The mistake has, no doubt, arisen from the fact that Sir Seymour King gives the height of the point as 2,706 m., whereas the point was that now known as the Hörnli (2,929 m.).’

THE LYSKAMM (14,889 ft.) BY THE S.E. WALL.—At 11 A.M. on the morning of September 5, 1903, Miss Grace Fidler, with the guides J. B. Pellissier, of Val Tournanche, and Antonio Curta, of Gressoney, made this ascent. ‘ We left the Gnifetti hut and set out for the plateau of the Pyramide Vincent. The dawn was clear and beautiful. Turning to the left we made for the snow basin at the foot of the S.E. wall of the Lyskamm. Crossing the bergschrund on the right, we followed for about 40 ft. a steep slope of smooth ice, and took to the rocks at the fourth arête from the Cresta Sella. This we climbed straight up for about 1½ hr. Arriving near the top of it we found a very steep “ plaque ” of ice, where Pellissier’s ice axe came into play. Another stretch of steep rocks brought us to the foot of the “ rochers rouges,” as I have called this fine bit of wall that now faced us. They are nearly perpendicular, smooth, and solid rocks to climb, and form the direct and safest way to the east cornice. But they require a good deal of exertion to ascend,

* See *Alpine Journal*, vol. xiii. p. 417, and vol. xiv. pp. 29, 30.

† *Ibid.* vol. xx. p. 267.

and wishing to reserve my strength, as there was plenty before us still to do, I begged Pellissier to come down, although he was already a good way above my head, and try the passage on the left, which looks very much easier, though more dangerous. He gave in to please me, rather against his better judgment, and we crossed to the left a couloir about 50 ft. wide where stones fall. We hurried over it and none fell at this time. Still it is a place to be avoided, and those who may follow us by this route will find it better to breast the "rochers rouges" if they wish to be on the safe side. If they do so they must in any case on arriving at the top of them turn again to the left to reach the ice cornice at the same place at which we struck it coming up past the couloir. Crossing this couloir we now climbed by a small and easy arête, always straight up, for about 70 or 80 ft. and reached some nearly vertical rocks, which fortunately are perfectly sound and offer good hand and foot hold. Turning to the right, always climbing straight upwards, we reached the great cornice of the Lysjoch, which we turned by about 30 or 40 ft. of nearly perpendicular staircase cut most scientifically by Pellissier. At last we set foot on the Swiss or N. side about 150 ft. from the S. arête, or Cresta Sella. Here we found traces of the usual route, which we followed till we arrived at the highest point at 12 o'clock. G. F.'

The Lyskamm was first ascended from this direction by Mr. Percy W. Thomas, with Joseph Imboden and J. Langen, on September 1, 1878.*

LYSKAMM, WEST FACE.—On August 26, 1903, MM. A. E. Kuhlmann and C. A. Reymond, with Adrien Crettex, of Champex, having traversed the Lyskamm from the Lysjoch to the W. summit, quitted the S.W. arête (usually followed) and descended the W. ice-face towards the basin of névé which lies between the cliffs of the N.W. and the above-mentioned arête. The route was taken under a misapprehension. Halfway they were stopped by séracs, and it was necessary to hazard a traverse in a S. direction over ice, which brought them to a point where the bergschrund was practicable, though the passage of it required considerable care. When they had thus gained the basin of névé they were able to join the ordinary route a good way below the Felikjoch. When the mountain is in good condition this route avoids a long détour and saves appreciable time. They left the W. summit at 11.15 A.M., reached the bergschrund at 12.30 P.M., and arrived under the Felikjoch at 1.5 P.M.

* *Alpine Journal*, vol. ix. p. 109.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall on the evening of Tuesday, February 2, 1904, at 8.30, Sir Martin Conway, *President*, in the chair.

Messrs. R. Cajrati, J. E. C. Eaton, C. F. Meade, P. J. H. Unna were balloted for and elected members of the Club.

Mr. E. H. F. Bradby was unanimously elected a member of committee in place of Mr. C. Schuster, who had resigned.

The proposed new rules were then taken into consideration.

The PRESIDENT said that the proposed new rules were the result of a great deal of hard work on the part of the sub-committee and afterwards of the committee. He thought that the best course to take would be that a motion be made that the existing rules of the Club be abolished and that the new rules, as amended by the meeting, be enacted in their place. The rules would be then taken one by one, and amendments might be proposed on each rule as it was brought forward.

Mr. LEAF then moved that the existing rules of the Club be abolished, and that the proposed new rules, as amended by the meeting, be adopted in their place.

The motion was seconded by Mr. JUSTICE WILLS.

The proposed rules were then considered rule by rule and agreed to, after discussion, with some amendments, and with the exception of the proposed rule 46, which dealt with the summer dinner and corresponded to the old rule, which was struck out on the motion of Mr. C. T. DENT. Mr. Leaf's original motion was then put to the meeting and was carried unanimously.

A GENERAL MEETING of the Club was held in the Hall on Tuesday evening, March 1, at 8.30, Sir Martin Conway, *President*, in the chair.

A large number of photographs of the Eastern Alps, taken by Würthle, of Salzburg, were exhibited on the walls of the Hall.

Messrs. J. K. Parker and A. Woods were balloted for and elected members of the Club.

The PRESIDENT said, 'I am sure that it is the wish of the meeting that I should make reference to the sad loss that the Club has experienced in the death of its fourth President, Sir Leslie Stephen. This is not the place to refer to his record as an author, as perhaps the soundest and sanest critic of literature and life that we had among us. We here remember him as a mountaineer, a lover of mountains, and a lover of this Club. His memory will long be cherished by our members, both those whose joy and privilege it was to be numbered among his friends and those who knew him through his books and his fame as a mountaineer. Only recently he sent us as a gift two old ice axes and an old alpenstock that had been his. At the winter meeting of the Club you

accepted my suggestion that we should send him a message of sympathy in his illness, and of thanks for those evidences of his thoughtfulness for us; I accordingly wrote to him in the name of the Club, and received this letter in reply, dated December 17:—

‘DEAR CONWAY,—I am deeply touched by your letter and its proof that I am kindly regarded by so many members of the Club. I shall never be able to take any part in the proceedings of the Club, but those quaint old poles reminded me of some of the pleasantest days of my life. My membership of the Club has been a source to me of unmixed pleasure, and of kindly feeling from my comrades, which is one of the best things in life.

I wish you all good-bye most cordially.

Yours truly,

‘LESLIE STEPHEN.’

Mr. BRYCE said, ‘I cannot refuse to add a few words to what the President has said, for I knew Sir Leslie Stephen for more than forty years, and I am one of the few surviving members of the Club who have travelled with him. It may surprise some of you to know that he was famous as a climber before he was famous in any other capacity—in 1855 and 1856, when he had hardly written anything—and that it was by his writings on mountains that he first made his literary reputation. He was a delightful companion to climb with; with an immense capacity for enjoyment, bold and enterprising, but at the same time very cautious and careful. I was never in company with any one who more studiously exerted himself to avoid all unnecessary risks, to consider weather, routes, and all other conditions of success and safety. He had, as you all know, a great love for the mountains. He climbed them not only for the scenery but for the sake of the exercise and the excitement, and the qualities of skill and courage which climbing called forth. I should not be going too far in saying that the two most striking writers on mountain travel and climbing have been J. D. Forbes and Leslie Stephen. Stephen was, in his manner and style, quite unlike Forbes, and one would hardly have thought it possible for two men to deal with the same theme in ways so different and at the same time so excellent. Stephen really introduced a new way of treating mountaineering, and his influence has been felt by every one who has written since, just as the influence of Gibbon and of Macaulay has been felt by all who have since their time sought to write history. Forbes was best appreciated by those who had some knowledge of science, while Stephen, touching deeper springs of universal human interest, appealed to all by his graphic mode of presentation and by the unexpected touches of humour with which he lit up every scene he described. He had also a great influence on the Club and on the confraternity of climbers in that he set an example of looking upon mountain-climbing as a means of promoting good fellowship, an example we have always tried to follow. Those who may have met him in the old days will remember the atmosphere of geniality and kindness that his presence always brought. He was the most true and loyal and

steadfast of friends. I do not suppose that any of us will ever know any one more pure-minded and more high-minded in small things and great, and I trust that the Club will always preserve him, as one of its founders, in affectionate remembrance.' Mr. Bryce concluded by suggesting that the President should transmit to Sir Leslie Stephen's family an expression of the sympathy of the Club.

Mr. C. E. MATHEWS said, 'I agree with and second Mr. Bryce's suggestion. I knew Leslie Stephen for forty-four years, and I accompanied him on a memorable ascent of the Bietschhorn. He was one of the most admirable and brilliant climbers and one of the most charming men of letters. His 'Playground' will always be a classic, and there are passages in it which show that he was a poet as well. Under a somewhat brusque exterior he concealed one of the sweetest and kindest hearts ever given to the sons of men.'

The PRESIDENT said that he would convey to the family of Sir Leslie Stephen an expression of sympathy, as desired by the meeting.

The PRESIDENT then called the attention of the meeting to a petition to be presented to the Board of Trade for the safeguarding of the scenery in the building of a light railway from Beddgelert to Bettws-y-Coed, in North Wales. The Club, as a club, could take no official action, at all events not without notice; but he understood that time pressed, and members interested were invited to sign the petition. He did not know the circumstances, but now, as so often before, he could call on Mr. Bryce to explain them.

Mr. BRYCE said that the railway threatened to spoil some of the most lovely and hitherto untouched scenery in Britain. Under the Light Railways Act the Commissioners to whom plans were submitted must have regard to scenery, and any one was entitled to object to them on the ground that scenery would suffer; the Commissioners had passed the line, but the National Trust for preserving Natural Beauties had set on foot a memorial, addressed to the Board of Trade, before whom the scheme would come, directed to ensure that the damage to scenery should be averted or kept within as narrow limits as possible, and it was felt that signatures of members of the Club would appreciably strengthen the memorial. The petition was signed by about forty members.

The HON. TREASURER then presented the accounts for 1903. He had little to say with regard to receipts; there was the usual slight rise in subscriptions, owing to the larger proportion of subscriptions of 2*l.* 2*s.* There were thirty entrance fees, the highest number since the record year 1893; it looked as if there would not be so many in 1904, but, for his part, he considered that the members of the Club were increasing quite fast enough. The sum of 1,000*l.* on deposit had been invested in consols at 86½, which he hoped the Club would consider a sound investment. As to expenditure, there were two notable features—the large deduction from rent due to sums received for the hire of the Hall on the one

hand and the large amount spent on special furnishing and repairs on the other. Apart from these, and from the cost of the 'Journal,' which was unusually high, the ordinary expenditure was higher than that of 1902 by only 84*l.*, and the actual difference was even less, for the rise in firing and electric lighting was partly attributable to the letting of the Hall, and in order to arrive at an accurate view of our own expenses somewhat more should have been attributed to Hall expenses, so that the net rent ought to be rather higher than appears and general expenditure rather lower. The large deduction from the rent was mainly due to the letting of the Hall for two evenings a week to the Cosmopolitan Club, an arrangement which would be continued during the present year. Of the 300*l.* spent on special furnishing and repairs about 100*l.* was attributable to inside painting, 80*l.* to the new stove, 20*l.* to new bookcases demanded by the Hon. Librarian, and 11*l.* to repairs of the electric lighting apparatus, and about 140*l.* had been spent on new carpets and new tapestry for the Hall. He was not able to make any definite announcement as to the prospects of the second volume of the 'Climber's Guide,' but he might say that Mr. Valentine Richards was devoting himself to it with unflagging industry, and that steady progress was being made.

Mr. ROLLESTON then read a paper on 'Climbing in Suanetia,' which was illustrated by lantern slides.

Mr. FRESHFIELD said his acquaintance with the Caucasus was now antiquated. He had written a small book about the Caucasus, which he had hoped would induce others to go there, but after its publication people seemed to think that everything had been done, and no one had gone there since. He was very glad to hear that Tetnuld had once more been climbed, for it was a delightful expedition with a most glorious view. The party had reached Suanetia by crossing the Leila, and he thought that further information about this approach would be useful.

Mr. LONGSTAFF said that they had gone to the country simply to climb and not to explore, for which they had not time. The presence of the German party had stimulated them to do more, perhaps, than they would otherwise have done. The secret of success in the Caucasus was to read up the country well beforehand, and to find out from those who had been there what were the best places for camps. They had done all their climbing from four base camps. A great point was to be far enough from villages to avoid the inquisitiveness of the people, but not too far for sending for any provisions required. They had no dragoman and did not find the trip more expensive than a visit to Switzerland. Once in the country there were no expenses. Sheep were 10*s.*, chickens 5*d.*, and eggs $\frac{1}{2}$ *d.*; and probably they paid double what they ought to have paid. Neither wine, tea, nor sugar was to be had, and, as the bread was not good, it was well to take a supply of biscuits. They had a Whymper tent and a Mummery silk tent for the higher camps. The lighter the baggage the better, as a great deal of time may be lost in hiring horses, though it was always easy to

get one or two. It was to be remembered that in making long journeys the natives never stop to eat, so that the traveller must be provided with some loose ready provisions. The riding was rough, as there were only bridle paths, but the natives were intrepid riders with whom it seemed to be a point of honour never to dismount at any difficulty. The climbing, he thought, was more difficult than in the Alps, for snow conditions were bad. He did not know what to say on the delicate subject of climbing two on a rope, but he might mention that the rope was a silk one.

Mr. DENT said that it was interesting that the highest peak of Ushba was attained by what was known as Burgener's route, nearly twenty years after he had pointed it out. He wished to add his congratulations to the party on their climbs. They had been so modestly told that only those who knew the mountains could appreciate the very remarkable season that had been gone through. There was no climb more remarkable and more creditable than the ascent of Shkara from the S. The year must have been a very exceptional one for the Caucasus. The snow conditions were for the most part treacherous, and in consequence mountains apparently simple might be very difficult and dangerous. Probably in the past year the snow was in quite an exceptional condition. A knowledge of snowcraft was absolutely essential in the Caucasus. The afternoon conditions were often totally different from those in the morning.

Mr. WOOLLEY was glad that our own members had secured a fair share of the brilliant series of ascents in the Caucasus in the past year. The climb of the S. side of Shkara was a very fine one. Although Latsga and Bashil-tau were less than 14,000 ft. the ascents were something to be proud of. No doubt Tiktengen was very difficult. In 1898 his party had met with such a decided check on the S.W. ridge that he would hardly think of attempting that route again. The distance from base camps in the Caucasus was always very great. The party had shown not only great energy and endurance but great good judgment. They fully deserved the success they had met with.

Mr. SOLLY said the paper had indicated a totally different condition of the snow from anything that he had seen in the Caucasus. Persons were to be avoided who tried to find unsuitable reasons for success. No doubt this party owed a good deal of theirs to having been only two, and also to their having crampons. He thought that a holiday of seven weeks was quite enough to allow of a visit to the Caucasus. The German party on Ushba must have been men of great endurance and strength. The weather too must have been warmer than was usual, or drier, to help them to stand the exposure at high altitudes.

The PRESIDENT considered that a better illustrated paper had not been before read to the Club. It had been very easy to follow the routes made. 1888 had been the great year for the conquest of the Caucasus, but after that interest had seemed suddenly to cease.

He had never himself been in the Caucasus, and probably never would be, but it was to be hoped that the paper read would influence some of the members to go out. He wished to emphasise what had been said of the usefulness of crampons, which ought to be much more largely used in the Alps.

The meeting was brought to a close with a hearty vote of thanks to Mr. Rolleston.

A GENERAL MEETING of the Club was held in the Hall on the evening of Tuesday, March 29, 1904, at 8.30, Mr. H. Woolley, *Vice-President*, in the chair.

Messrs. W. R. Caesar, J. H. Clapham, and J. B. Slack were balloted for and elected members of the Club.

Mr. W. RICKMER-RICKMERS read a paper on 'Climbing in the Caucasus,' which was illustrated by lantern slides.

Mr. FRESHFIELD congratulated Mr. Rickmers and his companions on their wonderful feats. He had never listened to a more dramatic paper read before the Club. An important fact had been brought out, the great charm of the scenery of Suanetia as compared with that of the northern valleys. In the one case you have a beautiful valley with five or six glaciers running into it, while in the other you are cooped up between high rock walls. The S.W. corner of Ushba always seemed to him to offer the best point of attack. He could not quite make out where the lower snow-field was. The height of the wall was 400 ft., and above that no great difficulty seemed to have been met with. He would like to have heard more of the expedition in which the two peaks were crossed, what the party carried, what they slept in, what they ate, what cold they encountered at night. He should also like to know their impressions as to the relative height of the two peaks. In Russian maps there was a difference between them of from 7 to 20 ft., the northern being the lower. There were now three routes up Ushba—Cockin's by the eastern couloir, that by the western glacier, and the route by the southern peak.

Mr. NEWMARCH joined his congratulations to those of Mr. Freshfield. Personally he had found the weather bad in the Caucasus. Rickmers's party had been very strong and his organising power extraordinary. He was glad to find that Cockin's idea about the south peak had been proved practicable.

Mr. ROLLESTON had been much struck by the wonderful organising power of Mr. Rickmers. When he and Longstaff had reached Betsho they had seen Schulze and the party who had done Ushba, and he thought that Schulze's leading so soon after his accident was one of the pluckiest things that had been done in mountaineering. He was glad to have an opportunity of publicly thanking Mr. Rickmers for his kindness in the Caucasus and for the advice he had given them there.

Mr. LONGSTAFF also wished to thank Mr. Rickmers for his kindness.

Mr. WOOLLEY said we had been indebted to Mr. Rickmers on

previous occasions for very interesting papers, and this evening we had to thank him again for an excellent account of the series of brilliant ascents made last summer by himself and his companions. He was uncertain what to admire more, the endurance and determination of the conquerors of Ushba and Janga or Mr. Rickmers's self-denial in sacrificing so much of his own climbing in the interest of his friends.

Every one who had seen the magnificent S. face of Janga could appreciate the great difficulty and the considerable danger of the feat accomplished by Herr Schulze's party. The surprising thing was that they were able to take a native porter with them. It was interesting to note that the route taken on Janga was that chosen in 1890 by Ulrich Almer when with Messrs. Cockin and Holder. He need not dwell on the carefully planned and brilliantly executed first ascent of the S. peak of Ushba. Members of the Club were sufficiently familiar with the mountain from photographs and descriptions to realise the merit of the achievement. But the second ascent—the traverse made by Messrs. Distel, Leuchs, and Pfann—must strike every one as an extremely bold undertaking, because, in crossing the N. peak and descending on to the saddle, these gentlemen were possibly burning their boats and staking everything on the chances of continued fine weather.

MR. RICKMERS, in reply, said that round the S.W. corner where they went up there was a small snowfield which took them up 300 ft., which was invisible from the S. The S.E. corner looked broken from below, but the blocks were as large as the Hall and quite sheer, and the cracks were filled with icicles. The S.E. corner was quite impossible. With regard to the base of the lower snowfield, they ascended to a small col connecting the two glaciers, and looked up a sheer wall of 300 ft. fringed with icicles at the top formed from the frozen water of the lower snowfield. The party who had traversed the two peaks carried very little, and were able to do with very little food. He could not say which of the two peaks was the higher.

The proceedings came to an end with a hearty vote of thanks to Mr. Rickmers.

NEW EXPEDITIONS IN THE ANDES.

WE are indebted to Mr. W. R. Rickmers for the following notes on new expeditions in the South American Andes.

Of the many ascents made by the German Geological Expedition the following are probably new :

CERRO CAMPANARIO (5,240 m. ; 17,180 ft.).—On October 10, 1908, Baron Bistram, Dr. H. Hoek, and Professor Steinmann reached this summit, which is laborious but not difficult. This is most probably the culminating point of the great Victoria Range.

CERRO LIQUI (5,000 m. ; 16,400 ft.).—H. Hoek, alone, October 20. The last bit offers some interesting rocks.

CERRO TUNARI (5,200 m. ; 17,000 ft.).—On October 12 Steinmann and Hoek reached the Col between the summits, which Hoek subsequently climbed. The two peaks are of equal height.

CERRO CHANCAPIÑA (5,400 m. ; 17,700 ft.).—H. Hoek climbed this mountain of the Quimzacruz Range on January 12. The view of Illimani is overwhelming, surveying as one does the tremendous wall of over 16,000 ft. from the summit down to the bottom of the La Paz valley. The Quimzacruz chain itself is extremely interesting : a numberless array of aiguille-like peaks of 18,000 ft. and more.

CERRO TACORA (6,080 m. ; 19,700 ft.).—By H. Hoek.

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A TOUR IN THE SILVRETTAS.

By EDGAR FOA.

(Read before the Alpine Club, June 7, 1904.)

I HAVE complied with the invitation which has been made to me to undertake the paper for to-night's meeting with some little reluctance. I am one of those who have always climbed with the view to personal enjoyment rather than from any desire for the furtherance of geographical or mountaineering knowledge. The fierce joy of setting foot upon a virgin peak has never been mine—and I fear now never will be mine; whilst the lesser delight of climbing well-trodden peaks by new and obviously wrong ways is one of which I have only tasted on rare occasions. I therefore felt as if—not to make an excessive parade of that sense of modesty which is a well-known characteristic of all mountaineers—I really had nothing of sufficient interest to bring forward to justify me in occupying the attention of members of a Club like this.

It so happens, however, that I have become acquainted with a district in the Alps which, though very accessible to us, and though presenting features of great interest and beauty, has for some reason always been strangely neglected by the English climber. In proof of this I might be allowed to mention three circumstances. The first is, that since the announcement of this paper I have had more than one inquiry addressed to me by members of this Club as to what and where the Silvrettas are. The next is, that in the course of a somewhat extended tour of the district which I made in the summer of the year 1902, and which was spread over a period of some five or six weeks in the most animated part of the season, from start to finish I never met a single Englishman.

And the third is, that, after a careful search of the records of the Club, I have been unable to find that the district of which I am to speak has, from the beginning of things, ever been made the subject of discourse at one of our meetings; nor, if I may except a single contribution from the pen of Mr. Coolidge some six or seven years ago, can I find that it has ever been made the text of dissertation in the columns of our Journal.

At the same time I cannot doubt that there are some members of the Club to whom the district *is* known, and to whom it is known much better than it is to myself. I have only been there once, when I went out, accompanied by my friend Gover, whose name is, I feel sure, well-known to you in connection with the art of photography, and whose work—for all of it is his—it is going to be my privilege to exhibit to you on the screen to-night. We went out in response to the appeal which, as you may remember, was made to members of this Club generally, to assist in the preparation of the new edition of Ball's 'Alpine Guide,' by undertaking the supervision of different districts. And this leads me to say that I had another object in accepting the invitation which was made to me to address the Club to-night.

I am one of those who think that when in the fulness of time the second volume of that publication sees the light—and we are told that its appearance will not in all probability be delayed beyond next year—a serious and sustained effort ought to be made by the Club to carry the work to its proper conclusion by bringing out the sole remaining volume on the Eastern Alps. To bring out one volume out of three might pass. But to bring out two out of three—to get so far and yet stop short of the real goal—is to achieve a lame and impotent conclusion; it is to bring out a truncated and ineffective work, which proclaims upon the face of it the failure of the Club to effect the primary design which the enterprise had in view—that of offering a tribute of respect to the memory of a man who was one of its principal founders, and who, as you all know, was its first President.

One is infallibly reminded in this connection of a celebrated incident in classical history, which presents many features of resemblance to this case, although, perhaps, in some respects, it might be more fittingly described as the converse of the present. When the Sibyl—known to fame as the Cumæan—offered to Tarquinius Superbus her guide to ancient Rome, that work (like ours) was contained in three volumes, each volume, as we are told, being divided into three

books or parts ; and she submitted to him the whole at an inclusive price. The King examined the work, but thinking either that the price asked was too high, or that the work perhaps was not sufficiently up-to-date, declined the bargain which was offered to him. The Sibyl, however, undeterred by his refusal, returned home, and adopted, as we are informed, a somewhat singular expedient. She destroyed one of the volumes, and with the two which remained repaired to the King's presence, and offered them to him once more at the original price. Tarquin, however, thinking no doubt, and not unreasonably, that if he had been asked too much for the whole work he was certainly being overcharged in being required to pay the same price for a compilation which was no longer complete, again refused the offer. The lady, however, was still undismayed. She went back to her abode, destroyed another volume, and returned once more to the King, to whom she made a final tender of the only volume that had survived, always at the same price ; and this time, as we learn, Tarquin, overcome probably by the remarkable perseverance which she had displayed, succumbed to her efforts, purchased the remaining fragment at a price for which he might have obtained the whole publication, and spent, as we are told, the remainder of his days in regretting that he possessed an incomplete and not a complete work, attributing to that cause the misfortunes which overtook him in his subsequent career.

With this example before our eyes, I say that it behoves us to do all that is humanly possible to present the public with a finished and not an unfinished work. To do that, I feel sure that the money which may be necessary for the purpose can and will be found ; and, what is not less necessary, the man willing and competent to undertake the onerous and responsible duties of editor will surely be forthcoming also. But having found the money, and having found the man, what will still be required is to find workers, members of the Club who will come forward in sufficient numbers and respond, more freely and more liberally than has been done hitherto, to an appeal for co-operation, by taking special districts under their charge. And a principal aim that I had in view in accepting the post which has been assigned to me to-night was to offer a slight contribution towards that object, by showing—I will not say how such a thing ought to be done, but at least how it can be done, and that without the expenditure of an excessive amount of labour, of energy, or of time.

It almost necessarily follows from what I have already said, that the present paper, unlike most of those which are read from this place, is a paper not so much giving an account of particular climbs, as descriptive of a particular district. Some climbs we did, and a few I will endeavour to describe and to illustrate; but our primary object was different. What we had to do was to travel over the district and, in the limited time at our disposal, to make ourselves acquainted with its principal features: we had to examine the means of communication, to explore the passes, to inspect the huts, to report on the accommodation provided for the tourist, and generally to adapt the information conveyed by the portion of the book with which we had to deal to the requirements of the present day. These are the things with which we had to occupy ourselves, and these things, or some of them, I will endeavour to describe to you to-night.

The district in question is one with clearly defined boundaries. On the north the Arlberg valleys, connected by the pass of that name, and stretching as far east as Landeck, where the valley of the Inn is joined; on the west the river Rhine, flowing northwards from Chur; whilst the southern and eastern boundaries are formed by the valley of the Prättigau, running nearly to Davos, and that of the Inn, which may be said, with a sufficient degree of accuracy, to be connected with it by the Fluela pass.

The Silvrettas lie in about the middle of the southern portion of the district. They throw out one well-defined ridge (called the Rhätikon) to the N.W., terminating in the Scesaplana, and another to the N.E., the further and more easterly portion of which is sometimes known as the Samnaun group; whilst a third and separate mass, termed the Fervall group, lies more to the north, in a position immediately south of the Arlberg pass. Most of these peaks rise to a height of between ten and eleven thousand feet, two only—Piz Linard in the south, and the Fluchthorn in the north—of the Silvrettas exceeding (and that only slightly) the latter limit; whilst none of them, under favourable conditions, present any serious difficulty to the climber. They were, for the most part, ascended for the first time in the 'sixties; and the district has within recent years been greatly opened up and developed by the German Austrian Alpine Club, who have constructed, and are still constructing, paths and huts on a very liberal scale. The greater portion, perhaps some three-fourths, of the tract of land here spoken of is Austrian territory; but the frontier line runs through the Rhätikon, the

Silvrettas and the Samnaun valley, and the peaks lying, broadly speaking, to the south of that line all belong to Switzerland.

There is, however, another state which can lay claim to a portion of the region, although not a large one. To the east of the Rhine, and between that river and the outposts of the Rhätikon chain, lies the little principality of Liechtenstein, some ten or twelve miles in length, and with two exceptions (it is believed) the smallest independent state in Europe. It is united with Austria for purposes of coinage and of customs, but is in all other respects independent, and enjoys the distinction of having no national debt.

The mention of the Rhätikon recalls to our minds that all the peaks of this district form part of what are generally called the Rhaetian Alps. Who and what the Rhaetians were cannot be stated with certainty at the present day. But they are generally believed to have been a people of Etruscan origin, who migrated to the mountains of the Tyrol from the plains of northern Italy when the irruption of the Gauls caused them to fly from their own country. Little appears to be known of their history until their conquest was undertaken by the Romans in the reign of Augustus, from which time the country became a province of the Empire. It is the real home of that curious offspring of vulgar Latin generally known under the name of *Romansch*; and although German is now spoken throughout the district, the dialect, akin in many respects to Italian, still lingers among the peasants, whilst traces of it, in the nomenclature of peaks, of glaciers, and of villages, are everywhere found in abundance. It is probably owing to these circumstances that the spelling of geographical names in the district is throughout most confused and uncertain. It might, perhaps, savour of exaggeration to say that there is scarcely a name which is not capable of being written, and which is not habitually written, in three or four different ways; but if not the truth it would certainly be an approximation to it.

Of the portion of the district which belongs to Austria the western half is called the Vorarlberg, whilst the eastern is part of the larger province known as the Tyrol. The boundary between them, speaking roughly, is a line drawn southwards from the Arlberg pass, and passing through the range of hills (to the N. of the main group of the Silvrettas) which forms the watershed of the district. It afterwards takes a more easterly direction, traversing the group itself to a peak, which, in consequence of its forming also the Swiss frontier, bears the name of the Dreiländerspitz.

The valleys of the district are all of singular beauty. A British workman, according to a well-known story, is reported upon an historic occasion to have expressed the opinion that all beer is good, and that there is no such thing as bad beer, although it might be admitted that some beer was better than others. In the same way, perhaps, it may be said that, although some of these valleys may be more beautiful than others, all of them without exception present to the beholder points of great attractiveness and delight. In the interior of the district there are two principal valleys, the Montafon and the Paznaun, both situate entirely in Austrian territory. They both run out of the northern outposts of the Silvrettas, the main direction of the former being north-westerly, and that of the latter north-easterly. From these there branch out a large number of subsidiary valleys, nearly all of them running pretty well due north and south.

The Montafon—spelt also (amongst other ways) Montafun and Montavon—derives its name from the circumstance that it is, or contains, the ‘mountain in front’ (Fr. *mont d’avant*), though which is the mountain referred to, and which the front, it now seems impossible to say. By contradistinction, it may be mentioned here, the ‘mountain behind’ is in the Romansch dialect the *mont d’avos* (cp. Eng. ‘after’), a designation which survives in the name of the well-known health-resort in the canton of Grisons.

It is a fine and broad valley, watered by a river with the somewhat uninviting name of the Ill, and joining the main Arlberg valley at Bludenz. It contains a newly constructed and excellent road, now extending as I understand to nearly the whole of its length; and had it been Swiss instead of Austrian territory, there can, I think, be little doubt that it would for some considerable time past have been able to boast of a railway also. At several of the villages—especially at Schruns and Gaschurn—there is excellent accommodation to be found; and although the former at all events lies too low to be of direct service for the ascent of peaks, there are huts, of which I shall speak presently, which are within easy reach of it. In spite of all modern improvements, there exists a certain primitiveness in the valley and its inhabitants, which will be found highly refreshing to the frame jaded by too close a contact with civilised life. The women in their Sunday and holiday attire, which is of the quaintest description, present a most picturesque appearance, and one of a kind seldom or never seen elsewhere at the present day. On one occasion the landlord of an inn at which we were staying informed us with some

degree of positiveness that the weather was about to undergo a change for the worse. We asked him whether he based his prediction on the state of the barometer. He informed us that he kept no such instrument, but that when the change he looked forward to was about to take place the drains in his house gave notice of the fact. And he proved to be altogether in the right, though I feel bound to say that the evidence upon which he based his conclusion had not manifested itself to us. We left the next day.

The Paznaun is a higher and wilder valley than the Montafon, and is consequently more thinly populated. Its torrent is known as the Trisanna, and after joining the Rosanna, which runs eastwards along the Arlberg valley from St. Anton, the united stream throws itself into the waters of the Inn at Landeck. As in the case of the Montafon, the accommodation offered by its villages (of which the principal are Galtür and Ischgl) is of little direct use to the mountaineer, though of course he will avail himself of it on his way to and from the different huts from which his expeditions may be undertaken.

Mention has already been made of the good and plentiful character of the huts generally of the district. For the peaks of the Rhätikon chain there are the Douglas, Lindau, Tilisuna, and Scesaplana, all except the last (which is under the S. A. C.) belonging to the German Austrian Club. To these has been added within the last two years the Sarotla hut, situate in the beautiful valley of that name. It may be said in passing that there certainly does seem a tendency on the part of the German Austrian Club to overdo things a little in this respect. The latest addition can apparently serve no useful purpose except for the Zimbaspitz, and as this short though very pretty climb, which I will presently describe, can easily be undertaken by the same route from Brand, there seems hardly sufficient justification for its construction. The somewhat aged attendant whom we found in charge informed us that the duties committed to him were but light, quaintly adding that the shepherds in his neighbourhood looked after the sheep and that he himself looked after the shepherds.

For the Fervall group the two principal huts are the Konstanz hut in the Fasulthal, and the Darmstadt hut in the Moosthal, the former on the west, and the latter on the east, of the line of peaks in that range of which the Kuchenspitz (to be presently mentioned) is the highest summit. Both are easily approached from St. Anton, on the Arlberg road and railway. There are in addition two others, not so frequently

used, known as the Edmund Graf hut and the Asch hut, for the Riffler and the eastern outposts of the Fervall group.

With regard to the Silvrettas themselves, you have on the northern side the Madlenerhaus, and the Jamthal, Wiesbaden, and Heidelberg huts, all of them belonging to the D. Ö. A. V., though the last named, singularly enough, is situated within Swiss territory. On the southern side the principal club huts, all of them of course under the S. A. C., are three: the Linard, on the S. side of the mountain of that name, and the Silvretta and Vereina, which serve for the peaks on the western side of the ice-field. The latter, it must be confessed, compare unfavourably with the huts of the D. Ö. A. V., though improvements are said to be in active contemplation.

I may perhaps be allowed here to interpose the explanation that Silvretta and Vereina, according to a well-known legend of the Prättigau, were the lovely and accomplished daughters of a chieftain of the name of Baretto. This individual, who is supposed to have taken refuge in the mountains from the far south—a supposition in which, in accordance with what I have already said, he may be regarded as typifying the Rhaetian nation itself—is described as being of knightly appearance and of mysterious ways, a circumstance which caused him to be looked upon by the simple peasants of the valley as a magician, and dreaded accordingly. They, however, loved and admired his beautiful daughters, whose appearance brought with it everywhere sunshine and happiness. In the fulness of time Baretto died, and his daughters buried him in a cave near the Stützalp, which bears the name of Baretto Balma to the present day. Silvretta then returned to her home in the south, but Vereina remained a little longer, roaming mysteriously over mountain and dale. The last time she was seen, according to the legend from which I have quoted, was when she ascended a hill from which a view of the rich pastures of the Upper Prättigau can be obtained. She was observed stretching out her hands, blessing the inhabitants of the valley, and conferring those pastures upon them in Silvretta's name. Then she disappeared and followed her sister. In this way were acquired by the villagers of the district those rights in regard to the higher pastures which they possess at the present day. It appears, however, that one village, that of Fideris, was shut out from Vereina's view by an intervening hill. And I understand it to be a fact that the inhabitants of that village are still excluded from the rights of pasture in the higher parts of the valley which belong to their more fortunate neighbours.

We began our tour with a few days in the Rätikon. Leaving the Arlberg railway at Nenzing, we walked up the lovely Gamperdonathal to the mountain inn known as Nenzinger Himmel. From there we climbed the Scesaplana (9,740 ft.) by the Panüler Schroffen, descending on the other side to the Douglas hut on the Lünser See, and thence reaching Brand. The next day, in beautiful weather, accompanied by Leonhard Beck, of Bürserberg, as guide, we started for the Zimbaspitz (8,678 ft.). Leaving Brand at 5.30 A.M., we walked down the valley as far as its junction with the Sarotlathal, and thence up that valley, reaching at 7 o'clock

*W. H. Goer, photo.**Susan Electric Engraving Co.***ZIMBASPITZ FROM THE N.E.**

the new hut of which I have already spoken, and which had been opened only a very few days before. After twenty minutes' delay an hour's walk up grass slopes brought us to the screes at the foot of our peak, where we stopped for an hour to breakfast. The screes and a short snow slope shown in the middle of the above photograph were next ascended to the rocks. Our way then led up a steep chimney gradually sloping to the right, and then over some steep slabs which present the only difficulty in the climb. These surmounted, we found ourselves on a kind of small col on the north shoulder, and walked up the easy north ridge to the summit by about 11 o'clock.

Having spent a day or so in the Montafon valley, which I have already described, we next bent our steps northwards in order to visit the peaks of the Fervall group. With this object we crossed the col, free from snow in the summer, known as the Verbellner Winterjöchl. I may mention here that there are a considerable number of cols of this kind in the neighbourhood, and most of them bear the name of 'Winterjöchl.' This proved a source of great trouble to Gover. A *joch*, of course, one is familiar with, and a *jöchl* is a little *joch*; but why *Winterjöchl*, seeing that these cols are chiefly, if not entirely, used in the summer? Many were the persons, both natives and others, to whom he addressed an inquiry on the subject; but he could never get a satisfactory answer. At length one of them, evidently a man of superior intelligence, on being greeted with the usual question, shrugged his shoulders by way of reply, and observed in quiet but decided accents that he could not see how the thing could possibly be called anything else. It reminded me of a similar remark upon the word 'yorker' attributed to a cricket professional of the north country. After that my companion gave the matter up as a bad job.

For the Fervall peaks we at first made the Konstanz hut our headquarters, climbing, on successive days, the Kuchen-spitz (10,400 ft.) and the Patteriol (10,036 ft.). The latter is the more interesting climb of the two.

From the Konstanz hut we made our way to the top of the Fasulthal, and thence over the Schafbuchjoch to the Paznaun, spending a few days in the neighbourhood of Ischgl. We returned from there to the Fervall group by the Doppelsee-scharte, a glacier pass (shown in the photograph opposite), lying between the Seekopf and the Rautekopf, and descended to the Darmstadt hut at the top of the Moostal. This is a very fine route, and if undertaken, as it was by us, without the assistance of a guide, will be found to afford much interest in the employment of map and compass. The grouping of the peaks and glaciers viewed from the neighbourhood of the hut (from which the photograph was taken) is exceedingly grand.

We next descended the valley to St. Anton, and walked along the Arlberg road as far as Pettneu. Starting from there we spent a couple of days in the eastern outposts of the Fervall peaks, visiting the Edmund Graf and Asch huts, and passing one night at a beautiful little place in the Paznaun, called Wald, where there is an excellent inn. We crossed the Blankajoch and Furkajoch passes, and eventually reached Ried in the valley of the Inn. Thence we made our way up that



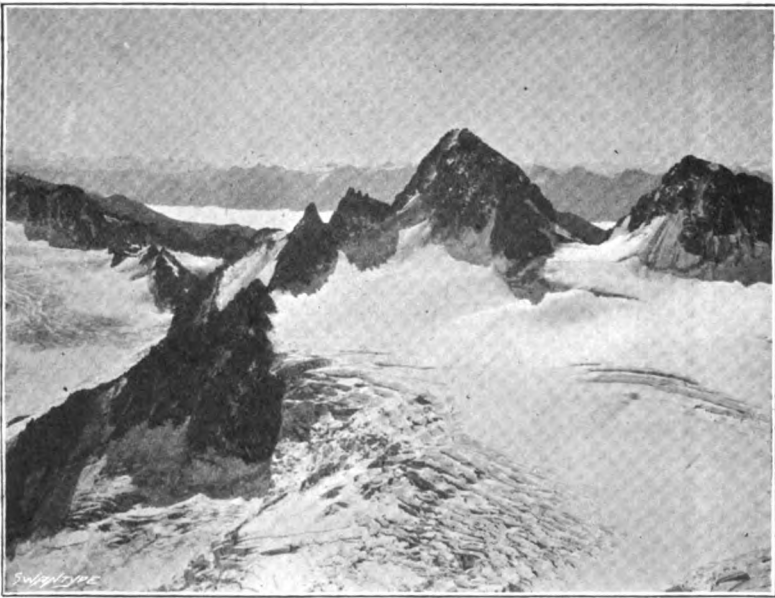
W.H. Gover, photo.

Swan Electric Engraving Co.

SEEKOPF AND DOPPELSEESCHARTE
FROM THE DARMSTADT HUT.

valley to Finstermünz, and from there along the Samnaun to Campatsch. From Campatsch we directed our steps over the Cuolmen d'Alp to Schleins, whence we regained the Engadine road at Strada, proceeding from there viâ Schuls up to Guarda, which we were to make our headquarters for the first part of our expeditions in the Silvrettas.

Our first excursion, with Bartolomeo Padrun as guide, was to the top of the Val Tuoi, and thence over the Fermunt pass at the foot of Piz Buin. There is a curious little lake at the very summit of the pass, the inclosing ice-walls of which are



W. H. Gover, photo.

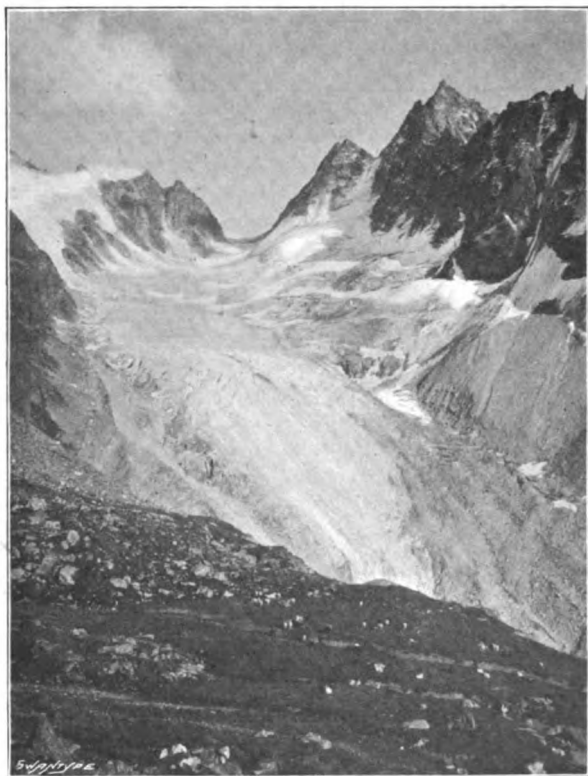
Suan Electric Engraving Co.

VIEW FROM THE SILVRETTAHORN LOOKING S.E.

rent with crevasse fissures in a manner but seldom seen in such a place. From the pass we descended over the glacier on the north side to the Wiesbaden hut, and thence shaped an easterly course across the Ochsencharte, a depression in the ridge running northwards from the Dreiländerspitz, and commanding an extensive view (some idea of which may be gathered from the accompanying photograph taken from the Silvrettahorn) of the icy wilds of the whole region. Coming down from there on the great Jamthal glacier we finished our day's journey at the hut of that name. The next morning we

reascended the glacier, keeping however more to the east, and steering for the Jamjoch, whence after a little step-cutting, though the pass is quite free from difficulty, we descended again into the Val Tuoi and found ourselves back at Guarda a few hours later.

The following day we toiled once more up the same valley, this time with the Klosters guide, Leonhard Guler, but



W. H. Goer, photo.

Suez Electric Engraving Co.

VERSTANKLATHOR FROM NEAR THE SILVRETTA HUT.

diverged from our previous route at the foot of Piz Buin, taking a more westerly course over the Plan Rai glacier, and thence by the Mittagsplatte to the summit of the Silvretta pass, and descended by the ordinary route to the Silvretta hut of the S. A. C. We spent a night in that shelter, which we found crowded and uncomfortable, and made an early start the next morning with the view of returning to the Engadine

over the Verstanklathor. This is a magnificent route, but on account of its being longer and more arduous than the others is not often taken. We followed the ordinary way from the hut across the lower end of the Silvretta glacier, and then up the rocky ridge known as the Krämerköpfe, from the upper end of which we descended to the Verstankla glacier, reaching in this way the Thor without difficulty. This rocky gateway (well seen in the accompanying photograph) opens on a field of *névé* which we next skirted on the south side until we reached the shoulder called Parait Alba. We descended by rock and snow slopes to the edge of the Maisas glacier, the way then winding round the rocks to the left, and the last part of the descent being effected by a gully opposite the Vadret Tiatscha, at the foot of which we entered the Val Lavinuoz, and so reached Lavin.

A temporary break-up of the weather prevented us from carrying out the intention we had formed of crossing Piz Linard from Lavin to Klosters. A heavy thunderstorm at night was followed by a drenching day, and, as we were pressed for time, there was nothing for it but to keep to roads and macintoshes. We accordingly walked up to Süs, and thence over the Fluela to Davos and Klosters in pouring rain. Upon our arrival at Klosters the weather fortunately cleared again, and, after spending a day in crossing the Pischahorn (9,784 ft.)—a simple and not very interesting climb—to the Vereina hut, we returned to Klosters. We next paid a visit to the Madlenerhaus, making our way over the so-called Kloster pass, a gap (unfrequented, and not altogether easy to find) in the ridge running S.E. from the Gross Litzner. It may be observed, in passing, that the glacier marked on the 'Excursion-Karte' as Im Glotter, on the N. side of the ridge, seems now to have disappeared. The following day we retraced our steps to Klosters over the Roth Furka, a glacier pass at the top of the Klosterthal, which is often used, and presents no difficulty. It leads to the lower part of the Silvretta glacier, in close proximity to the hut of that name.

As my companion had visited the district the year before I joined him, and had then climbed the most prominent of the Silvretta peaks, such as the Buin, Linard, Fluchthorn, Gross Litzner, and Verstanklahorn, we had to content ourselves with the somewhat hurried survey of the Silvretta ice-field which I have described, for we were anxious in the few days that remained to us to pay another visit to the Rhätikon. We accordingly drove down the Prättigau to Küblis, and then walked up the beautiful gorge to the north of that village,

which leads to St. Antönien, regaining the Montafon valley at St. Gallenkirch, by way of the St. Antönierjoch and Gargellen, and making our way again to Schruns.

From Schruns we walked up the Gampadelzthal to the Tilisuna hut, whence we made in unpleasant conditions the very simple ascent of the Sulzfluh (9,252 ft.), over that curious chalky bed on the Tilisuna side, which presents the appearance of a petrified glacier. The descent we made by a broad gully (known as Im Rachen), lying more to the W., is both grander and more interesting, and leads to the Lindau hut in the Gauerthal. We were next detained a day or two in idleness by bad weather, and then made the ascent of the Drusenfluh (9,282 ft.) by what is called the Eisjöchl route.

Leaving the Lindau hut in thick mist, with Aurel Steu (of Schruns) as guide, we followed the Ofen pass track for about half an hour, and then turned up a couloir called Thiergarten, which justified its name by revealing to our eyes a herd of chamois scampering up the rocks above us. As we ascended the snow became frozen hard, and our *steigeisen* were soon called into use. But, notwithstanding the irons, the slopes were too steep to permit of our dispensing with step-cutting. At the top of the couloir, the upper part of which is sometimes called Eistobel, we reached the rocks, which in places present some little difficulty, owing to the smoothness of the slabs. Indeed, in one part of them we found it advisable to use the whole length of our 60-ft. rope, my companion and I going up one at a time. The rocks become easier as you ascend, and we eventually reached the top, after about 4 hrs. climbing from the hut. The mist still hung heavily over the mountain, and the descent along the N.W. arête to the Ofen pass severely taxed our guide's knowledge of the locality. However, in spite of his finding himself on occasions at fault, we eventually emerged upon a stony col, and a few minutes later reached the stupendous rock doorway of the Schweizerthor.

The descent into Swiss territory by this passage presents, in the huge masses of rock strewn about in all directions, a scene of the grandest conceivable desolation. From there we made our way to Schiers, a somewhat uninviting place situated in the lower Prättigau, returning into the St. Antönierthal the next day near Partnun Staffel (where there is an excellent inn), and crossing the Rhätikon range again by the Drusenthor (a higher but far less beautiful pass than the Schweizerthor), and so regained Schruns. The following morning we went down the Montafon to Vandans, and thence up the Rellsthal

under the Zimbaspitz once more to the Douglas hut, making our way, with some difficulty owing to thick mist, over the Cavell Joch to the Scesaplana hut, and thence down to Seewis. From there we returned to the last-named hut the next day by a different track, and crossed the Kleine Furka by a newly constructed club path to Nenzinger Himmel. Our final expedition in the Rhätikon was over the Barthümel Joch to the upper Swiss pastures of Jes, and thence northwards again over the Samina Joch into the lovely woods of the Saminathal, returning to the haunts of civilization at Feldkirch. And from there a day's excursion in the principality of Liechtenstein, of which I have already spoken, traversing the whole of its territory from north to south, and arriving at Ragatz, brought our tour, and may bring this paper, to a close.

By way of summary it may be said that the district which I have endeavoured to describe is one which can be confidently recommended both to the mere lover of Nature and to the mountaineer. The climbs are for the most part short, but present features both of interest and of variety; the accommodation to be obtained, as I have already said, is excellent throughout; whilst the whole district, both in its glacial and in its non-glacial portions, may fitly be pronounced to be one of great beauty.

TWO GOOD ROCK CLIMBS FROM AROLLA IN THE VAL D'HÉRENS.

BY J. W. WYATT.

A ROLLA is, I fancy, so well known to most members of the Club that it is almost superfluous for me to say much about it, or to describe its delightful isolation and grand situation at the head of the Val d'Hérens, overlooked by the fine snow-clad peaks of the Mont Collon and the Pigne d'Arolla. It was, however, my first visit there, and to say that I was charmed with its unique situation—the feeling of being in the very heart of nature and the Alps, with no sign of man or his handiwork from the hotel windows, except the small and picturesque wooden bridge across the river below; the scene of desolation stretching up the valley with just sufficient clothing of larch and pine to give tone to it; the grand rock and ice slopes of the Pigne and Mont Collon closing in the valley; the fine ice fall of the Viubez Glacier,

and the curiously terraced appearance of the snout of the Glacier d'Arolla; and last, but not least, the *bon camaraderie* and sociability of the hotel party, mostly all on climbing purposes intent—is only to echo the feelings of all lovers of nature when visiting Arolla for the first time.

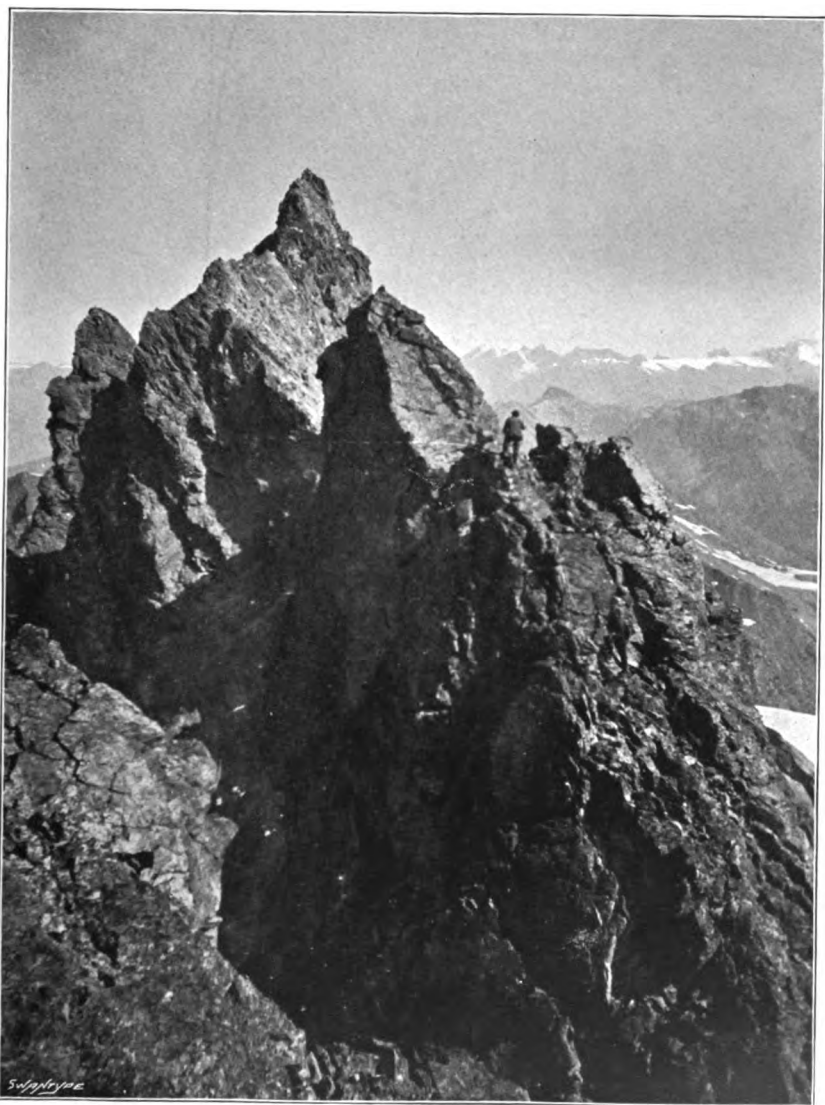
In addition, however, to being a delightful centre on its own account for many good climbs, some of the highest order, Arolla is very conveniently situated for crossing to other districts to the S., E., and W. One, or at most two mountain passes will take you to Zinal, Zermatt, Prarayé, Chanrion, Fionnay, &c. After a climbing tour in any of the above districts, Arolla appears as a haven of rest and freedom from toil where one may enjoy off-days from a botanising promenade to a rock climb hard enough to satisfy the most exacting. One advantage, not to be despised in these so-called degenerate days, is that you can start from the hotel, avoiding the discomfort of crowded Alpine huts, and at an hour that does not unduly encroach on your night's rest.

The purpose of this paper is to give an account of two of the best rock climbs at Arolla, viz. the Arête of the Aiguilles Rouges on the W. side of the valley, and that of the Pointe des Genevois and the Dent Perroc on the E. side, both fine arêtes much broken by rock pinnacles and gendarmes, yet quite different from each other both in the formation and the character of the rocks.

The Aiguilles Rouges.

On August 27 my friend Mr. W. H. Gover, with Baptist Epiney, of Zinal, as guide, and myself, with Josef M. Lochmatter, of St. Niklaus, and his youngest brother, Gabriel, as porter, left the Mont Collon Hotel at 4.10 A.M., for the traverse of the Aiguilles Rouges from S. to N. We had been advised to start the climb from the S., instead of the N., to avoid the long and tedious ascent of the moraine between the upper and the lower Aiguilles Rouges Glacier, usually taken when the Central Aiguille alone is the object in view. On mounting the grassy slopes above the hotel, it was a pretty sight to see the lanterns of various climbing parties dotted about the slopes of the valley: three bound for the Aiguille de la Za, two for the Pigne d'Arolla, and one, ahead of us, bound for the Aiguilles Rouges, but to traverse them from the N.

In about an hour, just as dawn was breaking, we reached the beautiful pastures of the Praz-Graz Chalets, and were rewarded with a grand sunrise effect on the snow peaks to the S. On breasting the grassy ridge to the right of the



J.W. Wyatt, photo.

Swan Electric Engraving Co.

THE AIGUILLES ROUGES ARÊTE
FROM THE SOUTH.

chalets, we struck an irrigation stream or channel bringing water from the waterfall below the Glacier des Ignes to the chalets, and which we followed to the foot of the moraine. This moraine and the Alp just below form a wonderful natural garden of rare and beautiful Alpine plants, to which I had been introduced the day before by the Rev. A. G. Girdlestone, a keen botanist and well-known frequenter of Arolla. I append a list of those I noticed in flower and foliage, some of the rarer alpinines, like the *Campanula Cenisia*, growing in great profusion.*

At the foot of the moraine we left our ice-axes behind—not perhaps quite an orthodox proceeding, but certainly advisable on these aiguilles, as we did not require them, even on the descent of the Upper Aiguilles Rouges Glacier in the afternoon, and they would have hampered us and been much in our way on the rocks. An easy and gradual ascent up the Lower Glacier des Aiguilles Rouges brought us to the foot of the rocks by 7.15 A.M., where we spent half-an-hour for breakfast, for which the keen morning air had made us quite ready. I noticed the rills and streamlets which in the daytime score these flat glaciers into furrows in all directions were frozen solid, the ripples and wavelets reproduced in solid ice as if they had been suddenly arrested and congealed whilst in motion. The frost the night before must have been severe, although the elevation is only about 10,000 ft.

* *Alpine Plants in flower or foliage on the Praz-Graz Alp and the Moraine of Glacier des Ignes, Arolla, August 1903.*

<i>Campanula Cenisia</i>	<i>Draba aizoides</i>
<i>Campanula barbata</i>	<i>Sempervivum arachnoideum</i>
<i>Linaria alpina</i>	<i>Sempervivum montanum</i>
<i>Linaria alpina</i> , var. <i>concolor</i>	<i>Arenaria ciliata</i>
<i>Hutchinsia alpina</i>	<i>Gentiana bavarica</i>
<i>Leucanthemum alpinum</i>	<i>Gentiana brachyphylla</i>
<i>Cerastium latifolium</i>	<i>Gentiana nivalis</i>
<i>Cerastium alpinum</i>	<i>Veronica saxatilis</i>
<i>Arabis alpina</i>	<i>Viola calcarata</i>
<i>Gypsophila repens</i>	<i>Dryas octopetala</i> , fol.
<i>Geum reptans</i> , foliage	<i>Primula farinosa</i> , fol.
<i>Geum montanum</i> , fol.	<i>Soldanella alpina</i> , fol.
<i>Cherleria sedoides</i>	<i>Senecio incanus</i>
<i>Euphrasia minima</i>	<i>Achillea moschata</i>
<i>Aster alpinus</i>	<i>Phyteuma hemisphæricum</i>
<i>Erigeron alpinus</i>	<i>Androsace obtusifolia</i>
<i>Saxifraga biflora</i>	<i>Androsace chamæjasme</i>
Do. do. var. <i>grey</i>	<i>Pedicularis cæspitosa</i>
<i>Saxifraga bryoides</i>	<i>Salix reticulata</i>
<i>Saxifraga oppositifolia</i>	<i>Salix retusa</i>
<i>Saxifraga stellaris</i>	<i>Salix serpyllifolia</i>
<i>Saxifraga aizoides</i>	<i>Ranunculus glacialis</i>
<i>Saxifraga stenopetala</i>	<i>Androsace glacialis</i>
<i>Saxifraga Aizoön</i>	<i>Silene acaulis</i>

The main arête from the S. Aiguille to the S. Gap rises above this little glacier in perpendicular and imposing buttresses, slanting off higher up into a series of steep parallel ledges of rock which run right up to the arête, each capped by a gendarme or rock-pinnacle, precipitous on the N. side, and sloping more gradually to the S. Some distance to the S. of the double S. Aiguille is a long deep couloir intersecting the face of the mountain, and which runs right up to a small



A. W. Andrews, photo.

Suan Electric Engraving Co.

THE AIGUILLES ROUGES FROM THE ROUSSETTE.

snow patch below the arête, easily visible from below and on accompanying photograph. We roped, and up this couloir we went—a steep climb, but the rocks were good and free from stones—traversed the snow patch to the right, and reached the arête at 9 A.M. by means of an interesting narrow double chimney, very convenient for two parties, as Gover took one and I took the other. Ten minutes of easy climbing along the ridge brought us to the first peak of the double S. Aiguille, where we rested for half-an-hour, enjoying the fine panorama

which burst upon us to the W., including the Mont Blanc range, the Grand Combin, Mont Pleureur, &c.

From the S. Aiguille to the S. gap, keeping strictly to the arête and traversing all the gendarmes but one, as we did, is an exceedingly fine but hard and difficult climb, and which we were told we did for the first time, but of this I am not sure. The W. face is very precipitous the whole way, but the more difficult gendarmes may be turned by short traverses and couloirs on the E. face. The arête as a whole is sharp, and the difficulties, traversing from the S., are all in descending, as the rock pinnacles fall precipitously to the N. But all through this climb we were struck by the excellent and safe condition of the rocks, hand- and foot-holds being plentiful, good, and secure. Two large gendarmes gave us special trouble: the smooth vertical face of the first was cleft by a narrow chimney, requiring considerable negotiation, but which soon lost itself in the precipitous western slope. At first further progress seemed impossible, till by leaning, in a somewhat eerie position, over a projecting lump of rock, a kind of hidden cavity underneath disclosed itself, into which I was able to wriggle with difficulty; and after crawling along this and taking a dizzy stride round a perpendicular rib of rock, I reached the arête again. This would have been probably described by poor Norman Neruda as 'a technically difficult bit.' The second or last big gendarme before the S. gap beat us, however: the N. face was too precipitous and long, and the porter, who had managed with great difficulty to get down as far as the rope permitted, had to be hauled back again. With a spare and doubled rope it might have been possible. We turned this gendarme by a couloir on the E. face. At the last pinnacle, immediately before the S. gap, we met Mr. P. Fletcher and his two sons, who had started out with us in the morning to traverse the other way: they crossed the E. face underneath us to turn the big gendarme above mentioned. We had to wait till they had passed for fear of falling stones, which here were numerous, and this was the only place on the whole climb where these were noticeable.

We reached the S. gap at 11.55 A.M., and took 10 minutes' rest. From this gap or col the Central Aiguille, the highest point of the ridge, 11,975 ft., looks very imposing, rising right up *en face* in a fine sheer peak, but the climb to the top is quite easy, and we reached it at 12.40 P.M.

Time traversing from the S. to the Central Aiguille exclusive of halts, 2 hrs. 55 min.

Mr. Morland, who traversed these aiguilles in the reverse direction on August 28, 1902, has kindly given me a sight of his notes on the climb. He remarks on the splendid climbing from the N. gap to the top of the Central Aiguille, and appears to have climbed the large gendarme, just past the S. gap, by what he describes as a diabolical ice-filled couloir of extreme steepness. This couloir, which faces directly N., he considers would probably not be so bad when clear of ice; but in the condition he found it, nothing, he says, would have induced him to descend it. He agrees that this ridge is traversed with less fatigue as we did it, viz. from S. to N., but is of opinion that the reverse direction gives the more enjoyable climbing, as the ascents in going from N. to S. are up the steep angles and down the less steep, giving better climbing at the expense of more toil over the moraines. He had no trouble from falling stones all the way, and considers the day spent on the Aiguilles Rouges one of the best he can recollect.

The atmosphere was very clear and the view both extensive and grand, and a rest of 1 hr. for lunch very acceptable. We had the usual climbers' companions in the shape of a pair of mountain crows or choughs, *Pyrrhocorax alpinus*, waiting for our departure for the remains of the feast, whose easy flight and splendid dives into the depths below were beautiful to watch. Looking down towards the N. gap, we spied a single figure sitting disconsolately on a projecting point of rock, which turned out to be Mr. Young from our hotel, who had made the climb of the Central Aiguille. At first we feared a mishap, but heard afterwards that his guide had dropped his pipe and had unroped to go down in search of it. It seemed rather like looking for a needle in a haystack, and, needless to add, he did not find it!

The descent to the N. gap down the N. arête is very steep and difficult, consisting of a series of more or less vertical pitches or steps, and it took us 1h. 10 min. to accomplish. From this col we turned off to the right, down the face of the mountain to the Aiguilles Rouges Glacier by a long couloir of steep, sloping, slabby rocks, somewhat after the nature of the Matterhorn 'Roof' above the shoulder. We kept to the rocks, just to the N. of the couloir—this part is not easy, and in bad conditions, with ice or *verglas*, these rocks might be both difficult and dangerous.

We reached the snow slope above the glacier at 3.15 p.m. and unroped off the ice on the edge of the moraine at 3.40 p.m. A long steep moraine of scree and loose stones, much pleasanter to descend than to mount, brought us back to the

irrigation channel of the morning, our ice-axes, and eventually the chalets of Praz-Graz at 4.40 P.M. I had marked down these chalets when passing in the morning as the place for our usual draught of fresh milk, which we always indulged in where possible after a climb. Imagine therefore our disgust when we found that none was to be had, although the chalets, cow-sheds, &c. were the most extensive and best arranged that I had yet seen on any Alp. We were told, however, that round some indefinite corner and up some problematical valley we might come across a chalet where goat's milk was to be had. The information was too vague, and the probable flavour of the milk not sufficiently enticing, so I refused to budge; but my guide, Lochmatter, always ready and obliging, at once started off with his brother, solved the mystery, and soon reappeared with our old wine bottles and gourds full of delicious and fresh cow's milk, which was much appreciated.

We reached Arolla at 6 P.M., deeply impressed with the Aiguilles Rouges as a fine rock climb, and having enjoyed our day most thoroughly. From 7.45 A.M. to 3.15 P.M. we were on the rocks, and had hard climbing all the time.*

I found a fine patch of the beautiful yellow *Aretia Vitaliana* in full bloom on the arête, besides other high Alpine plants, such as *Ranunculus glacialis*, *Androsace glacialis*, *Silene acaulis*, *Petrocallis pyrenaica*, and others.

The Pointe des Genevois and Dent Perroc.

Parallel with the Arolla Valley on the E. side is a long ridge of high rocks, much broken into peaks and pinnacles, which runs almost due N. and S., from the N. Col de Bertol

* A comparison of our times with those given by Mr. Slingsby and party, *A. J.*, xiii. 411, may be of interest.

	<i>Slingsby</i>		<i>Ouvracles</i>	
Arolla	6.15 A.M.	}	4.10 A.M.	}
Glacier des Ignes	8.15—8.45 A.M.		7.15—7.45 A.M.	
Foot of Couloir	8.50 A.M.	}	9.00 A.M.	}
Gap on S. Arête	10.15—10.50 A.M.		9.10—9.35 A.M.	
S. Aiguille	11.32—12.00 NOON	1h. 25m.	9.00 A.M.	1h. 15m.
S. Gap	1.35 P.M.	40m.	9.10—9.35 A.M.	10m.
Central Aiguille	2.00—2.20 P.M.	1h. 35m.	11.55—12.05 P.M.	2h. 20m.
N. Gap	—	25m.	12.40—1.35 P.M.	35m.
Glacier des A. Rouges	4.30 P.M.	}	2.45 P.M.	}
Moraine	—		3.15 P.M.	
Alp Praz-Graz	—	}	3.40 P.M.	}
Arolla	6.30 P.M.		4.40 P.M.	
		2h.	6.00 P.M.	2h. 45m.

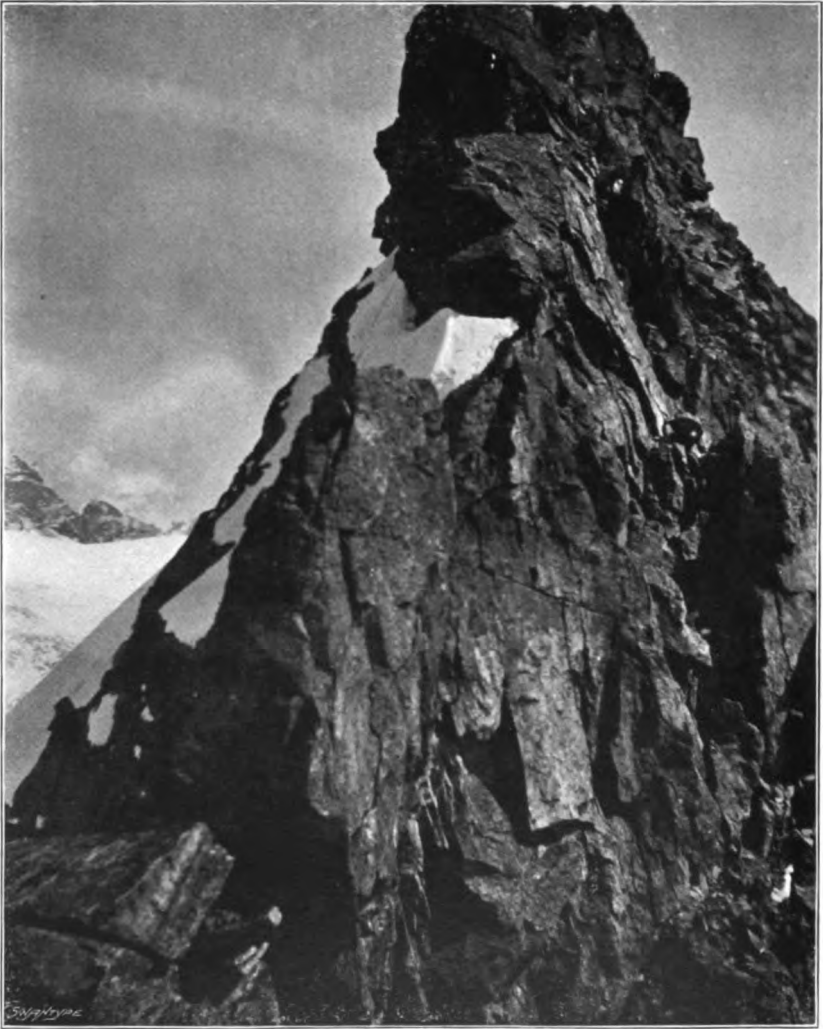
Actual climbing on rocks from foot of Couloir to Aiguilles Rouges
 Glacier 6h. 15m. 6h.

to above the village of Haudères, at a nearly uniform elevation of about 12,000 ft. This ridge or arête is known generally as 'Les Grandes Dents,' and starts from the S. peak of the Grandes Dents, 11,904 ft.: it includes the following points or peaks, Pointe des Doves Blanches, 12,015 ft.; Aiguille de la Za, 12,051 ft.; Dent de Zallion, 11,542 ft.; Pointe des Genevois, 12,070 ft.; Dent Perroc, 12,074 ft.; N. peak of Dent Perroc, 11,992 ft.; and Grande Dent de Veisivi, 11,565 ft. From this latter peak the ridge turns with a sharp twist to the N.-W., and drops 1,500 ft. to the Col de Zarmine, 10,046 ft., and the Petite Dent de Veisivi, 10,463 ft., where it falls abruptly to the junction of the Arolla and Ferpècle valleys above Haudères.

This ridge is composed almost entirely of granitic rocks broken and fissured into huge slabs and pinnacles in a very striking and fantastic way, consequently giving scope for many interesting rock scrambles and climbs; not only so, but, situated as it is at a considerable elevation, the views from almost any point on the ridge are exceedingly grand and extensive, embracing to the E. the Dent Blanche, Grand Cornier, and Matterhorn, with some of the higher peaks of the Zermatt ranges in the background; the mountains and snowfields of Arolla to the S. and W., with the Grand Combin, Mont Pleureur, and part of the Mont Blanc range in the distance; to the N.-W. the Dent du Midi and Vaudois Alps; and to the N. the plains of Switzerland and the Bernese Oberland.

Mr. A. W. Andrews, who was also staying at Arolla, suggested to me that we should take a day together to investigate part of this arête from the Pointe des Genevois to the Dent Perroc; consequently, on August 31, on a beautiful morning, we left the Mont Collon Hotel at 5.20 A.M., with the two Lochmatters. After crossing the rustic bridge over the glacier torrent below the hotel we mounted rapidly through the steep woods and rough pastures on the E. side of the valley. Working gradually to the left, we crossed a long stretch of boulders and scree and reached the foot of a long rib of grass-covered rocks, sloping off steeply on the left and running straight up the face of the mountain towards a round hump on the main ridge to the N. of the Dent de Zallion. We reached the top of this rock-rib at 7.30 A.M., and stopped 50 minutes for breakfast and photographing, enjoying the fine early morning effects of light and shade on the mountains at the head of the valley.

For over another hour, till 9.30 A.M., we ascended steadily,



J. W. Wyatt, photo.

Swan Electric Engraving Co.

A GENDARME ON THE GENEVOIS.

bearing always rather to the left, across a long slope of detritus and loose rock, and had a sight of a chamois going across the scree towards the Za. Here we had to cross a short and fairly steep ice slope, on which the axe came into play, to enable us to reach a conspicuous couloir intersecting the main ridge of rocks right up to the arête. A short and interesting scramble on the rocks on the left side of this couloir brought us on the arête at 10.15 A.M. at a point about midway between the Dent de Zallion and the Pointe des Genevois.

In climbing the face of rocks to the arête, the rock ribs should be used in preference to the couloirs, as even in the morning stones fall freely, and later in the day in great and dangerous profusion.

The view here is very grand, particularly of the Dent Blanche, rising magnificently above the snow fields at its base, and the wicked-looking tooth of the Aiguille de la Za crowning the ridge behind us. My friend Gover, who had gone up the Za instead of coming with us, could just be seen getting to the top, and we exchanged the usual Alpine greetings. We rested for three-quarters of an hour for second breakfast and to experiment on a new kind of tinned herring brought out by Andrews, and pronounced excellent by all.

From this point climbing proper commences. We put on the rope, and our first point of attack was the Genevois, rising abruptly and precipitously in front of us. The climb begins with a very steep and interesting chimney, quite 70 deg. in pitch in places, then a fine and steep arête climb to the top—we were on the arête all the time, rather on the right side, except to turn one of the pinnacles to the left. On this part of the ridge the rocks are good, and the hand-holds everywhere good and firm. We stayed on the top from 12.30 to 1.15 P.M.

Andrews, who took a fine series of photographs during the climb, caused the guides considerable amusement with his elaborate camera and its long telescopic attachment for telephoto views: it was promptly christened 'Die Kanone.' He certainly looked a curious object, perched on some projecting crag, his head enveloped in a black cloth and the telescope sticking out in front.

From the top of the Genevois we followed the arête to the col between the two peaks, which is really little more than a depression in the ridge: this part of the climb is very fine rock-work, with very difficult bits, and is the best part of the whole traverse, particularly the descent of the second large

gendarme. This gendarme projects up from the arête in a mass of huge granite blocks thrown together, apparently anyhow, and reminded one of the foundation of a breakwater formed of large concrete blocks dropped into the sea from a crane, and allowed to rest as they fell; the top finishes off with a peculiar twist, resembling the beak of a parrot—the final touch to this was given by Andrews, who unroped and scrambled to the top for a photo; his appearance, skied on the very peak of the gendarme, with the black hood over him



A. W. Andrews, photo.

Susan Electric Engraving Co.

DESCENDING THE POINTE DES GENEVOIS.

and his 'Kanone,' was for all the world like some huge vulture or bird of the mountains, ready to swoop down on the unsuspecting tourist who ventured to invade his domains. This gendarme (see accompanying photograph) falls on the north side, in two distinct and almost vertical pitches of smooth granite slabs, with very poor holds (in places none), and we required the doubled rope for the last man; then a nasty drop from the second pitch on to a steep patch of snow,

overhanging the precipice—certainly a 'disagreeable technical bit' (for the definition of a 'technical bit,' please refer to the last chapter in the 'Climbs of Norman Neruda').

The third portion of our arête, from the col to the Dent Perroc, presented no undue difficulties; rather a difficult bit at first of smooth slabs, and then a rough arête, broken by three large gendarmes, which we traversed with the arête all the way. We reached the top of the Perroc at 2.45 P.M., very well satisfied with ourselves and our performance. I believe we were the first to traverse this arête and gendarmes the whole way without once turning on the face.

Although the arête of the Aiguilles Rouges as a whole is more difficult and sharper than that of the Perroc, the gendarmes of the Perroc arête are harder to traverse and not so safe, and the rocks themselves are not so sure and firm. All this ridge is composed of granitic and gneissose rocks, in huge blocks, almost as if quarried, cracked, and fissured in an extraordinary manner, and quite of the cyclopean order of natural architecture. Some of these blocks, notably on the Perroc itself, are so smooth and white as almost to look like marble. About five or six years ago, during the summer, so say the local guides, a large gendarme on the arête between the col and the Dent Perroc fell down a couloir into the Arolla valley, and the dust came as far as the chalets of Arolla—we saw the remains of this fall.

There would appear to be an error as to the height of the Dent Perroc, the highest point of this ridge, in the Swiss Siegfried map: it is marked as 3,655 m. instead of 3,681 m. Conway gives 3,655 m. as the height of the N. peak, which is further to the N. along the ridge where a long rib of rock runs down on the E. side and encloses the small Montay Glacier on the N. The map gives no height to this peak.

We rested for $\frac{3}{4}$ hr. on the top, the day being beautifully warm and still, with little or no wind, and watched the wonderful curving, swooping flight of our old friends the choughs. I often wonder if the rapid flight and shrill cries of these little birds, when their solitudes are invaded, betoken a sense of disturbance or fear, or whether they have become so tame from the number of climbers that, like sea-gulls following a ship, it is a sign to them of the fragments that remain and a coming feast.

Had we had time we would have liked to have continued the traverse to the N. peak, which we looked down on only about 100 ft. lower, and about which Conway gives 'no information' in his guide. The ridge seemed to present no

special difficulty, except possibly one or two pinnacles, and a great part of it consisted of a snow arête considerably corniced in places.

Earlier in the month Messrs. Morland and Andrews attempted this traverse after a fresh fall of snow, when the rocks were in much worse condition and the climbing correspondingly more difficult. On this occasion every ledge and hollow on the W. face was choked with snow, while the less precipitous slabs on the E. side, by which the usual traverses of the gendarmes are made, were completely concealed by the heavy snowfall of four days before. Neither Messrs. Morland and Andrews nor their guide had been on the mountain before, and they feared that by attempting the gendarmes direct they would lose so much time as to be still on the rocks at dark. They therefore traversed on the W. face when obliged to leave the arête, and found the climbing by no means satisfactory, two attempts to traverse the snow-covered slabs on the E. face being for obvious reasons abandoned. When about half-an-hour from the summit of the Perroc, as it was late in the afternoon, they traversed across the W. face by rotten ledges and struck the S.W. arête or buttress by which the ascent of the Perroc is usually made, considerably impressed with the enormous difficulties a little extra snow makes in the length of a rock climb.

We left the top at 3.30 P.M. for the descent of the S.W. arête, which for the first part is very steep and difficult and very tiring for the knees; about half-way down it changed from firm hard rock to a broken arête of more or less loose slabs and steep couloirs: these couloirs were rather dangerous with loose stones and scree. We had to take to them now and again both to the right and left, and found them somewhat trying to the temper, the nerves of those in front receiving frequent shocks with shouts of 'Achtung, Steine!' while those behind were liable to sudden and disturbing jerks of the rope when the man in front endeavoured promptly to get out of the way of a possible cannonade. This nasty arête took us 2 hrs. to descend, but at 5.30 P.M. we got to the end of the difficult part and were able to unrope. I should say the average slope of this arête was not far off 40 to 45 deg.

Our difficulties, or rather our labours, were, however, not yet over, for the rest of the ridge consisted of loose large slabs of rocks, most insecure and wobbly and exceedingly hard on both muscles and temper. Soon, however, we were able to turn off to the left down a couloir of loose scree and boulders, and then had to traverse under the face of the

mountain across the most disagreeable and exasperating boulders and moraines it has ever been my lot to investigate, till we reached our breakfasting place of the morning. A firm slope of boulders or moraine where you can spring from one stone or rock to another with a reasonable sense of security is a rapid and exhilarating mode of descent, but when a large boulder, which anywhere else would be firm, turns turtle or wobbles you into a hole, where you run the risk of spraining an ankle or breaking a leg, it is quite 'another pair of shoes.' Such conditions make a proper balance of mind, as well as of body, a matter of some difficulty, and form an excellent exercise on self-control. I have always understood that special consideration is accorded to mountaineers on the early morning start, in the dark, over rough ground, especially if the coffee has been cold or the boots unduly hard to pull on. Let us hope that the same kindly feeling is shown in the late afternoon when descending loose moraines and other such horrors.

We eventually reached the hotel at 7.50 p.m., after another long and very interesting day, Andrews apparently as fresh as paint; but the screes and boulders had reduced me to a condition at last of silent and suppressed viciousness, which, however, was promptly dispersed after a wash, a change, and a bottle of 'Bouvier'!

Note of Times on the Climb.

Arolla	5.20 A.M.	} 3h. 20m.
Breakfasting place	7.30—8.20 A.M.	
Foot of rocks	9.30 A.M.	
Top of Arête	10.15—11.00 A.M.	45m.
Pointe des Genevois	12.30— 1.15 P.M.	1h. 30m.
Dent Perroc	2.45— 3.30 P.M.	1h. 30m.
Foot of S.W. Arête	5.30 P.M.	2h.
Arolla	7.50 P.M.	2h. 20m.
Actual climbing on rocks from ice slope at foot of main ridge to foot of S.W. Arête		5h. 45m.

IN WESTERN SUANETIA IN 1908.

BY J. H. WIGNER.

IN course of time Betscho may become in reality what it has already been nicknamed, the Caucasian Zermatt. Climbers will come in numbers to ascend Ushba, at first by the 'ordinary' route from the S., afterwards when the mountain becomes festooned with chains and desecrated by personally conducted tourists, by the traverse from the N.

over both peaks and by other routes yet to be discovered. In the train of the climbers may possibly come the trippers, for whom there will be hotels on the Gul Glacier and at the celebrated view-point on the way to Mestia, but it is to be hoped that the process of degeneration which the trippers introduced into the Alps is yet far off. Of this latter class many will naturally aspire to become mountaineers, and for the most part will doubtless commence with an assault on Ushba with the aid of two local guides at 100 roubles apiece. To others, perhaps equally ambitious but less misguided, it may occur to get preliminary practice on some of the peaks of 12,000 ft. to 13,000 ft., which even now are easily accessible from the Betscho Valley, and may then be to Betscho what the Rimpfischhorn and Dom are to Zermatt. To this class the ascents that my friend, Dr. Oscar Schuster, and myself made last summer from the Kwish Valley will be found not only to afford excellent training before undertaking Chatuin Tau and Ushba, but to prove in themselves, in the words of the immortal Bædeker, 'very repaying.' Our Kwish climbs were in no way to be compared with Longstaff and Rolleston's ascents, or with either of the ascents of Ushba, but little climbs as well as big should be chronicled if only for the benefit of future mountaineers and compilers of climbers' guides, and, above all, the Editor's commands must be obeyed. Possibly a feeling as of paternity makes me rate our new pass and peaklets rather too highly, but I imagine that a mountaineer who is fond of not too difficult peaks of mixed snow and rock with magnificent views will never regret climbing for a week or so in the Kwish district.

Schuster and I, as members of the party Rickmers organised, arrived with them at Betscho, having crossed the Laila pass and climbed its three little peaks on our way. After a busy day spent in unpacking and repacking, we made straight for the Kwish Glacier (in company with the Swiss contingent who were bound for Dongusorun), where we knew of a few virgin peaks approaching 13,000 ft. high, which we considered would be good enough to start upon. We camped at much the same place, at a height of 7,200 ft. below the tongue of the glacier, as Rolleston and Longstaff did on their ascent of Lakra, and by five the next morning were tramping up the glacier in perfect weather, and finding the going exceptionally easy in spite of the hard frost, owing to the fine grit with which the blue ice was covered.

About half-way up the glacier from its snout it is joined by the tributary which drains the large névé basin between

the mountains Dongusorun, Hewái, and Lodesht Tau. After a little unnecessary trouble with crevasses at the foot of this, which we subsequently learned to avoid, we gained the right moraine, a magnificent embankment with a smooth top, suitable for motor cars. Mounting rapidly up this we quickly turned the ice-fall and reached the upper névé plateau just as the sun's rays were beginning to strike it, and waited for a few moments to enjoy and photograph the splendid view of Dongusorun. The route up it from this side obviously offered no great difficulty, but the base of the mountain was a long distance away along the nearly level névé, and the Swiss went towards it without further delay. Schuster and I were much closer to our peak, and partly in consequence of that did not find it quite so easy to settle on our route. From below there appeared several points which might conceivably be the true summit, and we decided that it must be one or other of two adjacent ones, but which of the two it was impossible to say. The upper part of the peak was mixed snow and rock, from below we thought with a preponderance of rock, an opinion we sorrowfully changed later in the day. The lower rocks ended in small cliffs which plunged abruptly into the steep snow slopes of the base. We soon decided on our plan of action, which was to traverse diagonally across the still hard snow, below a little hanging glacier and across a moraine, to the point at which the snow penetrated highest into the rocks. This part of the programme was soon carried out, and by 8 A.M. we were inspecting what we had from below suspected would prove the crux of this route; this was the problem of getting up on to the rock face. In a way it would have been easy enough, for a chimney led directly up on to the face. But the chimney was unfortunately even at this early hour filled with an extremely active and successful waterfall, and though I told Schuster we should think nothing of such a trifle in the Lake district, he preferred a harder but drier route to the left, and soon landed himself and me on a small recess above the bottom and steeper half of the chimney. An attempt at a traverse back into the upper part being unsuccessful, we once more kept to our left, and after a rather stiffish little scramble landed on relatively easy ground. Almost directly above us, and perhaps some 2,000 ft. higher, lay the summit we had decided to attack, and, if the conditions had remained as they were, we should probably have stood upon it within two hours. We continued slightly to our right to a little snow ridge which formed the northern boundary of the lower part of the big couloir running from

between the two main peaks. We admired, and I photographed, the glorious view of Zalmiag, and basked in the sun with gratitude, for the morning had been cold. Our gratitude, however, was very short-lived; we had forgotten for the moment that we were no longer in the Alps but in the Caucasus. Within half-an-hour the snow from its condition of icy hardness became rapidly softer and softer; we sank in to our ankles, then to our knees, and finally to our thighs. Not only was the snow perfectly iniquitous in quality, but quite excessive in quantity. From below each little patch of steep rock had made a brave show, while the more gently sloping snowslopes retired gracefully until they were almost invisible. Now that we were among them they revealed themselves in their true proportions. There was no real difficulty, though the labour was very great, but the fact of our being on a virgin peak inspired us to continue. We took alternately shorter and shorter turns at leading and ploughing out a way. Little by little the surrounding peaklets sank below us, till there remained only one, the rival summit to the S. Not until we stood at 1 P.M. on the goal of our ambition could we say that our point was the highest. Indeed, even then we were not perfectly agreed on the matter; I felt sure personally that we were some 6 ft. to 10 ft. higher, but Schuster expressed doubt on the matter, especially as it had fallen to my turn to lead up the last 50 ft. or so and stand first on the summit, which might tend to bias my views. Not to waste time and temper over discussion, we left our belongings and went along the ridge without difficulty to the other summit, which we now perceived with satisfaction was really a little lower. We laid claim to it, however, by building a stone man, or rather a stone boy, for we were very lazy and more-over hungry, and had left our food on the true top. Thither we hurried back, built a real stone man this time, fed, photographed, and did generally what one should do at the summit of a mountain on a fine day, including sleep on the part of one of us. The only omission was the traditional champagne. Bouvier and Mauler are not for guideless climbers in the Caucasus. Schuster, indeed, had about a teaspoonful of cognac, which he offered to share with me, but not being really thirsty I declined.

On the way down we found the snow still worse, and progress was excessively slow. The condition puzzled us very much—we could not positively say it was dangerous, but it certainly gave an impression of being extremely avalanchy, and we worked from rock to rock with great caution. At the

little ridge where we had basked on the way up we diverged from the morning's route, keeping straight down and finally descending into the avalanche couloir, which seemed safe enough from stones, down which we shot as quickly as we could on to the open névé. A slight variation on this route would probably be the best line of ascent. On our way back to camp we fell in with the Swiss returning from their successful new route up Dongusorun, and dawdled back to the camp, arriving about 7 P.M.

During dinner we settled plans for the morrow. Schuster and I decided to stay another day or two and try at least two other peaks, with an idea of reconnoitring for Shtavler and our new pass, while the Swiss settled to transfer their camp to the Ushba Glacier and make an attempt on Chatuin Tau. We left first at 4 A.M., our destination this day being Ledesht Tau. To the foot of Hewái our route was the same as yesterday, and from there it was a short walk to the foot of our mountain, which we simply went up. To be a little more precise, we made for the high saddle S. of the peak, then straight up snow, in places very steep, to the heavily corniced summit ridge, which we struck too much to the right, and thence on to the top. The ascent cannot honestly be said to be much harder than the Zermatt Breithorn, but as a view point we considered it finer than Hewái. For once in a way we stayed on the summit a fairly long time, which was partly employed in reconnoitring a route up Shtavler, a route which on our subsequent ascent of the mountain we did not touch, and in endeavouring to see something of the way over the Kwish Pass, which lay directly below our peak but was partly eclipsed by the lower slopes. When at last we left the summit we once more found the snow excessively soft, but this time in safe condition, so that by selecting a somewhat different route we were able to descend the whole peak in a very few minutes in two magnificent sitting glissades.

On our way back to camp we discussed the commissariat, and made all haste in order to be in time to do some cooking. We had arranged with the Swiss, who were taking away the only remaining porter, to share with them a sheep to be brought up from the valley. As the weather was so fine we had practically decided to do just one more climb and return the same day to Betsho, in order to make an attempt on Ushba, and were rather doubtful if we two could manage half a sheep for dinner and breakfast. However the difficulty was solved for us, for on arriving at the camp we found, after much hunting, two fragmentary chops, which had been obviously

lying all day in a very warm place and were so excessively untempting that my companion cast them without more ado into the stream. The Suanetian porters had evidently a mind to save us from ourselves, but we looked forward to the sybaritic luxuries of the cancellaria in twenty-four hours' time and took courage.

For the next day we were content with a small programme, which was to ascend the small peak which is called Bak on Freshfield's map, but Charendá by the natives, and get back some way to Betsho. Charendá almost overhung our camp, but was unfortunately separated from it by the Kwish torrent, which could not be forded. Starting again about four, we had perforce to go up the valley again for half an hour, cross the stream by cutting across the snout of the glacier, and work back towards our peak. The obvious route was to ascend to the saddle to the left of our peak, between it and a very pretty lower summit, with rocky pinnacles, and from the col straight to the top. All went quite straightforwardly, except that above the col a sort of *mur de la côte* above a good sized bergschrund had to be treated with respect. After this the arête was easy, though somewhat long, leading over a rather annoying series of little tops till we arrived at the summit, where to our disgust we found a stone man. We ought to have known, but had forgotten, that Mr. and Mrs. Rickmers had been up this peak from the other side (from Ezeri) three years before, and we soon found their cards.

As a summit Charendá was superior to the two previous ones. One face, it is true, was snowy and uncomfortable up to the top, but the other was a fine stone wall fitted up with ledges and niches where one could doze in comfort. For once in a way, however, Schuster was in a hurry, and it turned out to be just as well. Less than an hour was allowed me for admiring and photographing the gorgeous view of Ushba, Sikildi Tau, and Chatuin Tau; more like Dauphiné peaks than any others I have seen in the Caucasus. From the summit we returned directly to the col, and then decided that we would not make the enormous détour by the camp, but return direct to Betsho, which we could almost overlook. We could see our route straight ahead, 2,000 ft. descent of an easy gully and then virgin forest. No words of mine can describe the agonies we endured in that forest; I can only say that we emerged from it in a scratched and exasperated condition towards evening, but that in spite of all we reached Betsho just at dark, having accomplished what

I should think is the very worst possible route between our headquarters and the summit.

After a failure in the Chatuin Tau district came the memorable ascent of Ushba, in which expedition five others were anxious to participate, so that not wishing further to augment the large number, and being the weakest rock climber of the party, I elected to stand out, and to join Rickmers, Fräulein von Ficker and others in an assault on Shtavler. Our route thither was a most enjoyable ride of a day and a half, with an involuntary wait of a day at Ezeri, where we were treated with magnificent hospitality by Prince Tatarchan Dadishkiliani. Shtavler itself gave us a most delightful day's climbing by way of its south ridge, and reminded me on the whole greatly of the Pic Coolidge, with occasional moderately difficult pieces of rock selected from the Rothorn and Dent Blanche. The route has already been described fairly fully in the 'New Expeditions.'

After our ascents of Ushba and Shtavler respectively Schuster and I met again at Betsho and wandered off to the Leksur district, where for once our plans were spoiled by bad weather. Our solitary capture was a peaklet in the Dalla Kara ridge of doubtful antecedents. We could find no account of its having been previously ascended, but on the summit was a little pile of stones which suspiciously resembled the remains of a stone man.

Arriving at Betsho we found the party beginning to break up, and decided on a final tour to Elbruz. Our plan was to go back to our Kwish bivouac, make a pass at the head of the valley between Leirag and Ledesht, ascending the former peak, which was still unclimbed from the col; descend to the upper part of the Nakra Valley and cross the Dongusorun Pass to Terskol at the foot of Elbruz. It was obviously necessary, as Longstaff pointed out, that some at least of the party should ascend the highest peak in the Caucasus, so we made ourselves a willing sacrifice.

For once in a way the whole plan was carried through without a hitch. From the Kwish bivouac the route up to the col was, as we knew, straightforward, and, arrived there, we started off up the peak, which offered us a very pleasant scramble of an hour or more, and was not quite so easy as it had appeared from a distance. The two porters whom we were taking over the pass we left on the col with instructions to await our return, a programme which met with their distinguished approval and put them in the height of good humour. The descent from the col was of course quite

unknown ground, and the first part consisted of fairly steep crevassed glacier. The porters had never previously used a rope, but picked up the proper method of doing so with amazing rapidity, and beyond the fact that on one séracswept slope they trifled rather longer than we liked with some very harmless crevasses, they acquitted themselves admirably. One of them wore mountain boots, which we had provided, but the other insisted on keeping on his moccasins.

The pass ended in the usual way, with snow and stone slopes, turbulent streams, and finally half-an-hour of very unpleasant thicket, the only disagreeable half-hour in a most enjoyable day. It led us out on to the path to the Dongusorun Pass, about two hours below the summit, and quite close to the upper limit of the wood, and we were enabled fitly to close a most enjoyable day at a comfortable bivouac, with a roaring fire, which was all the more welcome as we noticed this night for the first time, probably owing to our proximity to the huge glaciers of Elbruz, that the Caucasus really might upon occasion be frosty.

I can most cordially recommend the little trip to travellers who may be at Betsho and think of going to Elbruz. The pass itself is pretty, though not particularly difficult, and either of the peaks beside the col is well worth ascending for the view alone. Of the two, I think Leirag, the lower, is preferable, as it offers a little pleasant scrambling, and from the summit one has one of the most superb views I have ever seen, that of the magnificent snowy face of Zalmiag, a splendid new route for some future climber, which resembles, but to my mind far surpasses, the famous north side of the Grivola.

Travellers bound for the district west of the Nakra Valley will also find this little pass of great convenience, as it is a direct continuation of others leading into that little known region, and I fancy it would also form a pleasant route to Shtavler.

Our further doings were of an unexciting order. A very easy day took us to Terskol, half a day thence to the bivouac, 11,000 ft. high, on Elbruz, from which point we took seven and a half hours, on fairly good snow, to the summit. There is no occasion in this journal to chronicle so hackneyed an ascent, or even the crossing of the beautiful Betsho Pass, by which we arrived at our starting point and the end of our climbing.

I cannot close without an expression of gratitude to Rickmers, who organised our expedition so admirably.

Without his experience our routes through the inhabited parts would have been by no means so easy, and his knowledge of the requirements of a traveller in this country was of the utmost value to us. From his point of view the expedition was happily a complete success. He set out to prove that a good sized party of active guideless climbers could accomplish a great deal there in a short time at absurdly little expense, and thanks to good organisation and perfect weather the success of the tour quite exceeded our expectations.

THE FIRST ASCENT OF MOUNT FAY.

BY S. C. THOMPSON.

AT half-past one in the morning (Friday, August 7), Hans Kaufmann called me from a most comfortable bed in the heather under the lee of some young larch at the head of Consolation Valley. It was the night of the full moon, and the stars were shining brightly; but the balmy air, lacking the usual frosty sting of the early morning in the Canadian Rockies, seemed to promise rain. Indeed, from the summit of Mount Fay, directly above us, there hung to windward a pennant of light mist that caught and carried the forked shadow of the twin-peaked summit.

I remember sleepily wondering, as I drank the awakening coffee, which one of these pointed shadows—for we were too closely beneath the precipitous northern face to see the reality—was the chosen goal of our morning's climb. Then, slowly crossing a grassy meadow and serpentine boulder heap, I followed the indistinct figure of Hans (we were on the shadow side of the range) up over some soft snow and still softer scree to the top of the pass south-east of Mount Fay.

We were overlooking the Vermilion Pass, at almost the southern end of the summit range lying between that pass and the Kicking Horse River, where the Canadian Pacific Railway crosses the Continental watershed. About 3,000 ft. below, seemingly further in the indistinct moonlight, we could see through openings in the rapidly lowering ridge the black patches of evergreen growing on the floor of the pass; beyond and above them the curious half pyramid of Storm Mountain and the silvery white dome of Mount Ball.

Here also the slope of Mount Fay was changed. Instead of a precipice surmounted by an almost perfectly pointed cone, there was a rock wall, patched occasionally with snow,

perhaps half a mile long, falling slightly in height from east to west, yet so slightly as to suggest both in height and steepness the roof of a great cathedral. In only one place did there seem to be any difficulty in ascent: where a thick horizontal stratum of black rock, the characteristically bad rock of the region, since it weathers into smooth, almost perpendicular faces, ran across the face about 400 ft. above us. Even in the dusk there were obviously two ways of passing the obstacle—one in the central portion of the face below a triangular depression, hardly pronounced enough to be called a gully, and evidently a funnel for the spring snow slides, where a tempting chimney dropped through the black stratum to the top of the remnant of avalanche snow; the other along the rising ridge of the pass to its junction with the south-eastern part of the mountain, thus flanking the obstacle but compelling a long traverse over a ledge not clearly continuous to the foot of the funnel.

Hans dropped slightly from the pass to the avalanche snow, and I forthwith concluded that the former route was to be ours. Our climb, however, was to be almost entirely on rock. Half-way up the avalanche snow, just where it began to get steeper, Hans turned towards a ledge bounding it on the right, and thence to the summit we scarcely stepped upon snow, except that which lay in the crevices of the rock. At the black stratum we found two good handholds and a 12-ft. face. It was over in five minutes, and beyond came a delightful scramble, steep enough to be exhilarating, never steep enough to leave our attainment of the summit for an instant in doubt. In a little over three hours from the pass we stood upon the summit of a rib of rock between two snow couloirs at the foot of the southern peak. Hans hesitated a moment, sighting along his ice-axe, and then skirting it to the west led directly to the notch between and up the northern summit. His judgment was correct by perhaps 15 ft.: it was twenty minutes to seven, and the altitude disappointingly low—10,075 ft. Aneroid.

The view in three directions was well worth the climb: southward, over the sombre Vermilion, beyond which lay the snow fields and the magnificent ice falls of Mount Ball; westward, over a high ridge running down from Mount Hejee (the first and nearest of the celebrated Ten Peaks), where Mount Goodsir rose in splendid isolation; and north-westward, along the Ten Peaks, marshalled almost in file, partly hidden, to be sure, by the neighbouring three truncated towers of Mount Little, a hitherto nameless mountain lying between

us and Hejee, but showing distinctly, for perhaps the first time, the upper thousand feet of the northern face of their highest peak—Deltaform.

About dawn, while we were still on the southern face of the mountain, heavy grey clouds, threatening wind rather than rain, had begun rolling over the western Selkirk and the upper valley of the Columbia. Now the sky was overcast, and a chill, penetrating wind suggested the possibility of a storm. So, after the usual eating, drinking, and cairn-building, with more haste than the time of day (7.10 A.M.) demanded, we began our descent, on the side opposite to that ascended, by a snow gully that rose from invisible beginnings below to the depression between the two peaks. It was very straight, very narrow, and remarkably continuous, leading us down 900 ft. before a small precipice turned us for a traverse of 50 ft. on the right. Thence a long glissade took us to a snow-paved circus (alt. 8,500) at the head of the valley of Boom Lake, the lake which Mr. Wilcox mentions in his 'Camping in the Canadian Rockies,' as remarkable for the chain of logs stretching across its middle portion from shore to shore.

It was still early in the day, about nine, if I remember correctly. Crossing the circus, then entirely snow-covered, but I suppose at least in places somewhat thinly, we met its head wall at the foot of some buttresses running down from Mount Hejee, a little to the right of its lowest point. Climbing the rocks of the buttresses, we found ourselves on a pass across the Continental watershed, under the shadow of a square rock pinnacle 50 ft. high, a leaning tower overhanging the glacier field to the north not far below. This glacier field was the one we had overlooked from the summit of the two of the Ten Peaks—Nom and Tonsa—in 1901, and in a sharp angle at its further end, about three miles away, I located the head of the couloir by which we had ascended from Moraine Lake. Indeed, had we not ignorantly left our rucksacks behind at the head of the circus, we could easily have crossed the pass and glacier, returning to Moraine camp by that route. The flow of the glacier was south-westward towards Wilcox's Prospectors' Valley, and probably a way could easily be found—perhaps hardly on the ice, since the fall is abrupt—to the floor of the valley. Since my guide had made the first ascent of four peaks in the group, the only ones thus far climbed, I have suggested 'Kaufmann' as the name for the pass.

Our going back was uneventful. There was a fine view

down upon Boom Lake, with the curious chain of logs across its lower third, a constant frightening of broods of young ptarmigan on the higher Alps, and the discovery of a fossil in Consolation Valley, similar to those found by Professor Collie and his party in Prospectors' Valley, distant six or seven miles, the previous year.

TWO UNIMPORTANT BUT PERPLEXING PASSES.

(*Kummenfurke and Kriegalp Pass.*)

BY GEORGE BROKE.

THOSE who have undertaken to assist in the new edition of Ball, and have been struggling to compress their stores of information into sufficiently small compass, must have here and there reluctantly abandoned various fascinating topographical problems for which a hard-hearted general editor could not possibly afford space in the new volume. And such problems are much more likely to be found in that debatable country in which wandering can hardly be described as mountaineering proper, though one would hesitate to recommend unguided expeditions in it to a party whose climbing powers were an unknown quantity. Naturally, on that easy ground where a climber almost blushes to be found in possession of a rope, there is far more choice of routes, and also far greater probability of a pass having been used in old days by the inhabitants of the locality, than in districts where the glaciers come creeping down 5,000 ft. from col to terminal moraine, and the naked rocks stand out from the snow with what must have been a very *noli me tangere* air to the peasant desirous merely of getting into the next valley by the shortest and most commodious route.

Binn possesses any quantity of this debatable country; Binn which is only four miles in a straight line from the Rhone and yet is connected with half-a-dozen other valleys by a score or so of easy passes, only one of which can be crossed by a mule, though there are but four or five on which climbers of average experience would need the rope. Two of these easy passes—one on the N., the other on the S.—have caused me enough perplexity during the past twelve months to make me desirous of imparting to my readers, not much information indeed, but perhaps a sufficiency of the perplexity to cause them to make some effort on their own part to elucidate as much of the mystery as may remain unsolved.

The more northerly of the two is the Kummenfurke, declared by tradition to have been the regular way in ancient days from Binn to Reckingen; indeed from one or two of the local legends it would almost seem as if some of the villagers looked on it as a suitable after-church stroll on Sundays. As a matter of fact, even in these degenerate days, it would be possible for an energetic walker to attend early Mass (celebrated at 5 A.M. in summer) at Binn, lunch at Reckingen, and get back before dark, but he would have to be very energetic. To begin with, the pass is not in the Binn Valley at all, but is just to the N.W. of the Rappenhorn, one of the many peaks which are known as Mittaghorn, in this particular instance because it lies due S. of Münster, the largest and most important of the many villages between Viesch and the Rhone Glacier. From the N., *i.e.* from Münster or Reckingen, there is practically no doubt as to the course to be pursued at starting; it is obviously necessary to ascend the Blindenthal, a valley of 'dip' whose torrent seems at one time to have had energy enough to cut its way back through two, if not three, parallel ridges, and to push its watershed a long way to the S. As far as the bridge below Beim Keller the road is clear, and then begins the first uncertainty. Looking at the Federal map to ascertain the exact whereabouts of his pass the wanderer discovers, first, a path leading up from Beim Keller to the Kummen huts, then, as is natural, a blank half-mile or so on reaching the upper pastures; and then another track which, curving round *north* and *west* of the Kummenhorn, crosses two ridges to a little lake high up in the Rappenthal, and well above the tongue of the Rappen Glacier. In this second plainly marked track lies the chief mystery of the Kummenfurke, for, according to all local authorities, the pass is not N. but *south* of the Kummenhorn, and is reached by a path which ascends near the Gorbach to the Herkummen Alp, and thence over stony pastures to two depressions close together in the short ridge between the Kummenhorn and the western cliffs of the Rappenhorn. I once went over the more easterly of these gaps, but, misled by the track marked on the map, had no idea that we were crossing the Kummenfurke. Seeking the most convenient route from the top of the Rappenhorn to the Blindenthal, we went down the right side of the Rappen Glacier for 20 min. or $\frac{1}{2}$ hr. and then turned up a wide shallow gully to our right. A stony spur on our left cut us off from all view of the Kummenhorn or of possible tracks; but it was early in the season, and everything must have been covered

with snow, which reached just down to the Herkummen hut, while the Gorbach gullies were choked with it, and we glissaded merrily right into the valley.

It was partly laziness, but mainly the fact that the snow was still so low that hunting for paths at 8,000 ft. or 9,000 ft. must have been a failure, which deterred us in 1902 from yet another possible variation of the Kummenfurke. We had meant to mount on the left bank of the Blindenthal from the point where it debouches into the Rhone Valley, till we reached the Urschgen Alp (1,984 m.), which sits on the shoulder in plain view from Münster, and then to stick to the ridge all the way till we reached the Kummenhorn and the mysterious path. This expedition should not present any real difficulty, but would perhaps be preferable in the opposite direction, as the views to the N. would be very fine.

But when the traveller has succeeded by any of these routes in gaining a Kummenfurke and the head of the Rappentbal an even larger choice awaits him in the descent to Binn, from which place he is cut off by the long ridge running S.W. from the Rappenhorn, or rather from the snow plateau just to its S. Looking at his map, and actuated by the natural desire not to go uphill when down will do, he will probably drop down the track marked in the map over the slopes on the right bank of the stream to Ripei and then to Ritzresti. Here he will find a bridge from which a worse track slants up the opposite slopes till it finally reaches the crest just between the grassy summits of the Eggerhorn and Faulhorn. Keeping slightly W. of S., so as to clear the head of the small Meilibach gully, he will reach Binn by the Ebenematten track. Now this is a fairly straightforward route, but it is not that usually followed, as, although in some ways the easiest, it is also believed to be the longest. Undoubtedly, as a natural consequence of the law that valleys descend more quickly than ridges, it involves more ascent and descent, though only to the extent of about 50 m., than if the ridge of the Schweifengrat be crossed further E. It is also likely that in old days there was no bridge at Ritzresti, which would have effectually deterred anyone from taking that route.

Probably the quickest way, and certainly that which involves least additional ascent, is to go to the most southern Kummenfurke, then up the right side of the Rappen Glacier to the snow plateau at its head, and then to descend the Hölzli Glacier into the Feldbach glen. But in old days no one went over a glacier if he could go round, and consequently

the historical route lay a little further W. From the pass the peasant traveller would descend to the nearly flat tongue of the Rappen Glacier and cross to the left bank of the valley, which he then traversed in an upward direction over stony broken ground till he could turn up to an easy col, known vaguely as the 'Joch,' just to the S.W. of the Hölzlihorn, between that peak and the point 2,846. From this point he could make a fairly straightforward descent to the old iron mine in the Feldbach valley; but even then the possibilities of choice were not exhausted. From the iron mine the traditional route goes up again on the S. side of the stream, thereby adding another 50 or 60 metres of unnecessary ascent, passes behind the green point of the Gandhorn, and then descends over the Galen Alp and by Schären and Schinnern to Im Feld. This route might possibly be more convenient in spring or winter, when the Feldbach glen might be choked with snow; but the ordinary summer traveller will save a little time by keeping straight down the left bank of the Feldbach, and so reaching Im Feld by way of Kehlmatten. Going in the reverse direction he must be careful not to go on across the Feldbach by the path to Stafelstatt, but to turn up almost immediately after Kehlmatten.

So much for the map route, the glacier route, and the traditional route; but there is yet a fourth variation, which may perhaps be distinguished as the picturesque route. This consists in reaching the 'Joch' from the Kummefurke in the traditional manner; but then, instead of descending to the iron mine, the traveller follows the whole length of the crest of the Schweifengrat, till between the Faulhorn and Eggerhorn he reaches the point on the map route where the track comes up from Ritzresti. On a fine day the views must be superb on both N. and S., and it is said to be scarcely longer than any of the others.

There remains just one point that may suggest itself to the mind of a summer visitor to Binn. Why in the world should anyone take any of these routes when he could go quicker and more comfortably by simply descending to Aernen, and then following the old Rhone Valley bridle-path up through Mühlbach (the birthplace of Cardinal Schinnern, a name still possessed by various hamlets in the Binn Valley) and Steinhaus to its junction with the road at Niederwald. Again I think we must look for an answer to the different state of things in winter, especially at a time when the present char-road was only an ill-defined track. Even in this twentieth century I can imagine that the road through the

Twingen gorge might be neither safe nor agreeable on a rough winter's day, whereas the route by Schären and the 'Joch' to the Kummenfurke would lie for the most part over open downs and gentle slopes. Perhaps also some degree of enterprise and of a desire to go straight may have actuated the Binn peasants in their choice, and there may have been advantages in a back way to people who were not desirous of advertising their movements to the world at large. The puzzle about the track on the map N. of the Kummenhorn must remain unsolved. Another similar track, which has no beginning or ending, winds (on the map) across the slopes half-a-mile or so to the N.

The second of my two puzzles is the Kriegalp Pass, right away to the S., the most westerly of the nine or ten passes connecting Binn with Alpe Devero. There is no choice here about the approach from the N., it is simply a case of following the Kriegalpwasser to its head, keeping at first on the right bank by a small but fairly well-marked path from Heiligkreuz, till in something over an hour the track crosses to the other side, 10 min. or so after passing a shepherd's hut. Here, among boulders, shingle beds, and patches of snow, it becomes so faint as not to be worth looking for; the traveller has merely to pursue his way onward and upward, and if he is lucky he will from time to time hit off portions of some sort of path on the steep stony slope (just W. of a small waterfall) which leads up to a veritable wilderness of stones, so that the Kriegalp is emphatically a pass to be crossed early in the season while its asperities are still securely blanketed with the winter's snow.

Without a map the traveller is not likely to find any puzzle about the pass; he meanders on for $\frac{1}{2}$ hr., and then the low cliff that rises on his left hand comes to an abrupt end, and he finds himself looking E. into the upper Val Devero. On his right the lighthouse-like Kriegalpstock, which startled him with its quaint appearance as he came up on to the plateau, stands up boldly 300 or 400 yards away. Down he goes over stones, snow, and grass, making the best of his way to the Alpe Buscagna 2,000 ft. below, and in doubt he will do wisely to keep well to the left.

But if, having accomplished his descent, he then pulls out his Siegfried map, he will probably be a good deal perplexed at finding that the track on the Italian slope has no sort of connection with that on the Swiss side, but professes to cross the frontier 500 or 600 yards further to the N., just to the E. of a tiny lake; and, further, that this point is

marked (if his map is the later edition) as being 18 m. lower than the pass he has just come over. Here is the mystery of the Kriegalp Pass, and I fear I cannot do very much to solve it. Where two Government surveys come together there are always likely to be discrepancies, and of course the Siegfried map has to fit in the Italian survey as best it can. It is, however, curious that the later edition should have emphasised the error, for error it must be. Perhaps I ought not to speak too positively, for we went up to the Kriegalp in mist, sleet, and thunder; but though it was much too cold and wet to use the camera (almost the only occasion when I should have preferred a Frena to a Shew), and so I have no proofs to offer, it was easy to see that a cliff rises steadily to the left above the plateau all the way from the point 2,580. Moreover, in the earlier edition of Siegfried no fewer than seven contour lines are given between the point 2,567 (then without any height) and the dotted line 2,400, making, therefore, at least over 2,610. In the later edition this discrepancy has apparently been discovered, and only five lines are inserted, but I am tolerably certain that the older edition was more correct. Possibly two figures have been transposed, and we ought to read 2,657; but my own impression is that 2,567 is the Italian measurement of 2,580, and that they ought to coincide.

We have not quite done yet with the puzzles of the Kriegalp Pass; it is not much frequented by travellers, but nearly all those who have traversed it write or speak as if the actual crest lay N. and S., between the cliffs of the GÜschihorn and the Kriegalpstock. But instead it lies *east and west*, between the same corner of the GÜschihorn cliffs and that southern outlier of the Helsenhorn which is known as the *Punta di Boccareccio* (3,212 m.). The Kriegalpstock, together with the broken ridge connecting it with the *Pizzo di Boccareccio* (2,927 m.) a little more to the S., lies entirely in Italy, and ought perhaps to lay aside its Teutonic appellation and rest content with being the *Pizzo Cornera Dentro*. It is not very extraordinary that those who have crossed the pass should have been misled, for the rise is very slight on either side at the true frontier ridge. The Swiss map gives the position of the frontier quite correctly, but has erred in marking a slight cliff on the southern side—where there are only gentle slopes of snow and boulders. No doubt there was once a time when the watershed did coincide with the Kriegalpstock ridge, but in accordance with the general law of the Alps it has been pushed northwards. Thousands of years ago the whole of

the drainage of the tiny Kriegalp Glacier passed down the Kriegalp Valley. But in the course of ages the torrent on the Buscagna side, assisted by the rottenness of the rocks, succeeded in eating its way back through the ridge, and has now captured the extreme southern portion of the little snow-field.

I ought perhaps to confess that although one of my special objects in 1902 was the thorough exploration of the Kriegalp Pass, its Italian side is still a *terra incognita* as far as I am concerned; but that was partly the fault of the weather, and partly due to the fact that we had discovered a possible pass to Veglia, still uncrossed, at the extreme S.W. corner of the Kriegalp Glacier. Studying the map in the early spring, I had begun to think there might be a way across the Boccareccio ridge; a view confirmed by an illustration of the Veglia side (at p. 104 of the 1894 'Bollettino'), which showed a very satisfactory couloir curving down from a deep-cut notch in the ridge. A photograph which Mr. Baker-Gabb had kindly given me a year before showed (at a considerable distance) the same gap on the other side, and my opinion was strengthened. Finally Signor R. Gerla, the leading authority on the southern side of the Lepontines, in the course of much other valuable information, plainly declared that there was such a pass, and that it had not yet been crossed.

Our duty was obvious: we were to go up to the Kriegalp Pass, devote an hour or two to exploring the Italian side and elucidating the puzzles, and then go over the new pass to Veglia. Alas! it was again a case of 'weather disposes.' Filled with virtue we actually started at 2.15, having previously arranged that Wilhelm Schmid should convey as much change of raiment as could be compressed into one sack over the Ritter Pass, while the rest of our baggage went by post to Berisal.

But even as we rounded Willeren church the lightning began to flicker; the stars, which had shone brightly all night, began to be blotted out, and just as we reached Heiligkreuz heavy drops began to fall. Perplexity immediately assailed us. Would Wilhelm go on? We had no desire to arrive wet through at Veglia to find no clothes. And if we went back to Binn to wait another day we must do so before our luggage departed at 6 A.M. Eventually we turned into a convenient cowshed just by the Heiligkreuz chapel, and hung the lantern outside the door to attract William's attention. After an hour's wait, during which the thunder rumbled

overhead, he turned up and gave it as his opinion that this was nothing but 'showers.' So, as he also maintained his ability to find his way over the Ritter in any sort of weather, we hardened our hearts, solemnly pledged him to go on, whatever happened, and turned up the side valley. For some time things looked a little better; we crossed the Fleschenbach without difficulty by a tree-trunk, though a learned professor at Binn had solemnly warned us that we should be hopelessly pounded at that point; but an hour after leaving Heiligkreuz a perfect deluge (one of William's 'showers') swept down upon us up the valley. Fortunately we were close to the hut marked on the map as 1,840 m., and fled on till we found it. Its doorway was carefully barricaded with branches, and inside we found a sorrowful black sheep, who seemed much alarmed at our arrival. We assumed it was meant to be a prisoner, and carefully defeated its efforts to escape, for which we felt thankful when 10 min. later the shepherd appeared, a weird figure swathed in a blue capote. He lit a fire, for which we were extremely grateful, and proceeded to melt a loathsome decoction, with which he anointed the sheep's leg. He also seemed to think the weather was not going to be anything very dreadful, so after again waiting for over an hour, which we utilised by having breakfast, we set forth into the wilderness. From behind us masses of mist would roll up, envelop us with a spray of rain (twice we had to stop for 5 min. before we could see our way), while all the time the thunder rolled and rattled among the crags of the Helsen ridge on our right.

Further on it really did clear a little: the quaint castellated crags of the GÜschihorn and the tower of the Kriegalpstock stood out clear, and there was quite a patch of blue sky away to our left. But, as we entered on the final plateau, an even heavier mass of cloud came swirling up the valley. For some time grievous doubts had assailed us as to whether we should ever get over the Finestra di Boccareccio, as Signor Gerla had named our new pass; we had no desire to spend the rest of the day in tramping over the Scatta d' Oroghna and the Passo di Valtendra; and consequently the Italian side of the Kriegalp Pass was abandoned without discussion. Twenty minutes' or $\frac{1}{2}$ hr.'s disorderly flight, edging always to the right, took us across the plateau to the frontier ridge. Alas! it was so gentle that the lee side gave no more shelter than could be found under a boulder rather larger than the rest, and the storm burst on us in all its fury. One of us clamoured for chocolate and biscuits and got them, while the

others struggled with frozen fingers to encircle themselves with the rope, for 1,000 ft. of steep snow couloir lay between us and the wished-for col. Fortunately, as sometimes happens when rain has been judiciously mingled with the sleet, the snow was in perfect order, the couloir itself was sheltered from the howling blast, and 1½ hr. of steady kicking up ever-steepening snow, in which were two rather uncomfortable avalanche gutters and an opening bergschrund, landed us one by one into the teeth of the gale again. 'Facilis descensus,' especially as the couloir on the other side was not so steep; and Veglia was gained more rapidly than we had expected, though William, who perhaps had begun to have qualms as to the mere 'showeriness' of the weather, had been anxiously looking out for us for an hour or two. But that is why the Italian side of the Kriegalp Pass with its track leading up to 2,567 is still a mystery, so far as I am concerned.

THE RANGE SOUTH OF THE OTEMMA GLACIER.

By A. CUST.

THE Italian monograph 'In Valpellina,' by Signori Canzio, Mondini, and Vigna, published originally in the 'Bollettino' of the Italian Alpine Club, vol. xxxii, 1899, and briefly noticed in 'A. J.' vol. xxi. p. 64, deserves the study of English climbers, if only that the mountain part of interest to climbers was produced in collaboration with Mr. A. G. Topham, to whom the manuscripts were submitted.

The two Ciardonnays are distinguished, in accord with the latter and myself, as Becca di Ciardonnay Superiore and Inferiore. The first has two summits, marked on the Italian map E. 3,347 m. and W. 3,343 m., but the height for the mountain on the Swiss map, 3,398 m., is preferred.* I regret that another suggestion to change 'Great' into 'Little' in the title of point 3,437 m. (a height to be reduced, it appears, by about 100 m.) could not be adopted. The obvious misnomer, however, Grand' Epicoun, is, in

* The point where we made our cairn was a rocky cone E. of the snow ridge which forms the general summit of the mountain. On leaving the rocks about the middle of this we found a convenient shale path below it to the base of the cone. Our descent being to S.W. over snow S. of the summit ridge, we no doubt passed the second summit on our right. After following down the arête that descends to the Colle di Berlon we found a devious way down among ridges on its W. side, which brought us near the top of that pass. We then reached the route of the Crête Sèche, though perhaps not at the actual col. Mr. Topham's rectification of the watershed determining the frontier line, making it pass from the summit of the Lower to those of the Upper Ciardonnay by the intermediate col, is accepted.

fact, applied to it in the valley. Its very existence has been disputed (in 'A. J.' xv. 487), but Signori Canzio and Mondini made the ascent in 1897, and it is described as a triplet of rock summits, of which that to the N.E. is the highest. It lies between the Rayette, the Swiss name of which is Bec d'Épicoun (the only double name happily retained), and the Oulie Cecca. It is to be hoped that the opinion expressed in the monograph that the latter name (a corruption, we are told, of Ouille or Aiguille Sèche)—restored therein from the Sardinian map in place of M. Oulie of the modern Italian map, being also that by which the mountain is known in Valpelline—should be definitely adopted will be followed in future revisions of the maps to the exclusion of all others.*

The details of the ridge between the Oulie Cecca and the Blancien were fully discussed in correspondence between Sig. Mondini, who wrote the mountaineering part, Mr. Topham, and myself, and as a result the Italian monograph endorses my previous note on the subject.† On the propriety of applying the name Col d'Otemma to the low and practicable gap adjoining the Oulie Cecca (8,550 m.) on the E. we were entirely agreed, and the monograph certifies that the pass is so called in Valpellina. The Siegfried pass of the name between the Becca di Sciassa (8,480 m., S. map; 8,477 m., I. map; so called on the Sardinian, but unnamed on the Italian map) and the Punta Boetta has no support either in the monograph or the revised 'Studer,' and is, I take it, simply fictitious. The Punta Boetta, which equals the Oulie Cecca in height, has two summits, formed by the ends of a nearly level ridge composed of large blocks of rock, and running N.W. towards the Otemma Glacier, whence in consequence it has a bold appearance.‡

The accompanying map § shows the names authorised; the

* On the unsatisfactory nomenclature of Siegfried see Herr Wäber's note in Studer's *Über Eis und Schnee*, vol. ii. second edition, p. 528. The whole of this range is excellently seen in the photographs from the Ruinette (*In Valpellina*, pp. 88, 112). If the name Rayette could be authoritatively preferred as the sole name for the peak bearing it on the Italian map, and the lower point to S.W. now so-called on Siegfried be either deprived of it or called Petite Rayette, the present confusion of names at this part would be dispensed with.

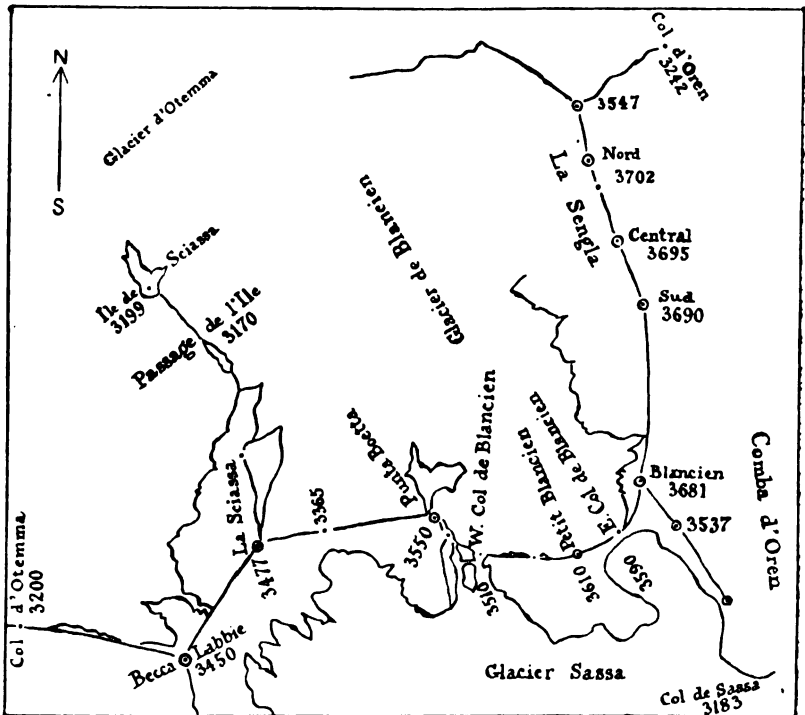
† A. J. vol. xix. p. 369.

‡ The N.W. end, where there can be no doubt we made our cairn in 1881, is, I believe, the higher. From a note which I made on my visit to Arolla in 1897, that the only col which Anzevui knew was that between the Sciassa and Oulie Cecca, it seems most likely that this was the pass crossed some time prior to 1879 by M. Gira, the geologist, in his company (see concluding note in A. J. ib.) It also best accords with the description given me in 1879 by Elie Peter, though Anzevui at that time identified the passage with the one I had just made (E. Col de Blancien). Signor Mondini informed Mr. Topham that 'Grande Zamaine' is *patois* for Gran Chamin, by which name the Valletta di Sassa is also called (see *Valpellina*, p. 90); and that in reaching the Glacier d'Otemma thence the only route taken by the chasseurs of Valpelline is by the first-named pass (the true Col d'Otemma).

§ Based generally on the Italian map, with the Blancien as a fixed point; and also adjusted and drawn in detail from photographs, such as those in the monograph, and my own sketches. There is a difference of nearly 500 mètres

heights so far as they are new on the Blancien-Labbie ridge were proposed by myself (that given on the Italian map for the Becca Labbie, 3,821 m., is certainly too low). The names Ile de Sciassa, Passage de l'Ile, and Glacier de Blancien for the E. branch of the side glacier between the Sengla-Blancien ridge and the Sciassa are now suggested.

As to the confusion between the E. and W. Cols de Blancien pointed out in the monograph, Sir Martin Conway did not communicate with myself either when engaged on the 'Climber's Guide'



Scale 1 : 25000 ca.

or when penning his previous 'vivace critica,'* now shown, on the authority of the Italian writers, to be erroneous, † or the misapprehension that the col reached by himself was identical with that

in the distance of the Oulie Cecca from the Blancien from the Italian and Swiss maps, the latter, which places it further W., appearing to me most nearly correct.

* *A. J.* vol. xv. p. 261.

† 'Da verifiche fatte dal sig. Topham e da noi, colla scorta di fotografie dei due versanti, risulta che il Conway venne tratto in inganno appunto dall'errata ubicazione del colle Est di Blancien' (note, p. 111; see also following page).

reached by me in 1879 would have been cleared up. It may be observed, however, that the fact that on leaving the Col de Sassa we went to the right up snow slopes to a high gap, whence the Blancien is easily ascended (in little over $\frac{1}{2}$ hr.), is incompatible with the supposition that the pass reached by us on that occasion was the W. Col de Blancien.* To have reached the latter we must have descended, rounded the base of the Petit Blancien, and then ascended a gully in the rocks, while in so doing we should have been going away from our mountain.

The beauty of the view from the Blancien (the Italian height 3,681 m. seems preferable to the Swiss 3,662) particularly impressed me, and I had rarely been so charmed with a mountain prospect. The most pleasing elements were present—the broad Otemma Glacier on one side, the deep Valpelline, with its long sweep to the Val d'Aosta on the other, the vapoury gap over Ivrea, the uninterrupted horizon of peaks, with nothing near to interfere, from Mt. Blanc to Mte. Rosa, the jagged, broken ridge of the Sengla, giving a bold contrast close at hand. The S. summit of the latter was ascended by Signori Canzio and Mondini from Prarayé in 1898, who found it higher than the Blancien; the central summit was higher again.

Both Studer and the monograph discuss Mr. E. G. Foster's expedition: the first holds that it is involved in too much uncertainty to found on it a claim to the first ascent of the Sengla; the latter disputes that ascent altogether, suggesting that the 'small peak' ascended was the W. Becca d'Oren (3,506 m.), which is in fact accessible by an hour's easy ascent from the Col d'Oren, while pointing out that the Sengla is anything but a small peak, and 460 m. above the pass, on which it descends in a ridge of glacier and steep rocks. Certainly the photographic views of the mountain on that side given in the work do not harmonise with Mr. Foster's language in writing to me (I quote from memory) that 'it was very easy, so easy, in fact, that I hesitated about sending it up to the "Alpine Journal," but thought it a pity others should not enjoy the view.' It is an objection to the Becca d'Oren that it lies E. of the pass, whereas the name on Dufour's map is in the other direction. If the pass crossed was the Col d'Otemma, neither the Sciassa of Dufour's map, which is the Oulie Cecca, nor the more insignificant peak so called answers the description. The latter obscure summit—possibly one of the last summits on the main ridge of the Western Alps bearing a name on the map to be victimised—seems to be precluded by a final climb along a narrow arête precipitous on the Italian side. But the ascent of the neighbouring Becca Labbie is a mere walk, and, as the locality corresponds better with the name than that of the Becca d'Oren, it occurs to me as presenting a possible solution.

Attention may be a second time called to the map accompanying

* *A. J.* vol. ix. p. 365. See the illustrations, pp. 109, 123; from the first all three cols named are seen.

the monograph (the Italian map on the scale of 1:50,000 corrected), as the nomenclature represents the results of alpinistic exploration on ranges extending from the Vélán to the Dt. d'Hérens; and, being made out of four sheets of the original, while the colouring renders it more pleasing to the eye, it is just the companion an explorer of the district would like to have.

I hear from Mr. Topham that Sig. Felice Mondini, who, he adds, has done useful work on the Italian frontier mountains, had recently informed him that he was going to reside at Santiago, Chili, where he hoped for some climbing in the Andes: he promised assistance to any English climbers that came his way.

THE ALPINE CLUB ANNUAL PHOTOGRAPHIC EXHIBITION.

THE annual summer exhibition of photographs was this year hardly as good as we have sometimes known it. There were, however, some excellent individual pictures.

The Club was very fortunate in having so many lady exhibitors; in fact, their contributions would almost have made an exhibition of themselves. Some of the best photographs in the room (by a lady exhibitor) were some views by Miss M. L. Longstaff of the Canadian Rockies and of the Selkirks. They were extremely picturesque and very good in artistic treatment and composition. The view of the Vermilion Range especially was remarkable for a very pleasing effect of cloud and distance. The way in which the dark fir trees in 'The Illecillewait at Dawn' cut the distant sky was also particularly clever and effective. We cannot help also mentioning the charming composition of 'Lake Louise.'

Mrs. Arthur Schuster, a very welcome new contributor, sent three views of mountain scenery in California, taken from the valleys, showing very good and careful work. Miss E. Venables also contributed a few photographs. Miss Evelyn A. Arkle had one particularly meritorious picture of Monte Rosa seen from the Strahlhorn. The composition was good, and there was a fine effect of clouds breaking on the upper fir like surf on a beach. 'The Pigno d' Arolla' was also a good photograph, but the trees on the left-hand side were rather too dark. Miss Marion Barrett kindly allowed Mr. G. W. Stevens to exhibit her nice soft cloud effects all in one frame. Mr. C. Thurston Holland sent a view entitled 'The End of the Glacier' which showed nice gradation of shade in the ice. Mr. John Gunston possesses good technic.

Mr. Mumm sent half-a-dozen enlargements of photographs taken in Bosnia and Herzegovina. They were all of great interest, especially for those who would in future journey there. Mr. A. W. Andrews exhibited a view of the icefall on the Durand Glacier which was remarkable for good and clear detail. 'The Rothhorn and Moming Pass from Lo Besso,' by Mr. J. W. Wyatt, was very

good. The joining of two enlargements has very seldom been more cleverly carried out. The sky was particularly appropriate and realistic, and the clearness of the atmosphere most marked, all exhibiting very careful exposure and great skill in execution. Mr. L. J. Steele, in 'A Storm on the Matterhorn,' showed us what might almost have been one of Dr. Tempest Anderson's views of an eruption on Mont Pélée, so impressive was the effect. There were also four or five very excellent small views by this contributor of the Canadian Rockies, which were very clear black and white, and not unlike steel engravings when seen from a distance. Mr. W. Douglas has, we think, improved in photography, and in two views of the Canadian Rockies showed very nice feeling for composition and tone. 'The Ortker from the Madatsch,' by Mr. Burchell Rodway, showed good detail.

Mr. T. G. Longstaff sent a very picturesque and nicely composed view of the Gannet Rock which we think was somewhat over-enlarged. 'Ramsay Isle,' by Mr. Wylie Lloyd, was a very interesting rendering of rocks and sea, but this picture was somewhat spoilt by the unpleasant shape of the rock on the left and by hard lines. The new Art frame was perhaps too noticeable. Mr. Ouston's views on the Lofoten Islands were interesting little productions. More imposing were Mr. J. P. Somers's picture of Langstrandtind and 'Clouds and Sunshine' in the same islands. They were remarkable for correct exposure and composition, but perhaps a trifle woolly in texture. Mr. Spencer's view of the same group of islands was an all-round good photograph with a particularly pleasing foreground. His other views of the Lofoten Islands were also very charming, and were marked by the excellent technic and neatness of effect of which he always shows himself to be a master. His views of the Engadine in winter, also, were beyond praise.

Dr. Norman Collie showed us, as perhaps no one else had previously shown us, what a wild and wonderful place is the Lofoten group. The 'Evening in Moskenesö' was an exceedingly striking picture of bare rocks and water, and the view entitled 'Mountain and Clouds' was perhaps even too dramatic. The enlargement called 'Sunrise on the Ofoten Fjord' was, we think, the best picture in the exhibition. It was a view of a distant range of mountains with a troubled sea below and a clouded sky, which was very effectively lighted, above. Its simplicity contributed very greatly to its charm.

Of two views sent by Mr. J. J. Withers 'The Piz Palü from the Piz Bernina' was worthy of notice, in spite of its somewhat unpleasant colour. Dr. Kennedy sent as usual an interesting collection of Swiss subjects, and also some views of the Scotch Highlands. The 'Finsteraarhorn' and the 'Lago Bianco' were perhaps the best of his contributions. Dr. O. K. Williamson possesses in a remarkable degree the gift of composition, and understands well how to choose his subject. His views of the Breithorn and of the Grosshorn and Mittaghorn were beautifully composed, but they were marred by a very injudicious retouching of the sky and of distant

mountain-tops. 'Mont Blanc from the Charmoz,' by Mr. Alfred Holmes, was certainly one of the best pictures of this year's exhibition. Its technical qualities were admirable, and the contrast between the sky and the brilliant snow was particularly effective. 'The Lakes of Piora,' by Mr. Garwood, formed a charming reminiscence of that beautiful Alpine spot.

Mr. Ellis's 'Matterhorn from the Forest above Heusten' was an example of good exposure and skilful rendering of trees against the distance. There were two very good photographs by Mr. Nettleton one of the Aiguille du Géant being especially striking. One cannot help regretting, however, that the very indifferently executed touching up of the sky and the horizon was not dispensed with. Mr. Gleason exhibited a number of views of the Canadian Rockies which could not fail to attract the attention of anyone interested in the topography of that region. Mr. Whitby Phillips's 'Head of the Zinal Valley' was a pretty, peaceful scene.

As an example of clever telephotography Mr. Lister's view of the Mischabel calls for notice. Mr. Wyatt's 'Descent of the North Arête of the Zinal Rothhorn' was a striking picture. An impressive panorama was that of the 'Clochers de Planereuse,' by Mr. Northall Laurie. The texture of the enlargement was particularly pleasing, but the joining of the three separate parts was rather noticeable. Miss Alice Gamble had a nice small brown photograph of the Drei Zinnen.

Mr. Speyer as usual contributed some excellent photographs. His view of the Signalkappe was remarkable for good light and shade and realistic clouds. In Dr. W. Hunter Workman and Mrs. F. Bullock Workman's views of the Himalayas there appeared several named and unnamed peaks, many of which were first ascended by these distinguished explorers; and in one of the photographs they were actually visible among the séracs. The two views of the Everest group lent by the Royal Geographical Society, one by Mr. Hayden and the other by Mr. J. C. White, were of great interest. These subjects, owing to the great distance from which they are taken, can be only rarely available to photographers. 'The Obergabelhorn,' by Mr. Andrews, was a good photograph, with the not unusual black sky and very white snow. Mr. Stutfield's photograph of the Glacier Lake in the Rockies would have done credit to a far more experienced photographer. The figures on the raft were very happy. 'The Moraine Lake,' by Mr. Woolley, was well exposed and particularly clear and brilliant.

Mr. W. J. Williams showed us his view of the Königspitz, which was clear and realistic; but the figure in the foreground might have been dispensed with. Mr. Paul lent two views of the Himalayas, by Mr. J. C. White, which were both large and interesting. The picture of Chumolhari was, however, rather marred by a spotty hill on the left-hand side. Two photographs by the Rev. A. C. Downer showed careful execution. 'Goats on the Gemshorn,' another photograph by Mr. W. J. Williams, was a clever study of a group of the little animals which chiefly frequent that mountain, and from which, no doubt, it derives its name.

We must not pass over the lantern slides which formed a feature of this year's exhibition. They were contributed by Miss Gover, Miss E. Venables, and Miss Ethel Blandy. Miss Gover's slides formed a very interesting diary of a tour in the Pennine group. Miss Blandy's were remarkable for some very good cloud effects, and in particular the 'Tour Ronde from the Aiguille du Midi' was distinctly worthy of praise.

The Club is to be congratulated on the very admirable manner in which Mr. Spencer organised the hanging of the photographs.

THE ALPINE CLUB LIBRARY.

THE following additions have been made since April :—

New Books and New Editions. Presented by the Authors or Publishers.

(Foreign works may be obtained through Mr. David Nutt, 57 Long Acre, London, W.C.)

Alpines Bücherverzeichnis. 8vo, pp. 111. München, Lindauer, 1904

A list of present-day literature.

Arbuthnot, James. A trip to Kashmir. 4to, pp. 104; plates. Calcutta, Thacker & Co., 1900. 8/

A record of various trips to Kashmir for sport and other purposes, with much useful information. There are numerous plates of mountain and valley scenery and of animals shot, but unfortunately they are badly printed. However, one is not so exacting with regard to pictures of less known places as to those of places well known, and the plates in this book help one to appreciate how beautiful and how grand is the scenery of the Himalayas. 'Nanga Parbat towers so majestically over all its neighbours that it looks as if it began where the others ended. Even though we stood at 17,000 feet, we had literally to look right up into the sky to see its summit.'

Baedeker, K. Südbayern Tirol und Salzburg Ober- und Nieder-Österreich, Steiermark, Kärnten und Krain. Handbuch für Reisende. 8vo, pp. xxii, 630; maps, etc. Leipzig, Baedeker, 1904. M. 8

Beraldi, Henri. Cent ans aux Pyrénées. Après cent ans. Les Pics d'Europe. L'Excursionnisme. Le Pyrénéisme impressionniste. 8vo, pp. 185. Paris, 1903

This is the sixth volume of M. Beraldi's privately printed standard monograph on the Pyrenees. A most valuable work, delightful and charming to read.

Biendl, Hans. Das Sextental und seine Berge. Herausgegeben vom Verschönerungsverein in Sexten. 8vo, pp. 55; plates. Sexten, Verlag d. Verschönerungsverein, 1904

A good little guide, well illustrated.

Boirac, E. A travers nos Alpes, Dauphiné. 8vo, pp. vii, 297; ill. Grenoble, Gratier, 1902. Fr. 3

A reading-book for schools, being formed of quotations from various writers.

Church, Percy W. Chinese Turkestan with caravan and rifle. 8vo, pp. xii, 207; plates. London, Rivingtons, 1901. 10/ nett

A book for the sportsman chiefly, being primarily concerned with the pursuit of the Wapiti deer and the ibex, but interesting to anyone wishing to know about this portion of central Asia. The route taken included Leh, Yarkand, Aksu, Shatta, Kuldja, Khotan, etc. The illustrations of scenery, animals and people, are excellent.

- Conway, Sir W. Martin.** The Alps. Described by W. Martin Conway. Painted by A. D. McCormick. 8vo, pp. x, 294; 70 col. plates. London, Black, 1904. 20/
- Also a copy of the limited édition de luxe, published at 2l. 2s.
- Coolidge, Rev. W. A. B.** The Bernese Oberland, Volume II. From the Mönchjoch to the Grimsel. Conway and Coolidge's Climbers' Guides. 32mo, pp. xxviii, 196. London, Unwin, 1904. 10/
- Josias Simler et Les Origines de l'Alpinisme jusqu'en 1600. Imp. 8vo, pp. 928; plates. Grenoble, Allier, 1904. Fr. 25
- Besides introductions and notes, this contains original texts, with French translations, of:—
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| C. Gesner, De montium admiratione | Salimbene, Ascent of Canigou by Peter III |
| Simler, De alpinibus commentarius | Petrarch, Mont Ventoux |
| Livy, Ascent of Hemus by Philip | Boniface Rotario, Rochemelon de Candale, Pic du Midi d'Ossau |
| Strabo, Ascent of Etna and Argaios | Domjulien, Mont Aiguille da Vinci, Monte-Bò |
| Spartianus, Ascent of Etna and Casios by Hadrian | Vadianus, Ascent of Pilatus |
| Ammianus Marcellinus, Ascent of Casios by Julian | Rhellicanus, Stockhornias |
| Paul Diacon, Ascent of Mte del Ré by Alboin | Marti, Stockhorn and Niesen |
| Cron. Novalis., Attempts on Rochemelon | Th. Schöpf, Bernese Oberland Villamont, Rochemelon |
| | P. A. Arnod, Passages du Duché d'Aoste |
- Also a copy of the limited édition de luxe, published at Fr. 50.
- Corcelle, J.** Les Routes et les Vallées de la Savoie. 8vo, pp. 122; plates. Chambéry, Perrin, 1904. Fr. 8
- Most of the chapters of this work have appeared in 'Le Tour du Monde.' The subjects are: Le Val du Fier, Annecy, Le Mont-Blanc, La Vanoise, Le Petit St.-Bernard, La Vallée de Beaufort, Le Mont-Cenis, Le Grand St.-Bernard, Chambéry.
- Corin, Dr Joseph.** Escalades et escapades dans les Alpes, par un Magistrat, un Professeur et un Vagabond. Ouvrage publié au profit des Colonies Scolaires de Seraing. 8vo, pp. 127; ill. Liège, Desoer, 1904. Fr. 3.50
- Val d'Annivières, la Cabane du C. A. S. au Mountet, Triftjoch, le Cervin, Riffelhorn, le Mont-Rose, Cols d'Hérens et de Bertol, Pas des Chèvres, la Tête Noire.
- Doughty, Marion.** Afoot through the Kashmir valleys. 8vo, pp. xxvi, 276; plates. London, Sands, 1901. 10/6
- This has many fine illustrations of mountain views.
- Duke, Dr. Joshua.** Kashmir and Jammu. A guide for visitors. 8vo, pp. xi, 618; maps. Calcutta, Thacker, 1903. 10/6
- This is based on Ince's Guide, first published in 1867, and the last edition by Dr. Duke in 1888. A very complete, careful guide-book, with most useful notes on equipment and medical treatment, besides full information on places and on methods of travel by one who has long known the district.
- Emden, Robert.** Ueber das Gletscherkorn. 4to, pp. 44; 6 plates. Basel, etc., Georg, 1892. M. 3.50
- Printed at the expense of the Schw. naturf. Ges.
- Grenard, F.** Le Tibet et ses habitants. Mission Dutreuil de Rhins dans la Haute Asie. 8vo, pp. iii, 387; map. Paris, Armand Colin, 1904. Fr. 5
- A popular version of 'Mission scientifique dans la Haute Asie,' 3 vols. 4to and folio Atlas; Paris 1897-8. Travel in 1891-4.
- Grove, F. C.** Il Caucaso. 8vo, pp. 32; ill. Milano, Soc. editr. Sonzogno [1904]. C. 15
- A translation of a portion of 'The Frosty Caucasus,' one of a series issued in French, in Paris, in 1899.

- Himalayas.** Un coin des Himalayas, par un missionnaire. 8vo, pp. 163; ill. Paris et Lille, Lefort [1900]. Fr. 2
 General description of Sikkim and of Nepaul.
- Iggulden, Capt. H. A.** The 2nd Battalion Derbyshire Regiment in the Sikkim Expedition in 1888. The Derbyshire Campaign Series, no. 4. 8vo, pp. xii, 116; map. London, Sonnenschein, 1900. 1/6
- Jahne, L.** Eisenkappel und Umgebung, die Ostkarawanken und die Sannthaler (Steiner)-Alpen. Geuters Führer. 8vo, pp. 49; ill. Darmstadt u. Leipzig, Geuter, 1903. M. 1
- Jegerlehner, J.** Das Val d'Anniviers (Eivischthal) nebst einem Streifzug ins Val d'Herens (Evolena). Führer durch Landschaft, Geschichte, Volk und Sage eines Walliser Hochtales. 8vo, pp. viii, 156; ill. Bern, Francke, 1904. M. 3.50
- Kilian, W.** Grenoble et les Alpes du Dauphiné et de la Savoie. Extrait du Livret-guide publié par le Comité d'organisation du viiie Congr. géol. intern. 8vo, pp. 38; plates. Paris, 1900
- Lefebure, Charles.** Mes Etapes d'alpinisme. Avant-propos de M. Pierre Puiseux. 8vo, pp. 242; plates. Paris, au siège social du C. A. F., 1904
 This work was first published in Brussels in 1901. This second edition, enlarged by many additional plates and by several pages of letterpress, is published 'sous les auspices du C. A. F. au bénéfice de ses Caravanes scolaires.' Of the work M. Puiseux writes:—'Feuilletez le livre et vous croirez connaître les sites dont M. Lefebure nous parle. Lisez-le, vous croirez connaître l'auteur et vous aurez le désir de le connaître davantage.' The book is published in various editions from 5 Fr. to 100 Fr.
- Louchs, Dr. G.;** see Schwaiger, H.
- Lorenz, Führer-Kollektion:** see Möller, A., and Noë, R.
- Lüthi, G. und Egloff, C.** Das Säntis-Gebiet. Illustrierter Touristenführer. 8vo, pp. 156; ill. St. Gallen, Fehr, 1904. Fr. 2.50
 A good little guide to the climbing in the district.
- Manuel de l'alpinisme rédigé sous les auspices du Club alpin français.** 8vo, pp. vii, 694; ill. Paris, Laveur, 1904. Fr. 5
 'Le Congrès international de l'Alpinisme, tenu à Paris en 1900, a émis le vœu, provoqué par un très intéressant mémoire présenté par M. P. Matter, qu'un nouveau manuel soit rédigé pour répandre parmi les guides et les touristes les notions relatives à l'équipement, l'alimentation, l'hygiène, les difficultés et les dangers de la montagne.
 'La Direction centrale du Club Alpin français a pensé qu'il lui appartenait de réaliser ce vœu en s'adressant aux personnes les plus compétentes en chaque matière traitée. Voici le plan suivi :
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| P. Puiseux, Avant-propos | E. Cardot, Restauration des mon- |
| — Aperçu sur la chaîne des Alpes | tagnes; économie alpine |
| E. Belloc, Les Pyrénées, esquisse | E. A. Martel, Spéléologie |
| sommaire | Ed. Sauvage, Equipement |
| Comte H. Russell, Charmes et | Mary Paillon, Equipement féminin |
| beautés des Pyrénées | Maurice Paillon, Technique de |
| P. Matter et R. de Clermont, Le | l'alpinisme |
| Jura et les Vosges | P. Matter, Alimentation |
| A. Baron, Plateau Central | Docteur Paul Courmont, Physio- |
| — Chaînes principales hors de | logie de l'alpinisme |
| France | Docteur Siraud, La Chirurgie à la |
| — Coutumes, musiques, jeux | montagne |
| Zurcher, Géologie | Docteur X . . . , Hygiène de l'œil |
| J. Vallot, Observations à faire | Docteur Payot, Sports d'hiver |
| sur les glaciers | J. Brégeault, Caravanes scolaires |
| — Eléments de topographie | Capitaine H. Dunod, Alpinisme mili- |
| alpine | taire |
| H. Vallot, Guide de l'alpiniste | A. Bonnet, Automobile, bicyclette et |
| photographie | alpinisme |
| Bérolle, Flore et faune alpines | H. Cuënot, Refuges, hôtels, guides |

- v. Massow, Wilhelm.** Aus Krim und Kaukasus. Reiseakzissen. 8vo, pp. 142; map, ill. Leipzig, Wigand, 1902. M. 5
The author did not leave the post-roads.
- Meisser, S.;** see Club Publications, S.A.C. Rhätia, Geschichte.
- Modlmayr, H.** Bunte Bilder aus dem obern Allgäu. Text von H. Modlmayr. Illustriert von W. Irlinger. 4to, pp. 68; col. and other ill. Memmingen, Otto, 1903. M. 3
Well illustrated. The chapters are:—Ein Hochalpines Fest im Allgäu; Alpenwirthschaft und Sennenleben; Auf der südlichsten Hochwarte des deutschen Reiches; Die Totentänze im alpinen Gebiete des Lechs und der Iller.
- Möller, A.** Steiermark, Kärnten, Krain, Küstenland nebst einem Ausflug nach Venedig in 20 Tagen genussreich und billig zu bereisen. 8vo, pp. vi, 53; maps. Freiburg i. Br. u. Leipzig, Lorenz, 1904. M. 1.20
- [Mortimer, Mrs]** Near Home, or Europe described . . . By the author of the 'Peep of Day.' 6th edition, carefully revised. 8vo, pp. xxiii, 535; map, ill. London, Longmans, 1902. 5/
pp. 298-316, Switzerland; pp. 454-465, Norway.
This is a posthumous edition of a work which originally appeared in 1849. It is quite a good book to give very young children a first idea of Switzerland.
- van der Naillen, A.** On the heights of Himalay. Sixth edition. 8vo, pp. 272. New York City, Fenno, 1900. 6/
This is not a work on mountaineering, as the title might suggest. It is a novel dealing with revelations made to inquirers by Buddhists living among the Himalayas beyond Simla, till recently a safe retreat for the fantastic.
- Near Home;** see [Mortimer, Mrs].
- Noë, E.** Die Schweiz in 15 Tagen mit Generalabonnement genussreich und billig zu bereisen. Kollektion Lorenz. 2. vermehrte . . . Aufl. 8vo, pp. viii, 60; maps. Freiburg i. Br. u. Leipzig, Lorenz, 1903. M. 1.20
A good little guide-book for anyone who imagines he can do Switzerland 'pleasantly and cheaply in 15 days.'
- Tirol und die angrenzenden Alpengebiete von Vorarlberg, Salzburg und Salzkammergut sowie das bayerische Hochland nebst München in 20 Tagen. 8vo, pp. viii, 67; maps. Freiburg i. Br. u. Leipzig, Lorenz, 1904. M. 1.20
- Norge i det nittende aarhundrede.** Tekst og billider af forfattere og kunstnere. 2 vols., folio; pp. 486, 467; col. and uncol. plates, and maps. Christiania, Cammermeyer, 1900
Published originally in 40 parts at kr. 1 a part.
This is a superb work. It is finely printed and copiously illustrated from photographs, drawings and paintings. It treats of the land and its people in every aspect. Among the writers and subjects—we can choose for mention only a few of the many—are:—
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| W. C. Brøgger, Norges geologi | H. E. Kinck, Sætersdalen |
| H. Magnus, Geografisk skisse | T. Caspari, Jotunfjeldene |
| H. Mohn, Norges klima | J. Tvedt, Hardanger |
| A. Blytt, Norges planteliv | Yngvar Nielsen, Lapperne |
| A. Aubert, Norges malerkunst | K. Randers, Nordland |
| Fridtjof Nansen, Fjeldhilder. | |
| Lose dagbogsblade | |
- There are also many articles on history, on literature, on art, and on the daily life of the people. The plates, especially those coloured, are very successfully produced.
- Oxley, J. Macdonald.** L'hasa at last. 8vo, pp. 269; ill. Philadelphia, American Baptist Publication Society (1900). 6/
A story for boys.

- Pyrenees.** Les Pyrénées. 3me partie, De la Garonne à l'Ariège: 4me partie, De l'Ariège à la Méditerranée. Obl. 8vo, pp. 32 bis; ill.
Paris, O. Beauchamp, 1904. C. 50 each
Éditées par les soins de la Compagnie des Chemins de Fer du Midi.
- Schachinger, K.** Through Upper Austria. Guide . . . published by the Association for promoting foreign travel in Upper Austria. 8vo, pp. 66; map, ill.
Linz, Feichtinger, 1904. Gratis
- Schwaiger, Hch.** Führer durch das Kaisergebirge, . . . neu bearbeitet . . . durch Dr. G. Leuchs. Sm. 8vo, pp. xvi, 178; maps, ill.
München, Lindauer, 1904. M. 1.50
- Stoppani, P.** Come d' autunno. . . . 8vo, pp. 294; plates.
Milano, Cogliati, 1903. L. 4
A collection of various disconnected articles, among which are, pp. 25-66, Un' ascensione al Monte Rosa; and, pp. 95-142, Sull' Etna.
- Switzerland.** Handbook for Switzerland and the adjacent regions of the Alps. 19th edition, completely remodelled and thoroughly revised. With 34 travelling maps and plans. 8vo, pp. cvi, 555.
London, Stanford, 1904. 10/
This is Murray's Handbook.
- Tarnuzzer, Dr. Chr.** Illustriertes Bündner Oberland. Herausgegeben vom Bündner-Oberländer-Verkehrsverein. 8vo, pp. 164; maps, ill.
Zürich, Orell Füssli, 1903. Fr. 2
This is nos. 256-258 of 'Europäische Wanderbilder.'
- Taschenkalender für Schweizer Alpen-Clubisten 1904, Nachtrag zum.** 8vo, pp. 20.
Zürich, Steiger & Tschopp, 1904
Committees and tours of Sections.
- Terschak, E.** Illustrierter Führer durch Ampezzo. 8vo, pp. 46; map, ill.
Bozen, Im Selbstverlage [1904]. Kr. 1.50
A guide to the tours and the climbing in the district. It is intended to publish an English edition of this book next year.
- Wagner, Hubert.** Eine Sommerfahrt in den hohen Kaukasus. Zwei Vorträge gehalten in der Sektion Freiburg des D. u. Oe. A.-V. SA. aus dem 'Breisgau Erzähler.' 8vo, pp. 47.
Breisgau i. Br., Hochreuther, 1904
- Whymper, E.** Chamonix and the range of Mont Blanc. 9th edition. 8vo, pp. xiv, 206; maps, ill.
London, Murray: Geneva, Kündig: Chamonix, Payot, 1904. 3/ nett
— The valley of Zermatt and the Matterhorn. 8th edition. 8vo, pp. xiv, 224; map, ill.
London, Murray: Geneva, Kündig, 1904. 3/ nett
- Zavattari, Lt-Col.** Rapport sur les expériences faites sur la neige en Italie dans ces dernières années. 8vo, pp. 136; ill.
Paris, Charles-Lavauzelle, 1904. Fr. 3
There is a steadily growing literature on the subject of the movement of large bodies of men over snow-covered surfaces. The subject is one of interest to Englishmen in view of the growing importance of the snowy Himalayas as the barrier to India. The lessons learned in sport and pleasure are in such a volume as this made a more serious use of. Great importance is attached to the use of the ski, still in its infancy. This of course makes possible the much more rapid movement of bodies of men than has hitherto been practicable.
- Zimmerer, Dr.** Tiroler Verkehrs- u. Hotel-Buch. 2. Aufl. 8vo, pp. 205; maps, ill.
Innsbruck, Schwick, 1904. Pf. 70

Older Books.

- Adams, W.** The modern Voyager and Traveller . . . volume iv, Europe. 8vo, col. plates.
London, Fisher & Jackson, 1828
Chamonix, Mont Blanc, etc.
- Barrow, John.** Tour on the Continent, by rail and road, in the summer of 1852. . . . 8vo, pp. lx, 126.
London, Longmans, 1853
No. 44 of 'The Traveller's Library,' bound in one vol. with Ferguson's 'Swiss Men.'

- Bayle, Abbé J.** Excursion aux glaciers du Mont-de-Lans par la Gorge de la Selle. 8vo, pp. 23. Grenoble, Drevet, 1875
- **Le massif des Grandes Rousses en Oisans.** 8vo, pp. 88. Grenoble, Drevet, 1880
- These two form portions of the Bibliothèque du touriste en Dauphiné, and are reprinted from 'Le Dauphiné.'
- Die Brieftasche aus den Alpen.** Dritte Lieferung. 8vo, pp. 103. Short poems and tales. St Gallen, Reutiner, 1783
- Presented by Mr. David Nutt.
- Curiosities of modern travel.** A Year-Book of Adventure. 8vo, pp. vii, 312; ill. London, Bogue, 1847
- Contains, inter alia, reprints of:—Speer's Ascent of the Wetterhorn, from the 'Athenæum,' [pp. 1055-6 of no. 940, Nov. 1, 1845]; of portions of Cheever's 'Pilgrim of the Jungfrau'; of the ascent of Snow Peak, from Fremont's 'Rocky Mountains'; and of portion of Tschudi's 'Peru.'
- [Devonshire, Georgiana, Duchess of].** Memorandums of the Face of the Country in Switzerland. 8vo, pp. 103. London, Printed by Cooper and Graham, 1799
- Notes on Geneva, Berne, Grindelwald glaciers, St Gotthard, Gemmi, etc.
- Donizetti, Gaetano.** Linda di Chamouni. An opera. Words and Music. [1841] The scene of the greater part is at Chamonix.
- Dujardin, Victor.** Voyages aux Pyrénées. Souvenirs du Midi par un homme du nord. Le Roussillon. 8vo, pp. 571; map. Céret, L. Lamiot, 1890
- Fenn, G. Manville.** In an alpine valley. 3 vols, 8vo. London, Hurst & Blackett, 1894
- A novel, with alpine scenery and climbing described.
- **The Crystal Hunters.** A Boy's Adventures in the Higher Alps. New edition. 8vo, pp. 415; ill. London, Partridge, 1897
- First edition, 1892. A tale of mountain-climbing, avalanches, and alpine adventures.
- Ferguson, R.** Swiss men and Swiss mountains. 8vo, pp. viii, 143. London, Longmans, 1853
- No. 45 of 'The Traveller's Library,' bound in one vol. with Barrow's 'Tour.'
- Fleming, Sir Sandford:** see Grant, Rev. G. M.
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This is printed from MS. in the Bibliothèque Mazarine, Paris.

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Kirchow u. v. Holtzendorff's Vorträge, N.F., 3. Ser., Heft 69.

Huson, T. Round about Snowdon. With Notes by J. J. Hissey. Folio, 30 plates. London, Seeley, 1894

This is no. 7 of 75 large paper copies.

Izzut-Oollah, Meer. Travels in Central Asia in the years 1812-13. Translated by Captain Henderson. 8vo. pp. 100.

Calcutta, Foreign Department Press, 1872

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Mandeville, Sir John. The Marvellous Adventures of Sir John Mandeville Kt. Being his Voyage and Travel which treateth of the Way to Jerusalem and of the Marvels of Ind with other Islands and Countries. Edited and profusely illustrated by Arthur Layard. . . . 8vo, pp. xxx, 414; ill.

Westminster, Constable, 1895

pp. 22-25;—'And there is another hill that is clept Athos, that is so high, that the shadow of him reacheth to Lemne, that is an Isle; and it is 76 Mile between. And above at the Top of the Hill is the Air so clear, that Men may find no wind there, and therefore may no beast live there; and so is the Air dry. And men say in these Countries, that Philosophers some time went upon these Hills, and held to their Noses a Sponge moisted with water, to have Air; for the Air above was so dry. And above, in the Dust and in the Powder of those Hills, they wrote Letters and Figures with their Fingers. And at the Years' End they came again, and found the same Letters and Figures that which they had written the Year before, without any default. And therefore it seemeth well, that these hills pass the Clouds and join to the pure Air.'

pp. 180-181;—'And there beside is another Hill that men call Ararat, but the Jews call it Taneez, where Noah's Ship rested, and yet is upon that Mountain. And the Mountain is well a 7 mile high. And

some Men say that they have seen and touched the Ship, and put their Fingers on the parts where the Fiend went out when that Noah said, "*Benedicite.*" But they that say such words, say their Will. For a man may not go up the Mountain, for great plenty of snow that is always on that Mountain, either Summer or Winter. So that no man may go up there. Nor never Man did, since the time of Noah, save a Monk that by the Grace of God, brought one of the Planks down, that yet is in the Minster at the foot of the Mountain. . . . But upon that Mountain to go up, this Monk had great Desire. And so upon a Day, he went up. And when he was upward of the 3rd Part of the Mountain he was so weary that he might no further, and so he rested him, and fell asleep. And when he awoke he found himself lying at the Foot of the Mountain. And then he prayed devoutly to God that he would vouchsafe to suffer him to go up. And an Angel came to him, and said that he should go up. And so he did. And since that Time never none. Wherefore Men should not believe such Words.'

Markham, Sir Clements R. A memoir on the Indian Surveys. 4to, pp. xxv, 303. London, Allen, etc., 1871

Contains the history of the early surveying of the Himalayas.

Marston, Annie W. The great closed land. A plea for Tibet. 8vo, pp. xx, 122; ill. London, Partridge [1894]

Short history of exploration, description of land and people.

Ollivier, Dr. Une voie gallo-romaine dans la Vallée de l'Ubaye et passage d'Annibal dans les Alpes. Etude historique. 8vo, pp. 56.

Digne, Giraud, 1869

d'Osmond, Comte. Dans la montagne. Le Tyrol autrichien. Le Salzkammergut, le Pongau, la Styrie, le Pâtre du Moser. 8vo, pp. iii, 237.

Paris, Lévy, 1878

Pyne, J. B. Lake Scenery of England. 4to, pp. 32; 25 tinted lithographs. London, Day & Son, n.d.

The views were also published in six parts, imp. folio, by Agnew, in Manchester, in 1853

The Recreation. A gift-book for young readers. Vols. 1 and 5.

Edinburgh, Menzies: London, 1841, 1845

Vol. 1 contains:—

Wylde, Ascent of Peak of Teneriffe.

Carne, Ascent of Faulhorn.

— Hospice of Gt. St. Bernard.

Taylor, Ascent of Peter Botte.

Vol. 2 contains:—

Fall of the Rosenberg.

A week among the glaciers [Dr. H. A. Grant's account of an ascent to the Grands Mulets, from 'American Journal of Science,' 1844].

Costello, Ascent of Puy de Dôme.

Richard. Guide du voyageur aux Pyrénées. Itinéraire pittoresque et artistique. . . . 5me édition, entièrement refondue. 12mo, pp. 712; maps.

Paris, Maison, 1853

This contains numerous extracts from writers on the Pyrenees: e.g.—

Corabœuf, Hauteurs dans les Pyrénées.

E. Vatel, Chasse au chamois.

A. Jubinal, Val de Jeret, from 'La France littéraire.'

C. Fleury, Gavarnie en 1837.

A. A., Bagnères de Bigorre.

A. de Franqueville, La Maladetta.

Ramond, Various extracts.

The first edition was published in 1836.

[Rowan, Archdeacon.] Gleanings after 'grand tour'-ists. 8vo, pp. viii, 415.

London, Bosworth: Dublin, Hodges, 1856

pp. 286-373; Chiavenna, Splügen, Righi. These first appeared in 'The New Monthly Magazine.'

Speer, S. T. Wetterhorn; *see* Curiosities of modern travel, 1847
Strange Tales of Peril and Adventure. 8vo, pp. 232; ill.

London, R.T.S., n.d.

Contains, inter alia:—

A climb to the highest point in Europe. [A compilation, reprinted from the 'Leisure Hour,' 21–28 July, 1853.]

The winter post across the St. Gothard.

Night upon the Alps, quoted from 'Scrambles among the Alps.'

Switzerland. Memorandums, 1799; *see* [Devonshire, Duchess of.]

Tani Buncho. Meisan Zuye, i.e. Handbook and guide of the principal mountains of Japan. 3 vols, 4to. Printed in Japan, 1804

Drawings of the mountains, with Japanese text.

Tournefort. A voyage into the Levant: . . . Adorn'd with an Accurate Map . . . not in the French Edition. 3 vols, 8vo; map, plates.

London, Midwinter, etc., 1741

Vol. 3, pp. 193–207, Journey to Mount Ararat, with plate opposite p. 177.

An ascent was made as far as the snow. The account given affords amusing reading.

Tyndall, John. Heat a mode of motion. 3rd edition. 8vo, pp. xxiii, 504; ill.

London, Longmans, 1868

pp. 177–189: glaciers and their formation.

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London, Richardson, etc.: Kendal, Pennington, 1799

— 11th edition. 8vo, pp. viii, 312; map, col. frontispiece.

Kendal, Pennington; London, Richardson, 1821

The first edition was published in 1778 anonymously by Richardson, London. The second edition, 1780, 'revised by X,' i.e. Mr. Cockin, gives the author's name in the preface.

The 'Addenda' to the guide consists of reprints of various descriptions of the Lake District, including, Thos Gray's Journal: A tour to the caves in the West Riding of Yorkshire (published separately by Pennington, in two editions): Mrs Radcliffe's description of the scenery in a ride over Skiddaw.

Sixteen views of the Lakes, by Smith and Emes, 'of a proper size to bind with the guide,' were published by Clarke, London, price one guinea. There are also advertised in the 1799 edition, 'Twenty views of the Lakes by Mr. Farington,' published by Byrne, London, price four pounds eight shillings.

Wilbraham, Captain Richard. Travels in the Trans-Caucasian Provinces of Russia . . . in the autumn and winter of 1837. 8vo, pp. xvii, 477; map, lithographs. London, Murray, 1839

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Wraxall, Sir Lascelles. Up in the Alps. 8vo, ill. 20 chapters in Beeton's Fact, fiction, history, and Adventure. London, Ward Lock [1870]

This is a reprint of Beeton's Boy's own volume of fact, N.S. vols. 1 and 2, 1862 and 1863.

The subjects treated are:—alpine climbers, the alpine region, the chamois, the l ammergeier, the ibex, the snow region, memorable ascents, etc.

Club Publications.

Appalachian Mountain Club. Register for 1904. 8vo, pp. 81. Boston, 1904
 Rules, excursions, members, etc.

Austrian Tourist Club. Section Wiener-Neustadt.

W. Eichert. Touristen-F hrer f r Wanderungen im Rosalien-Gebirge.

8vo, pp. 26; map. (1903

- Austrian Tourist Club. Section Wiener-Neustadt.**
 W. Eichert. Touristen-Führer für die Berggebiete von Fischau, der Neuen Welt und Hohen Wand. 2. Aufl. 8vo, pp. 50; map, ill. (1904)
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- **Section de Provence.** Bulletin. 8vo, pp. 55. 1904
 Club proceedings, excursions, members; and papers as follows:—
 E. Burnand, Le tour de la Grande Candelle.
 L. Nardin, Ascension de Font-Sancte.
 J. Bourgogne, Autour de l'alpinisme.
 Accident: Aig. de Sugitton.
- C.A.I.** Bollettino, vol. 36, no. 69. 8vo, plates. Torino, 1903
 The articles in this are:—
 G. Rey, Luigi Vaccarone.
 H. Hess e A. Ferrari, Mont Blanc du Tacul.
 F. Porro, Ghiacciai del G. Paradiso e del M. Bianco.
 G. B. e G. F. Gugliermi, Monte Bianco.
 F. Salmoiraghi, Monte Alpi di Latronico.
 R. Cajrati, Ascensioni nel Lake District.
 U. Valbusa, Il Gruppo del Monviso.
- Caucasus Club Circular II.** 8vo, pp. 5. Mai, 1904
 Contains:—Hints for a journey to Suanetia, by T. G. Longstaff.
- China, Tsingtau Bergverein (1899).** Satzungen. 8vo, pp. 9. 1900
 This new club is affiliated with the D. u. Oe. A.-V. 'Der Bergverein verfolgt den Zweck die Aufschliessung und den Besuch der an Naturschönheiten reichen gebirgigen Gegenden unseres Gebietes nach Möglichkeit zu fördern und zu erleichtern.'
- D. u. Oe. A.-V. Kalender für das Jahr 1904.** 17. Jahrgang. 8vo. München, Lindauer, 1904
- **Berlin.** Zwanglose Vereinigung von Hochtouristen der Section.
 Zur Erinnerung an das zehnjährige Bestehen. 4to, pp. 92.
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 Papers, articles and ascents by members.
- **Freiburg,** see Wagner, H., under 'New Books.'
- **Hannover.** 19. Jahresbericht. 8vo, pp. 20; ill. 1903
- **Warnsdorf.** Bericht. 8vo, pp. 20. 1904
- France.** Société de Géographie, Paris. La Géographie. Bulletin de la Société. Tome viii. 8vo, ill. Juillet-Décembre, 1903
 pp. 357-376, ill.: J. Brunhes et L. Gobet, L'excursion glaciaire—du Danube jusqu'à l'Adige—du IXe Congr. géol. intern., synthèse d. recherches et d. idées de M. A. Penck.
- Hungary.** Jahrbuch d. ungarischen Karpatenvereines, 31. 8vo, ill. Iglo, 1904
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 J. R. Hajnóci, Erzgebirg.
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 S. Beck, Taträreisen vor 25-30 Jahren.
 E. Barcza, In d. Siebenburgischen Karpaten.
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 'The objects of the Association are: To aid in making Mt. Whitney and the adjacent mountain region better known . . . to stimulate a love for our mountains and their majestic scenery. The members of the club consist of those who have made the ascent of Mt. Whitney.' The reason for so defining the qualification is:—'The top of Mt. Whitney being the highest point in the range, and so situated that none may attain it without at least an introduction to the countless charms of the Sierras.'

Norwegian Tourist Club. Aarvog for 1904. 8vo, 264; ill. 1904

Contents:—

- D. Grønvold, Ældre engelske reiser i Norge.
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 K. Tandberg, Manden og Kjerringa paa Maradalsryggen.
 J. N. Hertzberg, Høifjeldssygen.
 C. Kaurin, Paa Kongsvold.
 H. Raeburn, Nye bestigninger i Søndmere.
 P. Kars, Husdyrene tilfjells.
 O. Olafsen, Torbjørg Utne.
 P. A. Oyen, Bræforandringer i Jotunheimen.
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 — pp. 92–97; with views of Lhasa: G. G. Tsybikoff, Journey to Lhasa.
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 March, pp. 361–366; with view, by H. H. Hayden, of Nepalese Himalayas
 with Mt. Everest: D. W. Freshfield, Notes from Tibet.
 June, pp. 705–722; map, ill.: O. T. Crosby, Turkestan and a corner of
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S.A.C. Jahrbuch, 39. 8vo, plates. 1904

Among the articles are the following:—

- H. Dietler, Alpen von Cogne.
 L. W. Collet, L'aiguille du Chardonnet.
 A. Hürner, Berge des Nicolaitales.
 G. Euringer, Hochtouren in den Dolomiten vor 20 Jahren.
 E. Bähler, Calvin in Aosta.
 A. Wäber, Fremdenverkehr im engeren Berner Oberland.
 J. Königsberger, Das Strahlen u. die Strahler.
 A. Wäber, Erste Uebergang u. den Allalinpäss.
 H. Dübi, Die Früheste Wetterhornbesteigungen.

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— **Chaux-de-Fonds.** Bulletin annuel, no. 12. 8vo, pp. 128; plates. 1904
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- A. Bingguely, Souvenirs du Dauphiné.
 T. Payot, L'Aiguille Verte.
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S. A. C. Sektion Rhätia. Geschichte der Sektion Rhätia. 1864–1904. Zum
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 8vo, pp. 98; plates. Chur, Braun, 1904

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Speleology. Circolo Speleologico, Udine. Mondo sotterraneo. Rivista
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Luglio, 1904

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Abraham, Winifred E. A woman's ascent of the Wetterhorn. 8vo, pp. 386–
 393; ill. In the Woman at Home, London. August, 1904
 Ascent in 1903.

Andes. Across the Andes from Buenos Ayres to the Pacific. Obl. 4to, plates.
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Fine plates of scenery in the Andes.

— Across the Chilian Andes. 8vo, pp. 284–288. In Chambers' Journal,
 6th Ser. part 77. May 2, 1904.

Presented by the Publishers.

Baker, E. A. Cave-exploring: a fascinating new summer sport. 8vo,
 pp. 41–47; ill. In The World's Work and Play, vol. 4, no. 19; London.
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- A paper on the sport and on the antiquarian results of cave-hunting. Well illustrated, with interior views of English caves.
- Baker, E. A.** Rock-climbing in Great Britain. 8vo, pp. 149-159; ill. In *World's Work and Play*, vol. 4, no. 20; Heinemann, London. July, 1904. 1/
- A well illustrated article.
- Becke, F.** Ueber Eis und Schnee. Vorträge d. Ver. z. Verbr. naturw. Kenntnisse in Wien, xl. 12. 8vo, pp. 13. Wien, Holzhausen, 1900 M. o. 50
- [**Bryce, James, and Paul, Herbert.**] Leslie Stephen and his works. 8vo, pp. 468-498. In the *Quarterly Review*, No. 898. April, 1904. 6/
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- Gerard, Lt. A.** Narrative of a journey from Soobathoo to Shipke, in Chinese Tartary, in 1818. 8vo, pp. 263-291. In *Journ. Asiat. Soc. Bengal*, N.S. 41. 1842
- Grueber**; see Tronnier, R.
- Herbert, Capt. J. D.** Report on the Mineralogical Survey of the Himalaya Mountains lying between the Rivers Sutlej and Kalee. 8vo, pp. clxiii. *Journ. Asiat. Soc. Bengal*, Extra Number, supplement to no. 126. 1842
- Hess, A. e Ferrari, Agostino.** Il Mont Blanc du Tacul. 8vo, pp. 646; ill. Reprinted from *Boll. C.A.I.* 1903
- Presented by Dr Ferrari.
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- An advertisement of the Viège-Zermatt Railway.
- Hutton, Lt. Thos.** Journal of a trip to the Burenda Pass in 1836. 8vo, pp. 901-937. In *Journ. Asiat. Soc. Bengal*, no. 71. Nov. 1837
- Imfeld, X.** Topographische und geologische Reliefs. 8vo, pp. 15; plates. [Zürich, 1904]
- A catalogue of reliefs of:—Pilatus, Rigi, Vierwaldstätter-See, Central-schweiz, Jungfraugruppe, Berner Oberland, Zermatter Alpen, Matterhorn, Mont Blanc: with prices and photographs.
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- This work by M. Lugéon, Professor of Geology at the University of Lausanne, propounds a new theory on the formation of the Alps.
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- The original sketches made for illustrating Sir Martin Conway's book, q.v.
- [**McGregor, A. B.**] Ascent of Mont Blanc. 8vo, pp. 521-525; 529-534; ill. In 'Good Words,' London, vol. 1. August, 1860
- The ascent was in August 1859. The account is reprinted in a contracted form in 'Half hours in many lands,' Isbister [1881], which volume was reprinted by Nisbet, n.d.
- Pollock, Sir Frederick, Bt.** Leslie Stephen. 8vo, pp. 48-60. In the *Independent Review*, London, vol. 3, no. 9. June, 1904. 2/6
- 'There was a fine and rare quality in the modesty of such a master of the art (of mountaineering). It may well be that the pure gymnastics of rock-climbing have been carried farther by our recent amateurs, though Stephen, with his long reach and agile figure, was well built

for it . . . Stephen was akin to the guides in a faculty less common than climbing power, and exerciseable in almost any kind of country—the general sense of how things lie, which in action becomes a trained instinct of hitting on the right direction. . . . One is tempted to think that Stephen found an outlet in Alpine enthusiasm for the transcendental or mystical emotions which other men expend, according to their character and surroundings, on religion, speculation, and art, or devoted human affection, and that, for this reason, he was the better able to dispense with any such element in his philosophy.'

- Ray, C.** An English lady's dash for Lhasa. 8vo, pp. 426-431. In *The Sunday Mag.* London, Isbister. June, 1904
A short account of Miss Annie Taylor's attempt to penetrate from Tanchan in China to Lhasa in 1892. The account is illustrated with photographs of Lhasa and of the authoress. Miss Taylor's travels are fully described in 'The Origin of the Tibetan Pioneer Mission.'
- Taylor, Susette M.** The only Englishwoman in Tibet. 8vo, pp. 390-401. In *the Wide World Magazine*, Newnes, London, no. 76, vol. 13. July, 1904
- Tibet.** A visit to the infant Grand Lama a hundred years ago. 8vo, pp. 510-513; ill. In *Good Words*, Isbister, London. July, 1904
Short account of Captain Turner's visit.
- Trachsel, P.** Guide des Hôtels et Pensions de montagne en Suisse et Haute-Savoie. 8vo, pp. 20. Genève [1904]
Adventures.
- Tronnier, R.** Die Durchquerung Tibets seitens der Jesuiten Johannes Grueber und Albert de Dorville im Jahr 1661. 8vo, pp. 328-361; map. In *Zeits. d. Ges. f. Erdk.* Berlin, 1904, no. 5. Juni, 1904
Grueber and de Dorville travelled from Peking to Lhasa and thence to Agra, taking about four months on the journey. The sources of information on the journey are scant. They are:—Five letters of Grueber's which appear, with notes, scattered in
Der neue Welt-Bott, Auspurg u. Graetz, 1726, no. 34
Thévenot, *Divers Voyages* (certain editions only)
A. Kircher, *China illustrata*, 1667
An account based on these was printed in *Astley's Collection of Voyages*, 1745-7, and this was reprinted in *Sir Clement Markham's Narrative of the mission of Bogle*, 1876.
- Weston, Rev. Walter.** The ascent of Kaigane San. A story of mountaineering in Japan. 8vo, pp. 669-680. In *the Leisure Hour*, London. June, 1904
A peak of 10,337 ft. which afforded a good deal of rock-climbing.
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Ascents in the Himalayas in 1903.
- Young, G. W.** Modern climbing: a protest. 8vo, pp. 443-447. In *the Independent Review*, Unwin, London, vol. 3, no. 11. August, 1904. 2/6
A protest against the vulgarisation of mountaineering.

Item.

- Post-Cards.** 20 views in *The Reichenspitzgruppe*. Gratis im Interesse de Touristenverkehrs. Niedergrund, A. Richter, 1904

ALPINE NOTES.

'THE ALPINE GUIDE.'—Copies of Vol. I. of the new edition of this work, price 12s. net, and of 'Hints and Notes, Practical and Scientific, for Travellers in the Alps' (being a new edition of the General Introduction), price 3s., can be obtained from all booksellers, or from Messrs. Stanford, Charing Cross.

THE LIBRARY CATALOGUE is now printed, and may be obtained, bound in cloth, on application to the Assistant Secretary, 23 Savile Row. Price 3s.; postage, 4d.

THE ALPINE CLUB OBITUARY, 1904.—R. K. Parr (1902).

ERRATUM.—In 'A. J.,' vol. xxii. No. 164, May 1904, p. 161, line 88, the name should be Miss Grace Filder.

ENGLISH CHURCH AT BERN.—It is proposed to build an English church at Bern on a site in the Kirchenfeld quarter kindly offered by the Bern Land Company. To build a church (in stone) of adequate size will cost, it is estimated, 1,000*l.* Half of this sum is already promised—several public bodies in Bern have generously offered to contribute ten thousand francs (400*l.*)—and an appeal is made to English people to contribute the rest. The appeal is warmly supported by the British Minister at Bern, Sir Conyngham Greene. The Hon. Sec. of the fund is Rev. H. McDonald, Muristrasse 53, Bern, Switzerland.

THE TRIOLET CABANE.—We learn from the 'Rivista Mensile del C. A. I.' for July 1904, p. 245, that the Courmayeur guides have built a bridge across the Val Ferret torrent to facilitate the approach to the Triolet glen.

REFUGE INNS.—In the same number, pp. 240–4, will be found the tariff for provisions at the Rifugio Albergo Vittorio Emanuele II, on the Grand Paradis, the Torino, just below the Col du Géant, the Bartolomeo Gastaldi, at the Crot del Ciaussiné, at the head of the Valle d'Ala, as well as that of the Capanna Cedeh, in the valley of the same name in the Ortler-Cevedale group.

ALPINE CONGRESSES.—The 35th Congress of the Italian Alpine Club, under the management of the Turin Section, will be held from August 31 to September 5. A full programme will be found in the 'Rivista Mensile' for June. The French Alpine Club will hold its Congress from September 4 to 10. It will be organised by the Lons-le-Saunier Section. The Congressists will meet at Salins.

A TOUR IN THE PYRENEES IN 1903.—A camping expedition was carried out last August by Mr. Louis J. Steele, A.C., in the Pyrenees, with the object of following the highest portion of the range from W. to E. through the province of Aragon. Provisions and the necessary camping equipment were carried on the back of one mule, and Mr. Steele was accompanied by a friend and two Caunterets guides. A start was made from Caunterets, and the frontier into Spain was crossed at the Port de Marcadan for a

descent to Panticosa, thence to the Cirque de Tendenère, where the Col de Tendenère was crossed by the mule with considerable difficulty. A descent was then made to Boncharo, with a view to exploring the beautiful valley of Arrazas, where two camps were made, the last being made at the head of the valley for the purpose of making the ascent of Mont Perdu.

From Mont Perdu a descent was made to Gavarnie *via* the Brèche de Roland, for the ascent of the Vignemale. (As the Col d'Arrazas was found to be impassable by a mule the one accompanying this expedition had to be sent round by the lower valleys to join it at Bielsa.) From Gavarnie Bielsa was reached *via* the Col d'Allanz and Port de Pinède. From Bielsa the journey was continued to the village of Saravilla for the ascent of the 'Cotiella,' thence *via* the village of El Plan to the Col de San Juan. A descent was made from this point to Vénasque, and a camp made at the Rencluse for the ascent of the Néthou (Maladetta). At the end of August a successful journey was ended at Luchon *via* the Port de Vénasque.

Difficulty was experienced at times in obtaining provisions on the Spanish side. Fruit, milk, and butter and other luxuries were almost unobtainable.

The two Caunterets guides were found to be moderately good climbers, with a fairly good knowledge of the range, but those intending to spend a season in this region are recommended to engage their guides at Gavarnie.

Owing to the great relative height of the passes in the Higher Pyrenees some difficulty will be experienced in mapping out an extensive journey where mules form part of the equipment.

THE PASS BETWEEN THE SCHWARZHORN AND THE CHERBADUNG.—This pass, which lies at the S. foot of the Schwarzhorn, between that peak and the nameless point 3,108 m., at a height of just about 3,000 m., seems never to have been crossed as a separate expedition, and is not referred to at all in the 'Lepontine Climbers' Guide.' It is, however, worth mention, partly as being, if the right way is taken, an extremely easy, though high, pass between Binn and Devero, and also because it would seem to be the point to make for, from both Italian and Swiss sides, for any one desirous of making the easiest and quickest way up the Cherbadung, reached from it in about an hour by the simple N. arête. It was visited in 1894 from the Italian side by Signor R. Gerla and party.* They then climbed the Schwarzhorn, but, ignorant of the simple route down, got into a good deal of trouble on the Swiss side. The proper way is to go due W., avoiding the small glacier which descends between the Schwarzhorn and the Fleschenhorn, and passing down a curious sort of half-couloir, half-corridor to the S. of the latter peak. By this means the snowslopes are reached which descend between the Fleschenhorn and the Wannernhorn (just below the col called in the 'Lepontine Guide' 'Halbelfjoch,' but

* *Bollettino del C. A. I.*, 1894, p. 415.

which is more likely to be recognised in the district by the name of Wannenjoch); and keeping at first well to the left a party will be able to get down easily to the head of the Fleschen glen somewhere near the point 2,180 m. of the Swiss map in an hour or less from the nameless col for which the title Schwarzhorn Pass might perhaps be accepted.

GEORGE BROKE.

WILD FLOWERS IN SPITSBERGEN.—In 'The Garden' for August 13, 1904, p. 113, will be found a very interesting letter by Mr. A. Kingsmill on Wild Flowers in Spitsbergen. We extract from it one sentence: 'At half a mile from the shore the land was like a moor when the heather is in full bloom, and on landing we found that the colour was given by acres of plants of *Saxifraga oppositifolia*, each plant being a solid mass of bloom.'

THE EIGERHÖRNLI.—In accordance with the Rev. H. J. Heard Mr. G. Hasler sends the following statement about the Eigerhörnli. The first ascent of point 2,706 m., which consists of two summits quite close to each other, was made by Mr. Heard ('A. J.' vol. xx. p. 267). It is furthermore stated by Mr. Wills, who, with his brother, climbed the 'Eigerhörnli' the day after Sir H. Seymour King, that he did not ascend the easternmost point, but point 3,069 m., and not, as Mr. Heard points out on p. 161, point 2,929 m., of which Mr. Hasler made the first ascent in September 1903 ('A. J.' vol. xxi. p. 561). The statement in the November number of the 'Alpine Journal' should be altered accordingly.

TOFANA DI ROCES (3,215 m. = 10,550 ft.) BY THE S.E. FACE.—We have received communications on this subject from Mr. G. L. Stewart, the writer of the note in 'A. J.' vol. xxi. pp. 428 and 429, and from Mr. Arthur S. Megaw. It would appear that the first ascent was made by the daughters of Baron Roland Eötvös on August 9, 1901, the second by Mr. Heldmann a little later, and the third by Mr. T. L. Heath at the end of September in the same year (1901). On the second and third ascents Antonio Dimai, of Cortina, and Agostino Verzi, of the same place, who had guided the ladies on the first occasion, accompanied the travellers. Mr. G. L. Stewart's was probably the fourth ascent, though the first on which local guides were not taken.

MOUNT MCKINLEY (20,300 ft.).—We learn from an article in the 'Bulletin of the American Geographical Society,' vol. xxxvi. No. 6, 1904, by Mr. Frederick A. Cook, that his party attained a height of 11,400 ft. upon this mountain, the highest in North America. The difficulties of the enterprise were very great, as will be seen by the quotations which we give below. We heartily congratulate Mr. Cook and his companions on their very plucky expedition.

The party landed at Tyonek, on the north shore of Cook Inlet, on June 23, 1903, and were then confronted with the hard task of transporting supplies and walking to the great mountain.

'We chose as the most promising slope for the first ascent the western side. To reach this side it was necessary to march nearly 500 miles over swamps and tundra, through glacial streams and dense forests. With our outfit packed on fourteen horses we

started for our long, weary tramp from Cook Inlet lake in June. For the first thirty days we had an almost continuous series of cold rains, and during this time the horses and men were tortured by mosquitoes. After we crossed the range, however, the mosquitoes disappeared, the weather improved, and game was everywhere abundant. Here, along the northern slope of the McKinley group, we crossed the best game country in America. Caribou, moose, mountain sheep, and grizzly bears were constantly in evidence. With an abundant supply of fresh meat for ourselves and good grass for the horses we here made rapid progress. On August 14, after forty-nine days of difficult marching, we pitched a base camp fourteen miles north-west of the summit of the great mountain.'

On their first attempt the party were much troubled by bad weather; on the second they met with insurmountable difficulties.

'The second attempt was made over the surface of Peters Glacier; making a base camp at 5,000 ft. near the north-east ridge, we then packed our supplies back to the south-west ridge to an altitude of 8,000 ft. We only ascended a few hundred feet before it became necessary to cut steps. The task of making steps was particularly difficult, because it was necessary to remove 14 inches of snow before reliable ice was reached. Steps were thus cut for 8,000 ft., and floor space was cut for our tent at night, to keep from sliding into the dark depths below; but then we were faced by an arête, with a nearly vertical granite wall, which loomed up 4,000 ft. Here was an obstacle absolutely insurmountable. Though we were in splendid physical training, with an abundance of food in our sacks, we were forced to descend, because there was no other possible route from this side, and our previous reconnaissance had convinced us that the line of attack which we had pursued was the only route from the west.

'The winter was advancing too rapidly now to think of making a formidable attack from the north or east, but we desired to swing around the range and return along the eastern slope. We crossed about fifty miles north-west, marched for 100 miles over uncharted country, examined Mount McKinley from the east, left our horses, and then rafted down the Chulitna and Sushitna Rivers, getting back to Cook Inlet on September 26, three months after our start.'

Mr. Cook's final remarks will awaken keen interest in those who are looking for new mountaineering difficulties to conquer. If the Alps are, or perhaps we should say were, *severè*, Mount McKinley is certainly *sevisissimus*.

'Mount McKinley offers a unique challenge to mountaineers, but its ascent will prove a tremendous task. It is the loftiest mountain in North America, the steepest mountain in the world, and the most frigid of all great mountains. Its slopes are weighted down with all the snow and ice that can possibly find a resting-place, but, unlike Mount St. Elias, the glaciation is not such as to offer a route over continuous ice. Every conceivable way is interrupted by overhanging glaciers of granite cliffs. The area of this mountain is far inland, in the heart of a most difficult and trackless country,

making the transportation of men and supplies a very arduous task. The thick underbrush, the endless marshes, and the myriads of vicious mosquitoes bring to the traveller the troubles of the tropics; the necessity of fording and swimming icy streams, the almost perpetual cold rains, the camps in high altitudes on glaciers, in snows and violent storms, bring to the traveller all of the discomforts of the Arctic explorer; the very difficult slopes, combined with high altitude effects, add the troubles of the worst Alpine climbs. The prospective conqueror of America's culminating peak will be amply rewarded, but he must be prepared to withstand the tortures of the torrids, the discomforts of the North Pole seeker, combined with the hardships of the Matterhorn ascents multiplied many times.'

MURRAY'S 'HANDBOOK FOR SWITZERLAND AND THE ADJACENT REGIONS OF THE ALPS.'—We have received, 'the 19th edition, completely remodelled and thoroughly revised,' of this deservedly well known work.

CORRESPONDENCE.

The Franz Joseph Glacier.

Greymouth, N.Z. : March 9, 1904.

The Editor, 'Alpine Journal.'

DEAR SIR,—At the meeting of the Club (about two years ago) at which I read a paper on the N. Z. Alps Mr. Woolley and others questioned me somewhat closely as to the measurements of the Franz Josef glacier, which, as published in my book, showed a phenomenal daily rate of motion.

I then stated that my figures were the results of compass observation, and were only recorded as approximate, but that they were as likely to be under as over the mark, and further I gave good reasons for expecting a phenomenal movement.

In my chapter on glacier motion I only gave the records of two lines, because when writing my MS. I had not at hand the figures of a third line which I had laid.

In January last Mr. Gregory, Professor of Geology at Melbourne (who accompanied Sir W. Conway on his Spitsbergen journey), visited the Franz Josef Glacier, and had amongst his party a surveyor, who took some careful measurements as to retreat, &c. They only had time, however, to place one line for testing the rate of forward motion, and curiously enough they did this from the cairn I had erected for my third line (the unpublished one).

Professor Gregory was kind enough to give me his figures for this observation, and on comparing them with my old notes I was pleased to find that they are practically identical with my own. I look upon this as corroboration of my results as to this third line,

and therefore feel more confident about the figures for the two lines published in my book.

I consider that the movement of this glacier is of more than usual interest, and any facts which go towards establishing published observations should be noted.

I trust that you will find room for this letter in your next issue, and that this (in my opinion) corroboration of my measurements will help to satisfy any doubts which may exist as to the correctness of the same.

Yours faithfully,

ARTHUR P. HARPER.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall, 28 Savile Row, on Tuesday evening, May 8, 1904, Sir Martin Conway, *President*, in the chair.

Mr. E. A. BROOME read a paper on 'The Rothhorn Ridge,' which was illustrated by lantern-slides.

Mr. ELLIS CARR had no recollection of the statement attributed to him by Mr. Broome about a stuffed climber in a museum at Zermatt; but, judging by the account which they had heard of a lunch consumed by Mr. Broome's party, it seemed as if stuffed climbers might be occasionally found on the neighbouring mountains as well.

The PRESIDENT remarked that one feature of modern mountaineering appeared to be the development of *Grat-Wanderungen*. Recently he had had to look through a very large mass of literature connected with the Pennines, and he was struck by the fact that there appeared to be a distinct school of mountain-ridge wanderers—men who carried 30 lbs. to 40 lbs. weight of food, and moved slowly along, sleeping wherever they happened to be. He thought that there was a great future for that kind of climbing; there were so many ridges out of which new combinations could continually be made. Perhaps for enjoyment Mr. Broome's method of making acquaintance with them bit by bit and sleeping comfortably in between was the best.

A hearty vote of thanks was accorded to Mr. Broome for his paper.

A GENERAL MEETING of the Club was held in the Hall on the evening of Tuesday, June 7, at 8.30, Sir Martin Conway, *President*, in the chair.

Mr. L. K. Meryon was balloted for and elected a member of the Club.

The PRESIDENT referred to the death of Mr. R. K. Parr, who was elected in 1902, and announced that Dr. Dubi, editor of the *Jahrbuch des S.A.C.* had been elected an honorary member by the Committee.

Mr. E. FOA read a paper on 'A Tour in the Silvrettas,' which was illustrated by lantern-slides.

Mr. LEAF said that the Litzner gave some good climbing over smooth slabs of rock, with one or two long reaches and curious cracks, and was quite worth going up even by the ordinary route, but the proper way to treat the mountain was to traverse it. The whole district was interesting. The Silvretta Glacier was typical. Its character could be judged from the fact that it is good for tobogganing over in winter.

Mr. GOVER said the central peak of the Fluchthorn was a stiff climb, the south peak was easy; the peaks in the district were not of any great height, but wonderful views were to be obtained from many of them, and the passes were very beautiful. At first one was prejudiced against the red marks on the paths to the huts, painted by the German and Austrian Alpine Club, but when one went without guides and was caught in a fog, one's views were apt to change considerably. Those who found crowded centres trying would do well to visit this district. The building of huts was perhaps being overdone. The Scesaplana had an hotel on the W., a Douglas hut on the E., and a Scesaplana hut on the S., and another hut had been talked of on the N. The district would hardly tempt younger members from the more interesting peaks round Zermatt, but for older climbers it was ideal; the huts were comfortable, and the climbs short.

A hearty vote of thanks to Mr. Foa for his paper brought the meeting to a close.

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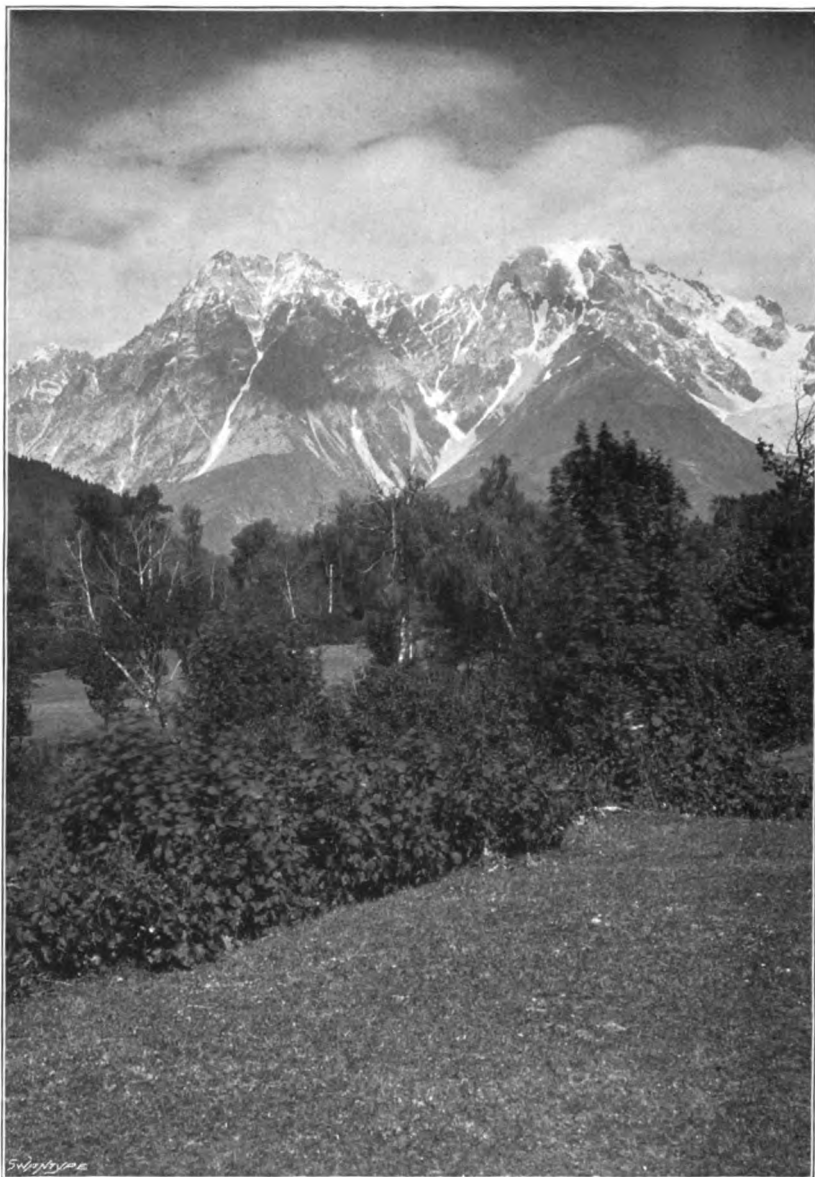


Photo. by W. R. Rickmers.

Swan Electric Engraving Co.

MAZERI TAU AND USHBA FROM BAL RIDGE.

THE
ALPINE JOURNAL.

NOVEMBER 1904.

(No. 166.)

PERSONALLY CONDUCTED: SUANETIA IN 1903.

BY W. RICKMER RICKMERS.

PART I.

EARLY in the spring of last year I had a circular printed which I sent to a number of friends whom I knew to have 'high' ambitions. Thus it came about that the type which generally graces the pages of the 'Radolfzell Daily Intelligencer' was the first cause and instrument of the Great Invasion. The leaflet contained a request for 50*l.* in cash, and by the month of June this simple confidence trick had placed in my possession the sum of 600*l.*—contributed by one lady and eleven gentlemen, including myself. This was an astonishing and substantial result for a publication which cost 25*s.* to produce and had a *bona fide* edition of fifty. The number of dupes being so great, I had no alternative but to make a pretext of fulfilling certain vague and alluring promises which I had made in the eventful print. This is what I had said and offered: 'For 50*l.* per head I shall take the mountaineer on a six weeks' excursion, beginning at Vienna on July 1, and returning there in the middle of August.' Between the start and the finish I undertook to defray all the expenses out of the sum named, and I guaranteed one pass, one attempt, one first ascent, and Elbruz. Every member of the party was to be decently fed, but I warned them that after Tsageri they would have to walk most of the time, although a fairly liberal supply of porters figured in the estimates. It was, of course, a foregone conclusion that only guideless climbers could attain success in the Caucasus for so moderate a sum, and that, next to calculation and knowledge of the country, much, very much, depended upon the hearty co-operation of all. This means

that when I, the self-constituted general staff of the expedition, laid my plans, and drew up the scheme of organisation, I placed great value upon the intelligence, experience, and energy of the units under my command. To cover the same ground (even quite apart from the climbs!) with ordinary tourists would cost more than twice as much, not reckoning the greater worry and responsibility of the leader.

I may say at once that my programme, financial and otherwise, came off beautifully. So much is sure, that the 600*l.* lasted seven weeks instead of six, and that the 'bag' was enormous. Our party was responsible for about thirty peaks and passes, half of which were new. Nor were the results bought at the cost of great privations, excepting those voluntarily undergone during a climb, and, as everybody knows, these privations are everywhere the same for the guideless mountaineer, whether he starts from a Tartar kosh or from the luxuries of a Swiss hotel, being chiefly caused by the impossibility of carrying more than a narrowly calculated supply of food. We travelled second-class on the railway, first on board the Black Sea steamers, drank beer or wine where it was to be had, drove in carriages and rode on horseback more often than any one had dared to hope, lived in good tents and many of them, never lacked porters, which is a great blessing, and possessed a greater store of tinned delicacies than we could eat.

I believe I am speaking in the name of all when I say that the expedition was a very great success, and I can say so all the more as I do not attribute to myself the lion's share of credit for this splendid result. To succeed careful organisation is undoubtedly necessary, but other factors must contribute to ensure the realisation of the three degrees—to succeed, to succeed well, and to succeed very well. The first is based on caution, work, and absence of ill-luck; the second requires the existence of willing collaborators, and the third is dependent upon the benevolence of fate—on luck. And lucky we were! Fate favoured us by threefold utterance, by what is known as the three W's—Woman, Weather, and Wine. The first is she, Fräulein von Ficker, our kind-hearted sister of the mountains, who did so much to preserve a peaceful harmony among eleven men let loose upon the Caucasus. None of us will ever forget her; the face and voice of the Ushba girl must always remain closely interwoven with our recollections of that memorable journey. Wine, need I accentuate? stands for Caucasian hospitality, large, wide, unlimited; and what the second of our idols means to the mountaineer defies all

conception. It is the golden calf round which we climbers dance, and if it favours us we become very active, then enterprising and full of tireless energy, and then, if it smiles long enough, reckless, so that this fair goddess has smiled to death many a valiant knight, blinded by too much sunny favour. Happily remorse following in the track of downright luck was spared us, and twenty-five rainless days have done very much towards creating what may be called without exaggeration a record in the history of Caucasian climbing.

Travelling ahead of the party I spent two days in Odessa, in order to give a last touch to the preparations I had ordered by letter. I found that twelve first-class berths to Batum had been duly reserved, and that Herr Fischer had packed all the provisions very neatly in cases of the proper weight and shape. They were calculated to go two on a horse, and contained a selection of tinned meat, preserved fish, plum and apricot jam, chocolate, sugar, tea, tobacco, and the rest. The Russian agent of the firm of Berr & Co. had excelled himself, and we subsequently found very little, if anything, that could have been bettered in his arrangements.

On the morning of July 1, awaiting the train from Vienna, I got my first glimpse of the party in full strength as it emerged from the sombre depths of a Russian railway carriage. They seemed quite jolly; only poor Platz, who had undertaken to pilot them through the customs at Volochisk, wore a weary look. The little army consisted of Fräulein von Ficker and her brother, J. H. Wigner, F. Reichert, A. Weber, E. Platz, H. Wagner, O. Schuster, F. Scheck, A. Schulze, R. Helbling, and myself, the subjects of four countries and representatives of two languages, not counting the idioms, whereof there were many. German in a number of varieties resounded through the large hall of the Russian bath, where we went to scald off the dust of the journey. Of the steamer trip, as beautiful as ever, no more need be said than that we had a fine time all along, which we took as a good omen for the future. In Batum we left behind our town clothes, and the attention which we had so far received from young and old was now turned into a sensation. On the platform at Rion, where we had to stand half an hour waiting for the train to Kutais, a huge crowd almost suffocated us in their eagerness to inspect in detail our ice-axes and our hob nailed boots, the latter always an object of admiration in a country where people wear gloves on their feet.

Arriving in Kutais at 2 P.M. we waited twelve hours for the conveyances which had been ordered for the evening, but of

course did not turn up. This was one of the longest delays we experienced throughout the journey, which came off almost exactly as planned in the programme. Owing to the state of the road I was unable to obtain horse carts to take the impedimenta to Orbeli, and accordingly two arbas drawn by buffaloes undertook to carry a ton and a half from Kutais to Orbeli for the modest sum of fifty roubles. Our bones we had to entrust to the tender mercies of two lineikas, or knife-board cars, which hold six persons under the roof, being three on each side of the long seat, the faithful Makandaroff, our interpreter, and Victor, the cook, finding room on the box. These cunning instruments of torture were to fetch us at eight in the evening, but it was three o'clock in the morning before they presented themselves at the door of the *Hôtel de France*, ready to face forty miles of road. Having to wait so long, most of our party, not knowing how long a sleep would last if once begun, had undertaken to sample the wine of the country, with the consequence that at the start the sultriness of the atmosphere without was supplemented by a certain stuffiness under the frontal bone. The day had seen the thermometer at ninety, and night did not bring relief, so that some of us felt very uncomfortable when the ramshackle lineikas rumbled over the cobble-stone pavement of Kutais in the very small hours of the morning. The first interesting thing we met was our arbas, which had 'preceded' us by six hours, and which meanwhile had been able to gain a lead of about 500 yds., being laid up by some mysterious cause near a drink shop on the outskirts of the city. We contented ourselves by shouting and threatening, and drove on, all intent upon snatching forty winks in the arms of a shaky and irritable Morpheus, who lured us into deep unconsciousness with the intention of letting the sleeper fall head foremost on the road, but, with neatly calculated jocularly, awoke him just when on the extremest point of losing his equilibrium. Later on a welcome refreshment offered itself in the shape of a small stream which flowed across the road. We followed it into the forest whence it emerged, and there, under a cool vault of foliage, we discovered a limpid pool with a waterfall, where a timely shower bath averted heat apoplexy. Luckily enough a similar opportunity came about every ten miles, and the cold water was to us the first gift of welcome by the mountains.

Though we had despaired of reaching Orbeli the same day, we found as we proceeded that the three horses before each carriage were quite up to the task of covering the distance

surely, if slowly. At seven we arrived in Orbeli, where my friends made their first acquaintance with the hospitable interior of a cancellaria and its permanent inhabitants. We were obliged to wait for the arbas, and I found it hard work to calm the impatience of my companions, who, seeing the fine weather and feeling the nearness of the mountains, were loth to lose a single hour, much less a day. But I preferred to see the heavy baggage safe on the horses' backs and on its way across the Latpari before leading my men through the Laila forests. Towards evening, however, the general verdict was unanimous to the effect that the day in Orbeli was well spent and a godsend in disguise. The charms of the Orbeli ladies were responsible for working such a miracle. That particular day happened to be a Sunday, and a glorious day of joy and sunshine it was! Wending our way towards the ruined castle which towers above the maize fields and the vines, we found ourselves in front of the wooden church, where service was just over. We found the congregation assembled on the lawn, and the priest, perceiving that we were armed with cameras, arranged his flock in a wide picturesque semicircle, the men on one side and the women on the other. Now I have travelled in many countries. I have seen the Georgian women of the plains, the dark-eyed beauty of whom Mirza Shaffy sings, but never before have I seen so much natural charm collected in one place, always excepting an English ball-room.

The girls of Orbeli captivated us all, and the fact that they had washed and wore clean clothes—it being Sunday—made them all the more tempting. I am perfectly serious: they were a pretty and healthy-looking lot, with an astonishingly high percentage of beautiful and interesting faces among them, quite a contrast to the pale Georgians of the lowlands or the careworn females of Suanetia, stern and wild. I strongly advise every traveller to spend a Sunday in Orbeli, and to seek the picturesque height on which church and castle stand. There, before us, on the green sward, with the wooden pillars of the chapel as a background, stood 200 good-looking girls, laughing and chatting, and kept in order by their venerable priest, whom we envied. Towards our right the ruins of a Byzantine nave slumbered in the shade of a giant lime tree. Past the gaunt grey tower of the stronghold of the Orbeli barons our eye swept the hill-sides, yellow with the ripening corn, between the fuzzy green network of vines and hedges. It seemed to us a happy land that lay there in the warm sunshine, and happy seemed the

people, and we felt no wish to undeceive ourselves, to destroy the romantic dreams to which we gave free rein as we rested there under the big tree in the fragrant grass, with so much beauty on all sides. To me it was romance, for there I saw myself the leader of a hopeful band, and I knew not if I was leading them to failure and how many I should bring back. But a general—if so big a word may be used in jest—cannot dream long, for though he may not have wants he will be reminded before long that others have them, and so we descended to see if the arbas had come. They had; and at the same time an official arrived from Tsageri, telling me that the fifteen porters whom I had ordered from Odessa were on their way and would be there early next morning. This was good news, and such punctuality was more than compensation for the great loss of time which, in the opinion of the tirois, we had suffered so far, though in reality we had travelled at the usual Caucasian rate.

As plenty of horses were obtainable at a moderate price, I decided to ride to Lentekhi instead of walking, as had been intended. The tents, provisions, and spare things were despatched to Betscho *via* Latpari. Each of us had his knapsack, which he carried himself, while a waterproof sack with sleeping outfit, &c., was borne by a porter. The men were from Lentekhi, and I found them more willing, stronger, and more moderate in their demands than the average Suanetian on the other side of the range. With heavy loads on their backs they had a sufficient surplus of energy to spend in joking and singing, and these good fellows fully deserved the admiration which all of us had for them. Our start from Orbeli was a sight for the gods, especially as many of our party had never been on a live horse before, though they were quite familiar with striding a ridge, crossing a saddle, and riding on the avalanche. The question of balance was furthermore complicated by the problem of how to fit steel-shod boots into Caucasian stirrups, and how to adjust these stirrups to equal length, the straps being unequal, and in the last hole. But these are mere details to which the enterprising tourist soon becomes indifferent; for nothing is more certain to make things equal than equality of temper. On the way a short visit was paid to Ivan Ivanovitch, who resides in a substantial wooden house halfway between Tsageri and Lentekhi, and who, in the name of Monsieur Serebriakoff, who pays one rouble per tree, does his best to devastate the grand forests of Dadian's Suanetia, which are now gradually floating down the Tskhenis Tskhali. We all

enjoyed the fresh whiff of air which met us when the 'Gate' was passed; and the raw night mists which gathered round us were greeted as the heralds of a strenuous life full of vigour and freshness. Walking commenced in earnest from Lentekhi, which place we left at 9 o'clock on July 14, after a night which had presented us with the magnificent but sleep-disturbing spectacle of a first-class thunderstorm. A two hours' tramp through low-lying alder scrub with plenty of swamps and puddles took us to Kheladé, whence Katchash (roughly 3,000 feet) is reached in an hour and a half more, the same time being necessary to cover the distance to Djudari, which is the last village on the route, and which lies at the mouth of the Skimeri valley, into the shady vaults of which we entered at 5 p.m. It is a grand, a glorious virgin forest that fills this valley, in spite of the inroads which modern industry had made, but which apparently had been suspended since my last visit in 1900. Progress was naturally slow, and many an impatient youth felt his love of the picturesque drowned by the overpowering desire to slash his axe into the icy flanks of Laila Mountain. Two of our party lost themselves on the ill-defined paths that cross the thicket in all directions, and a long-continued blowing of torpedo sirens and sounding of bugles ensued to bring them back. As darkness was approaching fast I preferred to camp in the forest, though some said they would prefer to stumble on over roots and stones in order to come nearer to the region of the snows. Undue hurry, however, is energy misspent, and I, for my part, and many others, thoroughly enjoyed the strange and impressive scene of that forest camp without regretting the fact that it meant another day before the high bivouac was reached. In the very midst of the dense woods was a clearing overgrown with rampant weeds. A stately fir stood there in solitude, and around were beeches and maples with thick foliage, which reflected the shifting glare thrown out by the pile of burning logs, the camp fire, where the porters chattered. But there were some who did not understand how to listen to the silent language spoken by the shadows of the night, nor how to feel the forest's softly throbbing life. They dreamt of nothing but the rocky crest and of the sérac's mighty roar.

At midnight a small group of impatient and independents started, with the idea of crossing the pass the same day, but did not proceed far, for, coming to a rushing stream, they found that bridge-building by candlelight was out of the question, so had to return to wait for daylight and men to span the gulf. When we more leisurely, after having had a comfortable

breakfast, followed in their tracks, we saw them not very far in front, for crossing a rapid river is always a long and laborious task. This fact we learned here, and were reminded of it some weeks later, when confronted with the ice-cold waves which defend the approach to the Ushba Glacier. The Skimeri stream is powerful, and the rush and gurgle between its polished blocks of granite forebode evil to him who slips. Our Lentekhi men felled a slender tree, and let it fall across, then walked unconcernedly—here leather sandals are trumps—over the shaky beam, wet with the spray from the boiling deep. We preferred the less dignified but safer method of clinging to the elastic pole with all our hands and legs.

It would have been possible to get over the passes on this same day, but we wished to climb the Laila Peaks, and, above all, we were looking forward to the view which, as everybody knows, is obtainable only during the forenoon. So we decided to camp on the top of the grassy ridge which leads up to the rocks of the first gap (the High Pass), and along which we proceeded in a leisurely fashion, enjoying to the full the view of the dense vegetation of the valley, the park-like scenery of the higher slopes, with its beautiful maples and birches, and the pyramid of Gvadarashi, or South Peak of the Laila. Looking west we saw several desirable unclimbed summits, forming a small group at the extreme end of the glaciated Laila range.

Schulze and Scheck walked faster than the rest, and, with laudable energy, attacked and conquered the Skimeri Peak, returning by way of the pass, and reaching the high camp towards evening. Here everybody was busy constructing comfortable bed-places in sheltered nooks, and the porters lighted a big fire to roast a sheep, which, however, was not ready before 3 A.M., thus serving as breakfast in the morning instead of supper.

For the purposes of mountaineering our army was split up into small and convenient parties, and, with the exception of one exchange and one addition, these remained throughout the journey as formed for the first assault above the Caucasian snow line.

Seeing that all the routes have been described, it suffices to say that, starting from the High Pass, it takes about three and a half hours' fast walking to traverse the three peaks, and four and a half hours to reach Tskhomari from the North Peak. The party who chose the direct descent gained about an hour on those who returned to the pass when following the ordinary route. In Tskhomari we were royally received

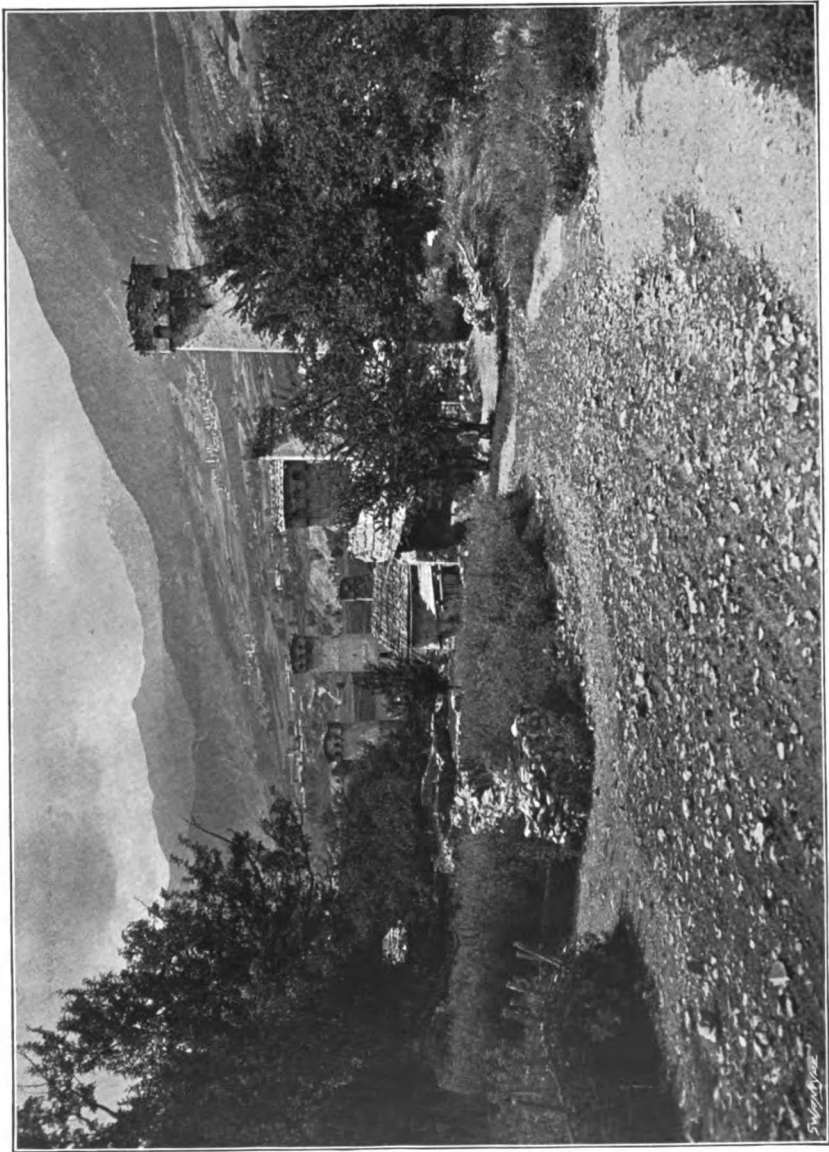


Photo. by W. R. Ricketts.

MUJAL, LOOKING WEST.

Swan Electric Engineering Co.

by Prince Bekerbi Dadeshkeliani, the fine old man who, since the days when the first climbers appeared in Suanetia, always takes you on to his spacious verandah, and, pointing north and east, exclaims, 'Ushba!' 'Tetnuld!' Two words only, but they say more than a conversation in Russian (a language foreign alike to host and guest) could possibly convey. In them are expressed his pride of race, love of country, its people, forests, streams, and awesome veneration for the mountains that rule over all. These two words go straight to the heart of every mountaineer. Tskhomari shares the privilege of many Suanetian villages, that of being a 'watering-place,' for tasty mineral springs flow copiously from wooden wells on the 'maidan.' It is true that those who drink these waters are mostly cows and sheep, their owners preferring stronger liquids. During our stay, however, for one short evening, the place wore an aspect to make the innkeepers of Marienbad turn green with envy. An immense crowd thronged the avenues to watch the foreign celebrities, who were seen in animated converse with the local potentates, while menials distributed largess of biscuits to the admiring population, so very much alive to and with everything. On our way to Betsho, in the village of Kartvani, we had an opportunity of watching one of the most impressive sights imaginable, a Suanetian burial feast. A young soldier of the police force had been shot by outlaws. It was a hot day of July when my friends and I rode up the sun-steeped slopes towards the home of the dead man, the grey slate mansions of Kartvani, that look down upon the foaming whirlpools of the Ingur. We found a great multitude already assembled, men and women forming separate groups, and still they came flocking in, until more than five hundred met on the open space before the house to show honour to the dead. Us they took to the cool shade of a walnut tree, where seats and tables had been built for the princes, who soon arrived from all sides—Tartarkhan from Etseri; Bekerbi from Tskhomari, with his sons; Mosostr; Bekerbi from Mazer, and his sons, and many another nobleman. We entered the house, and through an almost subterranean passage reached the room where the corpse lay on its bed. Nearly two hundred stood closely pressed against each other under the low ceiling; the air was thick and hot. The dead man was covered with his uniform, and around him were his weapons and his property, and on everything that had once belonged to him was a burning candle. On his dagger, rifle, and stick, on even the bottle and the glass, on every chair, and on the beams and rafters of the

roof stood a tiny yellow flame which sent a blackish trail of soot through the semi-darkness of the atmosphere. Round the bier, in single file, the wailing women tread with dishevelled hair and naked breast, which they strike with their hands, moaning and weeping in measured time. This continues for a long time. No ray of sun penetrates this dark hall, the air gets closer and closer, the candles twinkle through a mist of human exhalation. Suddenly the women stop, and the father steps into the circle, to repeat with loud lament the anguish of his soul, and every strophe he ends with striking his forehead, to which the women answer with a one-voiced sob, a threefold lamentation.

Long is the row of relatives, and long their plaintive wail ; the sweat of many brows is added to the flow of many tears ; gradually a veil of heavy air hides our neighbour from our view. Out ! out ! the grave is open and the priest is ready. The land is bright with sunny rays, the Laila glaciers sparkle on the height.

Round the open grave a multitude of hundreds is waiting to catch a last glimpse of him who now is carried through their midst to his eternal rest. The solemn procession wends its way amid deep silence. In front the violet clergy walk, murmuring prayers ; behind the prancing charger is led, empty the saddle where once a stalwart soldier sat. The Church will have its say ; 'tis done in haste. But high above, forming a long wide row that stretches far over the sloping meadow, two hundred warriors stand, Suanetians, with rifle, and dagger, and steel-shod stick. One, Muratbi, the hunter of Mazer, the veteran alike of ibex-stalkers as of mountain guides, intones the chant, and then the raucous strains of the funeral song mount heavenwards, the mighty song of two hundred in full armour. Above it all the eternal mountains rise ; above us is Ushba the Terrible, the Watcher of the Dead.

Now honour has been done, and the mourning relatives show their gratitude by a meal, which is served to all comers on rustic seats and tables. Bread, meat, cheese, beans are brought, and the whisky is passed round in wooden bowls, and there is no stint of anything. Aye ! grief is dear !

Gradually the slanting rays of the sun peep under the leafy roof, where we, the foreign guests, are dining. The afternoon is late, and slowly the assembly drifts away, for many a man has far to go ere his foot may touch the threshold of his home. We mount the steeds, and silently we ride into the creeping shadows of the night.

Betsho during the next day, July 18, was a scene of turmoil, which to the uninitiated onlooker must have appeared as the disorder of an army in retreat and not as the organisation of an attack. The baggage horses had arrived, and the contents of opened cases strewed the none too cleanly floor of the cancellaria. Brave men eyed with despair the ebb and flow of heaped-up things, commingling with their own belongings, and shifting these from place to place, so that nobody knew where to lay his head, though many felt the want of a resting-place. They had to work, however, and to sort the wheat from the chaff, the goods of the commonwealth from those of the individual citizen, who protested in vain when the cosy corner where he had spread his sleeping-bag must, for the time being, give way to the stern reality of candles and jam. The conception of property began to rot at the root, making way for a higher view of things, for whosoever found not his own took his neighbour's the while, and mayhap forgot, and in his heart blessed the common cause. Men realised the dawn of better days, when all are brothers, and those who may miss gloves or goggles will not ask questions of those who have, though they never had before. Meanwhile those who owned strong sacks and stronger locks gloried in their possession, not from fear of the wily native, but out of due respect for the boon companions of the summit chase. Soon, however, order grew out of chaos; the narrow store-room wedged in between the two 'large' sleeping-halls looked neat and tidy, with its shelves made out of empty cases, and where every article had its own appointed place. So quickly did things assume this shape that by 3 o'clock of the same afternoon two parties could be despatched on their respective errands—the one to the Gul Glacier, the other to the Kuish. I stayed behind in peaceful solitude, shared by Fräulein von Ficker and Herr Wagner, who volunteered to help in the finishing touches to the base camp and the plan of campaign. We enjoyed a day of restful quiet, for a detachment of mountaineers, the porters, horses, camp attendants, contractors, and the crowd of interested inhabitants manage to make a good deal of noise. To the topsy-turvy of bundled tents, rolling tins, running men, and interfering ice-axes is added a deafening babel of voices, topped, but not subdued, by the imperious tones of the interpreter, Grigor Makandaroff, my aide-de-camp, assisted by the sonorous organ of the village chief, the worthy starshina. Now the babel had ceased, and I was able to collect my thoughts, to survey the past,

satisfy the present needs, and prepare for the future. The attack upon Caucasian strongholds had begun in earnest, and many things had to be considered, planned, fitted, to secure smooth working to the somewhat complicated machinery. Provisions had to be despatched to higher camps; porters and horse-owners must be paid; tenders for the supply of many sheep, hundreds of eggs, and loads of bread, chickens, butter, milk, and honey are invited; messengers have to receive instructions as to the wishes of the climbers on the heights, and, above all, a numerous correspondence must be attended to, the correspondence which keeps in touch the widely distributed units of an harmonious whole.

Innumerable slips, tickets, and letters, written on paper of every conceivable texture, shape, colour, size, and in the savoury condition which only climatic adversity and prolonged stay in Suanetian pockets (or what stands for these) can produce, now form a special volume of my keepsakes, a vivid reminiscence of exciting days. Moreover the fate of the rearguard—Longstaff, Platz, and Rolleston—weighed heavily on the chief's careworn brow, and in due course Makandaroff was sent to Tsageri to meet the valiant remnant on its way, and to guide them safely through the perils of the pass. Relief, however, was felt by me concerning one danger which had threatened to snatch the hoped-for fruit from our outstretched hand even before we had a chance to try the mettle of its grip. Though averted for the time by the rapidity of our advance to the battle-ground, it behoved me to keep the ever-watchful eye of a commander open on the weather side. To clear the situation let me anticipate a general survey. Suanetia was in the year 1903 invaded by seventeen Alpine adventurers—my party of twelve, the two semi-attached English freebooters, and the host of the north. Already in Munich the general staff had been informed by the valuable intelligence department of local talk that a party under the leadership of Pfann had designs upon the same object, and intended to approach secretly from Vladikavkas. Fortunately the southerners under my command occupied the crowning bastion of Ushba in the nick of time. The northerners, upon hearing this from the spies, made a *détour* and commenced a desperate storm upon the coveted kopje. Great were their doggedness and courage, great were their privations, chiefly due to entire failure of the commissariat, but finally, after a four days' determined struggle, they carried the position, only to find that the enemy had left, deeming it untenable for any considerable length of time.



Photo. by W. R. Richmers.

MAZERI TAU FROM THE SLOPES OF TSENTSI TAU.

Snow Electric Engineering Co.

They came to the same conclusion, and descended to the south. In order to avoid all further conflicts the mountain of Ushba was handed over to a neutral power, Fräulein von Ficker, by the ruler of Suanetia, witness thereof the document and treaty drawn up and signed at his capital, Etseri. Thus peace was restored, and our mountain princess is beloved and honoured by friend and enemy alike. But the truthful history of the war between the Pfannites and the Rickmerites is chronicled for the generations to come in the "Kneipzeitung" of the A. A. V. M.' But to take up the thread of my relation, which I dropped at Betsho. While the three of us were sitting in the cancellaria, sorting, writing, working, three men at the Gul Glacier had not been idle; things had been done with surprising promptness almost before I realised that the chief contest had begun, and events were shaping themselves that led to the final conquest of one of the finest mountains in the world.

(To be continued.)

THE ROTHORN RIDGE.

By EDWARD A. BROOME.

(Read before the Alpine Club, May 3, 1904.)

HAVING made rather a special study of the magnificent Zinal Grat from the Weisshorn to the Ober-Gabelhorn, and having within the last year or two clambered up nearly every climbable chimney and crag upon the ridge, I propose to describe some expeditions on it to-night. Several of my candid friends appeared to consider it 'one-ideal' to put in so much time on the one range, but on mature consideration I think the time was well spent, and, at any rate, five or six days of unequalled enjoyment and some increased topographical knowledge are not altogether to be despised.

I do not propose to inflict on you to-night the Weisshorn portion (on which, indeed, I have already read a paper here), nor yet that part extending from the Triftjoch up to and over the Wellenkuppe and Gabelhorn; but rather to limit myself to the Zinal ridge proper, extending from the Schallijoch on the N. to the Triftjoch on the S., which we covered in three climbs; and I shall give these, for greater convenience, in geographical (N. to S.) and not in chronological order.

I will, however, preface what I have to say by a remark

apiece on the two omitted climbs, the first being that the Weisshorn by the great S.W. arête will always be a long and difficult expedition, and should certainly not be undertaken by an inexperienced or untrained party. One such party last summer took two long days from the Schallijoch over to Randa, and, indeed (though the mountain was in good order), they neither finished the S.W. ridge nor attained the summit the first day, and were not down at Randa until after dark on the second! The remark on the other climb is that the Wellenkuppe (first ascended *via* its N. arête from the Triftjoch by Mr. FitzGerald's party in 1881), when taken by this route in conjunction with the Gabelhorn by the entire N.E. arête, and over the huge rock tower between the two peaks (which should by all means be climbed over and not traversed under), made a first-class combination, and one, I believe, not before tried.

Traverse of Schallihorn and Moming Spitze.—To come to the first of the three main expeditions, August 28, 1903, the above peaks were crossed, N. to S., the first from the Schallijoch to the Ober-Schallijoch, and the second thence to the S. Moming Col. We went up the previous afternoon from Randa to the 1895 *gîte* above the Hôhlicht Glacier in 4 hrs., a great improvement, both in time and route, on our first wearisome walk up there, which took 6. We were joined by my friend Captain Farrar and another party consisting of an Englishman and a Russian, both parties for the Weisshorn; and the climbers, guides, and extra porters for carrying the provender and 'bed-clothes' made up a party of fifteen.

Such a babel of languages (six at least) I never heard, and there was some difficulty in finding sleeping accommodation under the rocks for so many; Farrar, who kindly took the outside berth in a sort of scooped-out concave lair, being kept in position all night by my knees skilfully wedged in his lumbar region. He slept soundly, however, and did not complain, while I watched Jupiter, a superb sight at that height, slowly steering his shining satellites round the sky, and incidentally giving sufficient light for us to see by our watches when it was time to get up.

Starting at three we lost a good deal of time on the upper portion of the Schalliberg Glacier, which was this year a good deal cut, causing us to retrace our steps for some distance more than once in order to circumvent the big crevasses. However by 6 o'clock we were on the top of the Schallijoch, and parted from the two Weisshorn parties, Farrar getting

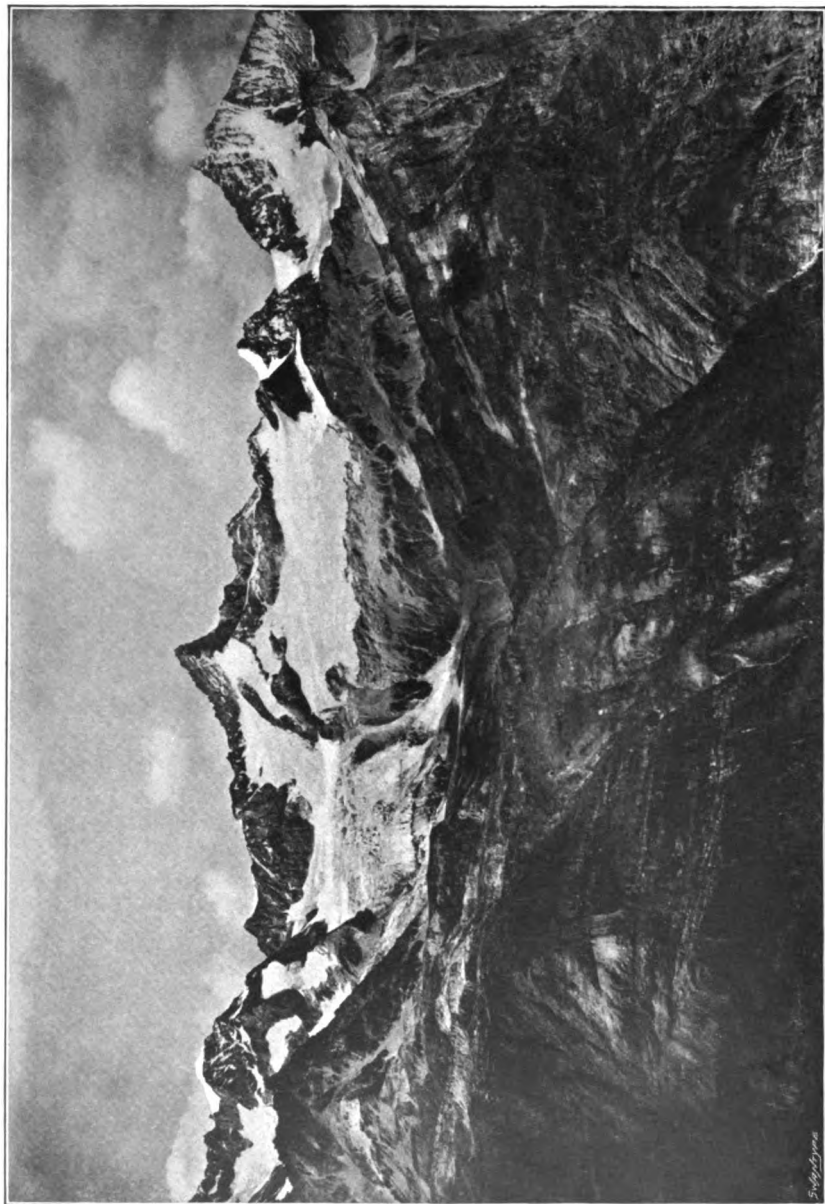


Photo by Dr. Paul Gussfeldt.

ROTHORN RIDGE FROM WEISSHORN TO GABELHORN.

Swan Electric Engraving Co.

over its two great ridges to Randa 12 hrs., and the Anglo-Russian contingent 38 to 40 hrs., later!

At 6.30 we started for our peak, first up a spur of rock beginning just below the pass itself, and following the rib had a good scramble up the mixed rocks and ice of which it consisted to a little gap on the arête to the left of the first gendarme. From this point we kept almost entirely to the ridge, and went over all the rock-towers and gendarmes, perhaps about six or eight in number, all very steep and composed of loose and unstable rock, and consequently giving plenty to do, till we came to the last of all, the one nearest to the summit. This looked very difficult, if not impossible, and it would not be too much to say that we fairly farked it, and turning down a peculiarly nasty iced, deep gully to the left (or E.) side, made a traverse of the rock-face with none too good holds, then ascended again another similar gully to the ridge, wishing all the time we had never left it. From this point the last slope up to the top was rather steep, hard ice, and took some care and cutting. The whole climb is somewhat difficult, the rocks being always very rotten and shelly, in this respect a perfect contrast to all the other peaks on this fine ridge. You will perhaps forgive me if I tell you that my own name for the mountain must always be the 'Scaleyhorn,' which after all is only a free translation of its original name.

We reached the top at 10 o'clock, 8½ hrs. from the pass, thus making (or so we thought at the time) the first ascent from the Schallijoch, or from the N. side.* There had been one previous *descent* this way, but on that occasion the party evidently worked somewhat more under the actual ridge on the E. side than we did.†

Leaving the summit at eleven, and still keeping to the ridge, we descended by Mr. Middlemore's original route to the Ober-Schallijoch (sometimes called the N. Moming Col) in ¾ hr. This was, of course, quite simple, and indeed we could see more than one easy route on this side, and especially down the E. face. In proof of this, if proof were needed, there were tracks of chamois on the actual summit of the Schallihorn, and again lower down in a couloir on the E. face, at the bottom of which we ultimately saw the beasts themselves, who on hearing our shouts went off at a great

* My friend the Editor has, since the above was written, discovered that this had once previously been climbed, but I have no particulars.

† See *A. J.* vol. xx. p. 264.

pace down the glacier. I believe that at this time of year chamois betake themselves to great heights without any apparent reason, unless it is to harden themselves against the coming cold winter and severe weather.

From the Ober-Schallijoch we traversed the Moming Spitze, taking about $\frac{3}{4}$ hr. to the summit. The rocks were quite good, and it is a pity this little peak is not more climbed; it is said that it had only been twice done before, once by an English and once by a Munich party.

We descended the other side towards the S. Moming Col, but not quite down to the lowest depression, for the schrunds below the actual pass looked from above like taking a lot of time this year (1903), so a fairly easy rock-rib was struck, which, with a snow slope at the bottom, took us down to the level Hohlicht Glacier. From here we had the usual tedious and tiring *ascent* to the second col on the spur between the Rothhorn and Mettelhorn, afterwards descending again by the Rothhorn Glacier and the Trift valley to the Trift Inn, which was reached at 5 o'clock.

Traverse of Ober-Mominghorn and Rothhorn.—I must now hark back to August 19, 1902, when we climbed the second portion of this ridge from the S. Moming Col over the above peaks to Zermatt. This was not a very long day, though a good deal of time ($5\frac{1}{2}$ hrs.) was spent in the grind from our starting point, the Trift Inn, to the top of the col; and I may perhaps mention here that I had some idea, after doing the Schallihorn and Moming Spitze the following year (1903), of again climbing the Mominghorn and Rothhorn, but this time traversing all four peaks in one day. I have no doubt, too, that they could all have been done if daylight could have been lengthened an hour or two, or if I had been content to lie out somewhere near the top of the Rothhorn. This latter course, however, would *not* have contented me, and would indeed have been some justification for the offensive doggerel which an old friend was rather too fond of 'rubbing in,' and of which perhaps the chief sting lay in its truth.

The plague of guide and friend, and wife and daughter,
Is 'senex' who will climb and didn't *oughter*.

I therefore give the 1902 climb for this part of the ridge, and a most enjoyable one it was, besides making a new combination.

After a pleasant evening at the now greatly improved and most comfortable Trift Inn, where amongst other friends were the distinguished Alpine author Major Theodor Wundt

and his charming wife, my party got off at two o'clock up the Trift valley, the Rothhorn glacier, over the col on the Mettelhorn ridge (where we breakfasted), and across the Hohlicht glacier again, this time in the slanting morning sunshine, to the foot of the Moming pass. The steep snow slopes and the bergschrund were now in good order, and we reached the pass itself at 7.30, feeling quite ready for another breakfast.

Starting off again at 7.50 we followed in the main Sir Seymour King's original route up the N. ridge of the Ober-Mominghorn, and found it a most delightful climb. It is best to follow the ridge over snow and easy rocks for a time, and then traverse a little on the left or E. face to a point just under a very large pinnacle on the ridge. Then you go up a steep chimney on the other side of the gendarme right up to the arête, which should be afterwards followed, climbing all the towers till the summit is reached. We were agreeably surprised to find ourselves on the top at 9.25, thus making 1 hr. 35 min. going instead of the $4\frac{1}{2}$ hours allowed by the President's 'Climbers' Guide.'

The climb is a good one, the one chimney very steep, and the towers, which are numerous, are interesting, and in my opinion more difficult than those on the Rothhorn, which followed. The height of the Ober-Mominghorn is given at 13,019 ft. (3,968 m.), just 10 m. lower than the Schallihorn.

The descent of the peak on the S. is easier than on the N. side; but a little below the summit, after a steep rock descent and where the rocks merge into a snow arête, we found a good deal of ice; however this did not last too long, and then crossing a sort of snow basin we reached the main depression between the two peaks at 10.45.

From here we again began to ascend, and after circumventing one or two big schrunds found ourselves at 11.30 at the foot of the Rothhorn N. arête, a little higher than the point where Le Blanc articulates into the main ridge, and just about the sheltered spot where the interiors of many rucksacks and wine bottles have been transferred to animate interiors! Fortified by similar transference we started gaily up the well-known Zinal ridge of the Rothhorn at noon, finding it all in good order and plain sailing, and on the way met some of our over-night party descending to Mountet. This ridge is now perhaps the most popular promenade of Zinal and Zermatt, and it is certainly as pretty a rock-climb as could be desired, containing just enough but not too much of every variety. It made my fourth passage, so we all knew

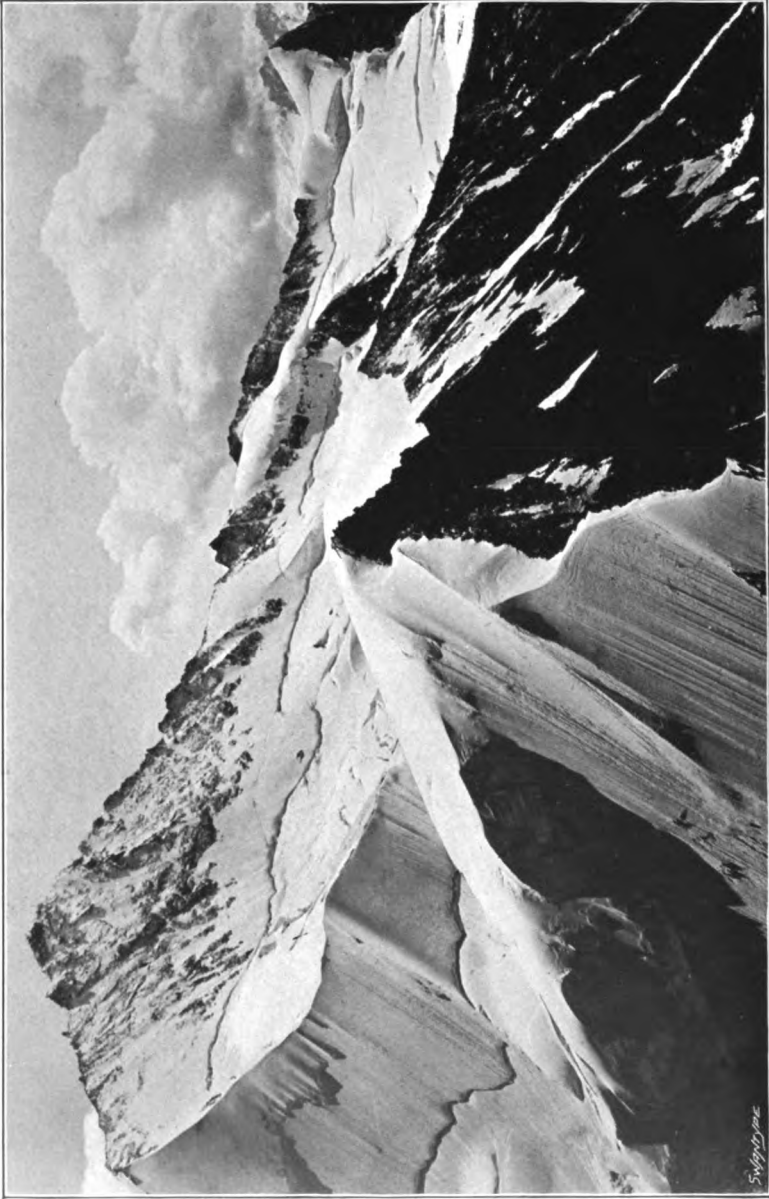
the way, and did not waste much time, getting to the summit at 1.20. After this we considered our day practically over, and took it very quietly by the ordinary route back to Zermatt.

Not having been in this now fashionable city for some time till this year, one noticed many changes, and looking back twenty years or more they are still more surprising. The electric lights, the shriek of the railway whistle, the numerous hotels, all with large omnibuses and magnificent *concierges*, and especially the fashionably dressed ladies promenading to afternoon band accompaniment in the garden, would indeed astonish a Valais Rip van Winkle returning from a peak. It is pleasant to sit in a post-pedestrian tub with window open, listening to the dulcet strains; but there are differences of opinion even on this point, and my friend Mr. Ellis Carr prefers the *old* manners and customs, and even thinks that 'soon it will be necessary to have on view in the Zermatt museum a stuffed climber in a glass case to show what once they were.' Perhaps later on he will make such testamentary dispositions as to ensure this!

Traverse of Trifhorn and Rothhorn.—I had thought much about the possibility of climbing the Rothhorn direct from the Triftjoch, over the Trifhorn, along the rest of the rock-ridge, including the Pointe de Mountet, and up the S.W. arête in one day; though after working it all out on paper, including a probable time schedule, this hardly appeared to be possible; while the two ascents last described had seemed, also on paper, fairly feasible in one long day. On opening out these plans to the faithful Alois I found him, as usual, quite game to try either or both (or indeed anything else I wanted); but this time, oddly enough, the improbable proved practicable and the feasible impossible, for the Trifhorn arête was accomplished in the one long day, while the ridge running N. to the Schalljoch had perforce to be taken at twice.

For our success I have to thank the energy and enterprise of my young friend the said Alois Pollinger, whose pluck and perseverance, as well as mountain craft and climbing powers, are beyond praise. He is, indeed, a worthy chip of the old block, and his young brother Heinrich (18), who was our sole companion in two out of these three climbs, will very soon be worthy to rank with his father and two brothers.

After this necessary digression I return to my tale, to which another festive forgathering at the Trift Inn, this time in the company of a distinguished former Vice-President



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ROTHHORN AND TRIFTHORN FROM LO BESSO.

Photo by Alfred Holmes, Esq.

Switzerland

of this Club and some members of his family, made a pleasant prelude. Again we started at 2 A.M. up the valley, moraines, and glacier to the Triftjoch, the top of which was reached by 5.30, three and a quarter hours' actual and not too rapid going. Here the usual polite attentions to Little Mary cost us half an hour, and at six we started up the Trifthorn, as nice a little rock-climb as any on the ridge. The ascent occupied $1\frac{1}{2}$ hr. to the summit, though our previous time had been $1\frac{1}{2}$ hr., but on the present occasion there was a little 'verglas.'

I am glad to find this little mountain becoming increasingly popular; the rocks are interesting and far from easy, and it makes quite a short day *via* the col from either Zermatt or Mountet; but in my humble opinion the best way to take it is to go up to the pass from Zermatt, thence climb the peak by the rocks, descend the snow ridge on the N. side to a little col a few minutes below the top, and then drop down the easy western snow slope to Mountet. This should not take much longer, or at any rate not longer than the extra time the actual Trifthorn ascent takes from the Joch, and is much better fun than the simple passage of the col with direct descent down the Triftjoch. Last, but not least, the well-known danger of stones at the foot of the regular pass is altogether avoided.

Well, from the Trifthorn summit (reached at seven o'clock) we dropped straight down the aforesaid north snow ridge to a first col, whence you can either descend E. or W.; then a little way up, still on snow, till the long ridge of easy rocks between the Trifthorn and the Pointe de Mountet was struck. These rocks, though quite simple, were continuous and took time, and on the top of them (12,608 ft., or 347 ft. higher than the Trifthorn) we had a second meal. Thence a descent, still over rocks for a time, leads down to a broad and easy snow ridge, easiest walking towards the Zinal side, ending in a well-marked col, erroneously called the Rothhorn Joch, just at the S. foot of that very sporting little two-pointed pyramid the Pointe de Mountet.

Up this we started at once, finding the ascent a huge, steep, smooth, sloping slab with no handholds, but fortunately not too steep to walk up without them if the body is kept at an acute angle with the slab and care taken not to tumble backwards. This summit was reached at 10.30, and the height is given at 12,723 ft., or 115 ft. above our last nameless rock ridge. The descent of the Pointe de Mountet on the N. side to the true (or N.) Rothhorn Joch took a good

half-hour, the first rocks being very steep and involving the use of a doubled rope for the worst pitch. Lower down they got easier, and the pass at the foot of the Rothhorn S.W. arête was reached at eleven o'clock. The Pointe de Mountet can, of course, be easily reached from either Zinal or Zermatt, and is recommended as a route (traversing the top) from one place to the other. In either case it would be better to ascend by the N. col, taking the little aiguille from the N. and descending to and continuing the journey by the S. col.

Here I wish to point out that there are three well-marked cols on the ridge between the Trifhorn and the Rothhorn, and each of the three has been at different times called the Rothhorn Joch. The usually correct Conway's 'Pennine Guide' describes the Rothhorn Joch as between the Trifhorn and the Pointe Mountet, or S. of the latter; but there is no doubt that the true Rothhorn Joch lies at the actual foot of the Rothhorn and between it (and N. of) the Pointe de Mountet. This is the view of the leading Zermatt guides, whose opinion I was at some pains to get; and it is also the pass over which the sledges were taken to recover the body of poor Biner after the sad accident on the W. side of the Rothhorn in 1894, the descent from it being easier and the bergschrund less troublesome than the other.

From this true (or N.) Rothhorn Joch the new portion, and consequent real interest, of our expedition commenced, and we started on it at eleven exactly. From the pass to the first gendarme the ridge is first snow and rocks mixed, and at the end of these (and at the foot of the first rock tower) another snow-slope runs up from the northerly arm of the Glacier du Durand, which would make almost as good a starting point for this way up the Rothhorn as the Rothhorn Joch itself. This first tower was fairly easy, but the second proved harder, and had to be climbed nearly to the top and then traversed to the left to the top of a couloir. The couloir was 'Einschnitt' (whatever that may be), and pretty steep to get out of. Fortunately shoulders—human ones, I mean—come in useful on these occasions, and Alois and I clambered up turn and turn about on mine and Heinrich's. Hence the ridge was followed to the third gendarme, which was climbed right over to another little col, which in point of distance seems to be somewhere about halfway (though much the easier half) between the N. Rothhorn Joch and the Gabel; we had, moreover, so far only surmounted three of the towers, and there were eight more to do. After this my memory is not by any means perfect as to all the details—which is perhaps as well—

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Photo by W. H. Gower, Esq.

TRIFTHORN AND ROTHORN FROM THE WELLENKUPPE.

Swan Electric Engraving Co.

and I must not draw too strongly on my imagination ; but we kept hard at work, scrambled up all those that were thought possible, and on the whole stuck to the arête. The first two of the towers were certainly difficult, and ' Charmoz-traverse '-like, but were climbed over, and I think only one or two of the remaining eight, which were, or seemed to be, impossibly slabby, were turned to the left or W. side. In this respect they were unlike those on the south-western ridge of the Weisshorn, all of which are best dodged, when necessary, to the right or E. side.

It is a magnificent arête ; the towers are, as I said, about eleven in number, and all are—as on the Rothhorn they should be—huge red rocks. All wanted climbing, but first Alois and then Heinrich alternately went up them like squirrels and down them like steinbock, while I blessed Providence for having constructed Valais shoulders tougher and less sensitive to nailed boots than English ones, and also for having put it into my head to take an extra 100 ft. of light rope, down which we dangled when descending difficult drops, thus saving time—an all-important point on such a long expedition.

Towards the Gabel the last tower but one, or the last but two (I forget which), was turned, also to the left by a very steep ice-slope, which I did not particularly fancy and which reminded me of a similar one on the same side of the Teufelsgrat ; but I think the latter was necessary, while ours was not, so I should advise its being climbed over in future. The last gendarme of all was not climbed direct from the ridge, but was first traversed under on the left, and then ascended by a couloir from that side ; and when on its top we were delighted to see the ' Gabel,' so well known as the Rothhorn breakfast-place, at our feet, and into this we descended with little or no difficulty, highly pleased with our success and with having made what we then believed to be, and have since ascertained was, the first ascent of this ridge. Pollinger was especially delighted, as he knew that some of the Zinal men had tried it without success, while other first-rate guides had expressed a strong opinion as to the impossibility of getting up ; but

The mighty pyramids of stone,
That wedge-like cleave the mountain airs,
When nearer seen and better known
Are but gigantic flights of stairs.

We had taken just 2 hrs. 40 min. from the Rothhorn Joch, and thought the time fairly good. The height and distance

of the climb on this side are perhaps best shown by comparing it with the well-known ones on the two other routes up the peak. At the Rothhorn Joch you are both vertically and horizontally about the same height and distance from the summit as the point where you first strike the Le Blanc snow arête on the Zinal side, while it is considerably below the level of the foot of the S.E. rock and snow ridge (above the long snow slope) on the Zermatt side. In point of difficulty this side affords much longer and more continuous work than the N. arête, and there are about eleven gendarmes here instead of the well-known three or four there. So it may fairly be claimed as being far and away the best and most sporting route up the peak. In my own mind I should class it more in point of interest and difficulty with the Weisshorn S.W. arête, and, though the latter is somewhat longer in height and time, it does not exceed the Rothhorn S.W. arête in general interest.

Arrived at the Gabel we were not sorry to allow ourselves the usual interval for refreshments (in this case 35 min.), and then proceeded upwards at 2.15, arriving on the summit at 3 o'clock. I am afraid I cannot claim any great novelty for this portion of the climb; if I did captious critics would probably cavil and contradict, and every member now present would arise and say (with truth) that he had done it himself! I will accordingly content myself with remarking that there did not seem to be any alternative route, and that from the Gabel upwards is only about one-sixth of the total distance from the Rothhorn Joch to the top. This last bit is always a nice varied piece of interesting work, and we went up it in good spirits, and returned the same, both as to route and spirits, the latter being none the worse for a judicious admixture of Bouvier, reserved for our goal!

Up to now we had found everything in capital order, but the couloir on the S.E. face below the Gabel was all just a thin layer of loose snow on ice, and was in as bad order to descend, especially to a tired party, as it could possibly be. Time, however, now was no particular object, so we did not 'take time by the forelock,' feeling that this at any rate was not a suitable moment to tumble down and *requiescat in pieces* at the bottom, or finish up a glorious climb in such an ignominious fashion. Below the couloir we got on better, but the snow was soft and the usual glissades impossible, so, taking it slowly and quietly, we reached the Trift Inn at 7.30 and Zermatt in pitch darkness at 8.15, our actual times going

for the whole day being thus 15½ hrs. and door-to-door time 18½ hrs.

In these climbs we were very lucky, especially in a dreadful season like the last (1908), in our weather, and in having chosen the good days. I think too the fact that the work had been almost entirely on the ridges, and with the occasional rock-traverses always facing E. and W., thus getting the sun, was very much in our favour. At any rate among other long dreamt-of good things the Zmutt arête of the Matterhorn, with its N. aspect, was utterly hopeless, as indeed it had been for some years previously.

However, having now finished the *climb* and got to the *weather*, it seems quite time to end my sermon; so *à propos*, or 'finally,' as our clerical friends would say, I will tell you a true little story showing what weird ideas the outer world has of the weather suitable for our glorious sport, and supposed to be liked by climbers. It was in the hunting-field, a perfect hurricane of cold wind blowing, blizzards of snow sweeping horizontally across the bare pastures, and a knot of half-frozen sportsmen shivering and sheltering for a few moments to leeward of a haystack on the bleak hillside. Up spake one of them, a farmer all untutored as to mountains: 'Well, there's only one of us here present as is a thoroughly enjoying of hisself to-day.' 'Who is that?' 'Why, Muster B.' (the present writer), 'of course; *he's* quite happy, and thinks he's a-scalping them blooming Pyrenees!'

THE KLEIN NÄSSIHORN AND THE WELLHORN.

By A. E. FIELD.

IN August 1908. Mr. R. W. Broadrick and myself were climbing in the Bernese Oberland with two Chamonix guides, our leading man being Alphonse Simond. Both were quite unacquainted with the district and anxious to learn what they could of it.

We determined to begin with the Schreckhorn and started off one afternoon for the Schwarzegg Hut. While we were getting wood at the Bäregg the clouds began to gather, and not long afterwards heavy rain forced us to seek shelter in an empty cow-chalet, where we spent nearly two hours. We squatted in the manger till our backs ached, and then we took up a position on the floor, which was covered with a thin layer of ancient hay full of various crawling things. Finally, as the rain showed no signs of abating, we beat a retreat to

Grindelwald, where we arrived in a rather damp condition. The next day was fine, and so we started off again, picked up the wood we had left at the Bäregg on our way down, and went up to the Schwarzegg Hut, where we spent two nights. On the first day we climbed the Schreckhorn; when we reached the foot of the great couloir we climbed up the rocks on the left, looking up, but in the descent we came straight down the snow, which we found in excellent condition, and got back to the hut at two o'clock.

The next day we started off at 4.50 A.M., and ascended the point marked 3,686 m. on the ridge between the Schreckhorn and the Little Schreckhorn. This peak seems not to have been climbed previously, and with the approval of Mr. Coolidge I have named it the Klein Nässihorn. We roped on the Nässi Firn at 6.10, made for the point marked 3,295 m., and had an interesting scramble up the rock arête which leads thence to the summit of our peak, which we reached at 9.30. It was a splendid day, and we had an excellent view in all directions; the N.W. arête of the Schreckhorn was seen to advantage, and we began to regret that we had not attempted its descent on the preceding day.

We descended the main arête running to the Little Schreckhorn for some distance till it became much broken up into gendarmes. We then traversed across the face on the side overlooking the Nässi Firn, regained the ridge lower down after some interesting climbing, and followed it down some steep snow to the col marked 3,420 m., just S.E. of the Little Schreckhorn. Our first idea was to make our way down to the Gleckstein Hut, but a rather steep ice slope just below us would have necessitated two or three hours of step-cutting. We chose the easier side, left the col at 12.45 P.M., and descended easy snow slopes to the Nässi Firn. Here we had one moment of excitement when a sérac above us gave a little shiver and projected a few drops of water across our path. However it stood firm as we ran across, and at 1.30 we unroped on the moraine and halted for nearly an hour. Twenty minutes down pleasant green slopes brought us to the Schwarzegg path, about half an hour below the hut. On our way we passed an old bivouac place, which we took to be the Kastenstein of which we had read in Alpine literature. We reached Grindelwald at 5.15 P.M., and spent the next day there in splendid weather.

The following morning we walked over the Great Scheidegg to Rosenlauri, where we lunched and got provisions. Here we made some enquiries about the Wellhorn, and were

informed that we ought to sleep at some cattle alp about two hours distant. Our informant seemed, however, to know absolutely nothing about the mountain, and we disregarded his suggestions and went off to the Dossen Hut, which I found had been enlarged since my visit five years before.

We had had some idea of trying to make a way up the Wellhorn by the long ridge known as the Welli Grat. We observed this ridge carefully on our way up to the hut, but the higher we rose the longer and more slabby appeared the ridge, which is seen much foreshortened from below. We could not make out a practicable route, and therefore gave up our idea. While turning over the leaves of the book in the hut we came across a very useful sketch, made by a Swiss climber, of the ordinary route up the Wellhorn by the E. arête.

We left the hut at 2.15 A.M. next morning in bright moonlight, and half an hour brought us to the top of the couloir by which the ordinary Wetterhorn route from the Dossen Hut descends to the upper snows of the Rosenlauri Glacier. The snow was in splendid order, and the walk across the glacier most enjoyable in the bright moonlight. At 3.30 we roped at the foot of the rocks, traversed across some slabs which were very wet in places, and reached the E. arête. We found this easy and were able to advance straight up it to the summit of the Wellhorn (10,485 ft.), which was reached at 4.44. Our situation had all the charms of novelty, for this was the first time either of us had been on the top of a peak before sunrise.

The air was still rather cool, and after twenty minutes we started down the S. arête, which was very easy going. This was soon quitted and a divergence made to our right down a long scree couloir. The scree was very loose and we slithered down it just as if we had been making our way down Hell Gate on Great Gable, of which this couloir strongly reminded us. We followed it down for a long way till a climb down a few pitches at its foot brought us out on to the W. face of the mountain. This face is pretty steep and the rocks rather rotten, so that much care was necessary and frequent traverses had to be made. Some of these traverses were not too easy, for the rock was slippery and there was but little handhold. This face ended in a precipice about 200 ft. high, running down to the snow below, and some time was lost in finding a way down.

We climbed down in about four different places till we found ourselves on each occasion on the brink of an im-

practicable cliff, and had to traverse across the face in search of another route. It really seemed for a time as if we should after all have to climb up to the summit again and descend by our line of ascent. However perseverance was finally rewarded, for we caught sight of a couloir to the south which obviously afforded an easy path to the snow below. The problem was how to reach this couloir; must we climb up the face for some 500 feet in order to traverse into it, or could we find a way from where we were? Simond unroped and prospected, only to announce on his return that there was no chance there. We then climbed up for a few minutes, and he again went off to explore, with the result that he found a chimney which he said we could manage with the help of the 'corde supplémentaire' which we had with us.

We found this spare rope very useful on several occasions, notably a few days later in the descent of the north face of the Aletschhorn, where we were obliged to come down some very bad snow mixed with ice. Our second man now climbed down the chimney, and at the point where it terminated on the face he hammered away vigorously with his axe till he detached a flake of rock, the removal of which left a shallow groove round which our spare rope was looped. We had already unroped, and now each of us came down in turn, steadied by the full length of our 100-foot rope. The cliff overhung for about seven or eight feet at one point, and here we dangled free. The doubled rope was held carefully below as Simond descended last, and we were all soon reunited in the couloir. Its descent was easy, and we soon reached the little bergschrund at its base, which gave us no trouble, and at 8 A.M. we found ourselves on the snow.

Having thus made the first traverse of the Wellhorn from the Rosenlauri Glacier to the Schwarzwald Firn, we ascended the snow slopes of the latter, which were still in shadow and afforded excellent going. We kicked steps steadily upwards, keeping fairly close to the foot of the Wellhorn rocks, till at 8.40 we got into the sun and soon found the snow getting softer and softer. We struck the ordinary Wetterhorn route from the Dossen Hut, and toiled along the snowfields till we reached the Wettersattel at 10.12 A.M. We left the sacks there, ascended the Wetterhorn in 45 minutes, came back to the Sattel, and went down to the Gleckstein Hut. We arrived at 1.40 P.M., and spent nearly two hours there with a large party of peasants who were apparently out for a picnic, and then descended to Grindelwald, which we reached at 5 P.M.

In the new edition of Moore's 'Alps in 1864,' p. 367, I

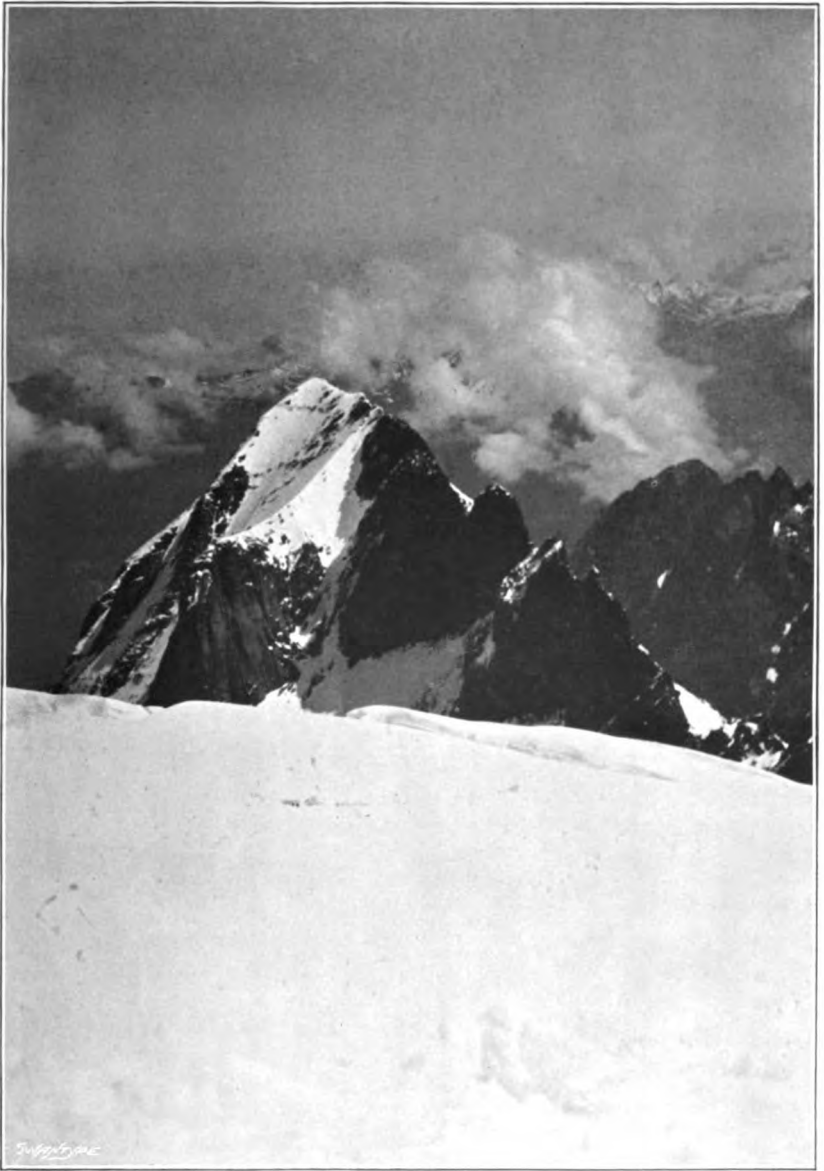


Photo by C. W. Nettleton, Esq

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THE WELLHORN FROM NEAR THE WETTERSATTEL.

find the following mention of the west face of the Wellhorn: 'In front of us rose the singularly fine peak of the Wellhorn, which is, I think, one of the few summits of the Alps that are totally inaccessible. I never saw rocks so perfectly and hopelessly smooth, and it would be totally impossible for any human being to find hold for hand or foot on them. I have, indeed, seen nothing at all like them in any other part of the Alps.'

A footnote adds, 'The Wellhorn was ascended by Herr von Fellenberg in 1866.' Professor Kennedy says in a further note that the party 'climbed the mountain by its eastern ridge, which was found to be "good going" once the difficulties of reaching it had been surmounted. The actual face referred to by Moore has not, of course, been climbed.'

This last sentence will, I trust, be regarded as sufficient justification for my having written this account of the first passage of the west face of the Wellhorn.

ON MOUNTAINS AND MANKIND.

An Address delivered to the British Association at Cambridge.

By DOUGLAS W. FRESHFIELD,
*President of the Geographical Section.**

WE have all of us seen hills, or what we call hills, from the monstrous protuberances of the Andes and the Himalaya to such puny pimples as lie about the edges of the Cambridge fens. Next to a waterfall, the first natural object (according to my own experience) to impress itself on a child's mind is a hill, some spot from which he can enlarge his horizon. Hills, and still more mountains, attract the human imagination and curiosity. The child soon asks, 'Tell me, how were mountains made?' a question, easier to ask than to answer, which occupied the lifetime of the father of mountain science, De Saussure. But there are mountains and mountains. Of all natural objects the most impressive is a vast snowy peak rising as a white island above the waves of green hills—a fragment of the arctic world left behind to commemorate its past predominance—and bearing on its broad shoulders a garland of the Alpine flora that has been destroyed on the lower ground by the rising tide of heat and drought that succeeded the last glacial epoch. Midsummer

* The preliminary portion of Mr. Freshfield's address, dealing with general geographical progress, is omitted.

snows, whether seen from the slopes of the Jura or the plains of Lombardy, above the waves of the Euxine or through the glades of the tropical forests of Sikhim, stir men's imaginations and rouse their curiosity. Before, however, we turn to consider some of the physical aspects of mountains, I shall venture, speaking as I am here in a university town, and to a more or less literary audience, to dwell for a few minutes on their place in literature—in the mirror that reflects in turn the mind of the passing ages. For geography is concerned with the interaction between man and Nature in its widest sense. There has been recently a good deal of writing on this subject—I cannot say of discussion, for of late years writers have generally taken the same view. That view is that the love of mountains is an invention of the nineteenth century, and that in previous ages they had been generally looked on either with indifference or positive dislike, rising in some instances to abhorrence. Extreme examples have been repeatedly quoted. We have all heard of the bishop who thought the devil was allowed to put in mountains after the fall of man; of the English scribe in the tenth century who invoked 'the bitter blasts of glaciers and the Pennine host of demons' on the violators of the charters he was employed to draft. The examples on the other side have been comparatively neglected. It seems time they were insisted on.

The view I hold firmly, and which I wish to place before you to-day, is that this popular belief that the love of mountains is a taste, or, as some would say, a mania, of advanced civilisation, is erroneous. On the contrary, I allege it to be a healthy, primitive, and almost universal human instinct. I think I can indicate how and why the opposite belief has been fostered by eminent writers. They have taken too narrow a time-limit for their investigation. They have compared the nineteenth century, not with the preceding ages, but with the eighteenth. They have also taken too narrow a space-limit. They have hardly cast their eyes beyond Western Europe. Within their own limits I agree with them. The eighteenth century was, as we all know, an age of formality. It was the age of Palladian porticos, of interminable avenues, of formal gardens and formal style in art, in literature, and in dress. Mountains, which are essentially romantic and Gothic, were naturally distasteful to it. The artist says 'they will not compose,' and they became obnoxious to a generation that adored composition, that thought more of the cleverness of the artist than of the aspects of Nature he used as the material of his work. It

was a contented and material century, little stirred by enthusiasms and aspirations and vague desires. There is a great deal to be said for it; it produced some admirable results. It was a phase in human progress, but in many respects it was rather a reaction than a development from what had gone before. Sentiment and taste have their tides like the sea, or, we may here perhaps more appropriately say, their oscillations like the glaciers. The imagination of primitive man abhors a void; it peoples the regions it finds uninhabitable with æry sprites, with 'Pan and father Sylvanus and the sister nymphs;' it worships on high places and reveres them as the abode of Deity. Christianity came and denounced the vague symbolism and personification of Nature in which the pagan had recognised and worshipped the Unseen. It found the objects of its devotion, not in the external world, but in the highest moral qualities of man. Delphi heard the cry, 'Great Pan is dead!' But the voice was false. Pan is immortal. Every villager justifies etymology by remaining more or less of a pagan. Other than villagers have done the same. The monk driven out of the world by his wickedness fell in love with the wilderness in which he sought refuge, and soon learnt to give practical proof of his love of scenery in his choice of sites for his religious houses. But the literature of the eighteenth century was not written by monks or country folk, or by men of world-wide curiosity and adventure like the Italians of the Renaissance or our Elizabethans. It was the product of a practical common-sense epoch which looked on all waste places, heaths like Hindhead, or hills like the Highlands, as blemishes in the scheme of the universe, not having yet recognised their final purpose as golf-links or gymnasiums. Intellectual life was concentrated in cities and courts; it despised the country. Books were written by townsmen, dwellers in towns which had not grown into vast cities, and whose denizens, therefore, had not the longing to escape from their homes into purer air that we have to-day. They abused the Alps frankly. But all they saw of them was the comparatively dull carriage passes, and these they saw at the worst time of year. Hastening to Rome for Easter, they traversed the Maurienne while the ground was still brown with frost and patched untidily with half-melted snowdrifts. It is no wonder that Gray and Richardson, having left spring in the meadows and orchards of Chambéry, grumbled at the wintry aspect of Lanslebourg.

That at the end of the eighteenth century a literary lady

of Western Europe preferred a Paris gutter to the Lake of Geneva is an amusing caricature of the spirit of the age that was passing away, but it is no proof that the love of mountains is a new mania, and that all earlier ages and peoples looked on them with indifference or dislike. Wordsworth and Byron and Scott in this country, Rousseau and Goethe, De Saussure and his school abroad, broke the ice, but it was the ice of a winter frost, not of a glacial period.*

Consider for a moment the literature of the two peoples who have most influenced European thought—the Jews and the Greeks. I need hardly quote a book that before people quarrelled over education was known to every child—the Bible. I would rather refer you to a delightful poem in rhyming German verse written in the seventeenth century by a Swiss author, Rebman, in which he relates all the great things that happened on mountains in Jewish history; how Solomon appreciated the charms of Lebanon; how Moses and Elias both disappeared on mountain-tops; how kings and prophets found their help among the hills; how closely the heights of Palestine are connected with the story of the Gospels.

Consider, again, Greece, where I have just been wandering. Did the Greeks pay no regard to their mountains? They seized eagerly on any striking piece of hill scenery and connected it with a legend or a shrine. They took their highest mountain, broad-backed Olympus, for the home of the gods; their most conspicuous mountain, Parnassus, for the home of poetry. They found in the cliffs of Delphi a dwelling for their greatest oracle and a centre for their patriotism. One who has lately stood on the top of Parnassus and seen the first rays of the sun as it springs from the waves of the *Ægean* strike its snows, while Attica and Bœotia and Eubœa still lay in deep shadow under his feet, will appreciate the famous lines of Sophocles, which I will not quote, as I am uncertain how you may pronounce Greek in this university. You may remember, too, that Lucian makes Hermes take Charon, when he has a day out from Hell, to the twin-crested summit and show him the panorama of land and sea, of rivers and famous cities. The Vale of Tempe, the deep gap between Olympus and Ossa, beautiful in its great red cliffs, fountains, and spreading plane-trees, was part of a Roman's

* Even in the eighteenth century a great deal of interest was taken in mountain phenomena. M. le Baron de Zurlauben's splendid work, '*Tableaux de la Suisse*,' published in 1781, has numerous plates illustrating glaciers, and its index contains nearly three long columns of references to them.

classical tour. The superb buttresses in which Taygetus breaks down on the valley of the Eurotas were used by the Spartans for other purposes besides the disposal of criminals and weakly babies. The middle regions—the lawns above the Langada Pass, ‘*virginibus bacchata Lacænis Taygeta*’—are frequented to this day as a summer resort by Spartan damsels. The very top, the great rock that from a height of 8,000 ft. looks down through its woods of oaks and Aleppo pines on the twin bays of the southern sea, is a place of immemorial pilgrimage. It is now occupied by a chapel framed in a tiny court, so choked with snow at the beginning of June that I took the ridge of the chapel roof for a dilapidated stoneman. I have no time to-day to look for evidence in classical literature, to refer to the discriminating epithets applied in it to mountain scenes.*

A third race destined apparently to play a great part in the world's history—the Japanese—are ancient mountain lovers. We are all aware that Fujiyama to the Japanese is (as Ararat to the Armenians) a national symbol; that its ascent is constantly made by bands of pilgrims; that it is depicted in every aspect. Those who have read the pleasant book of Mr. Weston, who, as English chaplain at Kobe for some years, had exceptional opportunities of travel in the interior, will remember how often he met with shrines and temples on the summits of the mountains, and how he found pilgrims who frequented them in the belief that they fell there more readily into spiritual trances. The Japanese Minister, when he attended Mr. Weston's lecture at the Alpine Club, told us that his countrymen never climbed mountains without a serious—that is to say, a religious—object.

India and China would add to my evidence had I knowledge and time enough to refer to their literature. I remember Tennyson pointing out to me in a volume of translations from the Chinese a poem, written about the date of King Alfred, in praise of a picture of a mountain landscape. But I must return to the sixteenth and seventeenth centuries in Europe; I may go earlier—even back to Dante. His allusions to mountain scenery are frequent; his Virgil had all the craft of an Alpine rock-climber. Read Leonardo da

* Cicero puts together a list of rural delights (*De Natura Deorum*, ii. 39): ‘*Fontium gelidas perennitates, liquores pellucidos amnium, riparum vestitus viridissimos, speluncarum concavas altitudines, saxorum asperitates, impendentium montium altitudines, immensitatesque camporum.*’ Apuleius, in his treatise *De Mundo*, arguing in favour of physiography, quotes as amongst the common objects of picturesque description in the second century, ‘*Nysæ juga, et penetralia Coryci, et Olympi sacra, et Ossæ ardua, et alia hujuscemodi.*’

Vinci's 'Notes,' Conrad Gesner's ascent of Pilatus; study the narratives of the Alpine precursors Mr. Coolidge has collected and annotated with admirable industry in the prodigious volume he has recently brought out.

It is impossible for me here to multiply proofs of my argument, to quote even a selection from the passages that show an authentic enthusiasm for mountains that may be culled from writers of various nations prior to A.D. 1600. I must content myself with the following specimens, which will probably be new to most of my hearers.

Benedict Marti was a professor of Greek and Hebrew at Bern, and a friend of the great Conrad Gesner (I call him great, for he combined the qualities of a man of science and a man of letters, was one of the fathers of botany as well as of mountaineering, and, in his many-sidedness, a typical figure of the Renaissance). Marti, in the year 1558 or 1559, wrote as follows of the view from his native city:—

'These are the mountains which form our pleasure and delight' (the Latin is better—*delicie nostræ, nostrique amores*) 'when we gaze at them from the higher parts of our city and admire their mighty peaks and broken crags that threaten to fall at any moment. Here we watch the risings and settings of the sun and seek signs of the weather. In them we find food not only for our eyes and our minds, but also for our bellies;' and he goes on to enumerate the dairy products of the Oberland and the happy life of its population. I quote again this good man: 'Who, then, would not admire, love, willingly visit, explore, and climb places of this sort? I assuredly should call those who are not attracted by them dolts, stupid dull fishes, and slow tortoises' (*fungos, stupidos insulsos pisces, lentosque chelones*). 'In truth, I cannot describe the degree of affection and natural love with which I am drawn to mountains, so that I am never happier than on the mountain crests, and there are no wanderings dearer to me than those on the mountains. . . . They are the theatre of the Lord, displaying monuments of past ages, such as precipices, rocks, peaks and chasms and never-melting glaciers;' and so on through many eloquent paragraphs.

I will only add two sentences from the preface to Simler's 'Vallesix et Alpium Descriptio,' first published in 1574, which seem to me a strong piece of evidence in favour of my view: 'In the entire district, and particularly in the very lofty ranges by which the Vallais is on all sides surrounded, wonders of Nature offer themselves to our view and admiration. With my countrymen many of them have through

familiarity lost their attraction; but foreigners are overcome at the mere sight of the Alps, and regard as marvels what we through habit pay no attention to.'

Mr. Coolidge, in his singularly interesting footnotes, goes on to show that the books that remain to us are not isolated instances of a feeling for mountains in the age of the Renaissance. The mountains themselves bear, or once bore, records even more impressive. Most of us have visited the picturesque old castle at Thun and seen beyond the rushing Aar the green heights of the outposts of the Alps, the Stockhorn, and the Niesen. Our friend Marti, who climbed the former peak about 1558, records that he found on the summit 'tituli, rythmi, et proverbia saxis inscripta unà cum imaginibus et nominibus auctorum. Inter alia cujusdam docti et montium amœnitate capti observare licebat illud—

'Ο τῶν ὄρων ἔρως ἀριστος.'

'The love of mountains is best.' In those five words some Swiss professor anticipated the doctrine of Ruskin and the creed of Leslie Stephen, and of all men who have found mountains the best companions in life.

In the annals of art it would be easy to find additional proof of the attention paid by men to mountains three to four hundred years ago. The late Josiah Gilbert, in a charming but too little known volume 'Landscape in Art,' has shown how many great painters depicted in their backgrounds their native hills. Titian is the most conspicuous example.

It will perhaps be answered that this love of mountains led to no practical result, bore no visible fruit, and therefore can have been but a sickly plant. Some of my hearers may feel inclined to point out that it was left to the latter half of the nineteenth century to found Climbers' Clubs. It would take too long to adduce all the practical reasons which delayed the appearance of these fine fruits of peace and an advanced civilisation. I am content to remind you that the love of mountains and the desire to climb them are distinct tastes. They are often united, but their union is accidental, not essential. A passion for golf does not necessarily argue a love of levels. And I would suggest that more outward and visible signs than are generally imagined of the familiar relations between men and mountains in early times may be found. The choicest spots in the Alpine region—Chamonix, Engelberg, Disentis, Einsiedlen, Pesio, the Grande Chartreuse—were seized on by recluses; the Alpine Baths were in full swing at quite an early date. I will not count the Swiss

Baden, of which a geographer, who was also a Pope, Æneas Silvius (Pius II.), records the attractions, for it lies under the Jura, not the Alps; but Pfäfers, where wounded warriors went to be healed, was a scene of dissipation, and the waters of St. Moritz were vaunted as superseding wine. I may be excused, since I wrote this particular passage myself a good many years ago, for quoting a few sentences bearing on this point from 'Murray's Handbook to Switzerland.' In the sixteenth century fifty treatises dealing with twenty-one different resorts were published. St. Moritz, which had been brought into notice by Paracelsus (died 1541), was one of the most famous baths. In 1501 Matthew Schiner, the famous prince bishop of Sion, built 'a magnificent hotel' at Leukerbad, to which the wealthy were carried up in panniers on the back of mules. Brieg, Gurnigel, near Bern, the Baths of Masino, Tarasp, and Pfäfers were also popular in early times. Leonardo da Vinci mentions the Baths of Bormio, and Gesner went there.

It is not, however, with the emotional influences or the picturesque aspect of mountains that science concerns itself, but with their physical examination. If I have lingered too long on my preamble, I can only plead as an excuse that a love of one's subject is no bad qualification for dealing with it, and that it has tempted me to endeavour to show you grounds for believing that a love of mountains is no modern affectation, but a feeling as old and as widespread as humanity itself.

Their scientific investigation has naturally been of comparatively modern date. There are a few passages about the effects of altitude, there are orographical descriptions more or less accurate in the authors of antiquity. But for attempts to explain the origin of mountains, to investigate and account for the details of their structure, we shall find little before the notes of Leonardo da Vinci, that marvellous man who combined, perhaps, more than any one who has ever lived the artistic and the scientific mind. His ascent of Monte Boso, about 1511, a mountain which may be recognised under this name on the Italian ordnance map on the spur separating Val Sesia and the Biellese, was the first ascent by a physical observer. Gesner, with all his mountain enthusiasm, found a scientific interest in the Alps mainly, if not solely, in their botany.

The phenomenon which first drew men of science to Switzerland was the Grindelwald glaciers—'miracles of Nature' they called them. Why these glaciers in particular, you may ask, when there are so many in the Alps? The answer is

obvious. Snow and ice on the 'mountain-tops that freeze' are no miracle. But when two great tongues of ice were found thrusting themselves down among meadows and corn and cottages, upsetting barns and covering fields and even the marble quarries from which the citizens of Bern dug their mantelpieces, there was obviously something outside the ordinary processes of Nature, and therefore miraculous.

Swiss correspondents communicated to our own Royal Society the latest news as to the proceedings of these unnatural ice-monsters, while the wise men of Zürich and Bern wrote lectures on them. Glacier theories began. Early in the eighteenth century Hottinger, Cappeller, Scheuchzer, that worthy man who got members of our Royal Society to pay for his pictures of flying dragons, contributed their quota of crude speculation. But it was not till 1741 that Mont Blanc and its glaciers were first brought into notoriety by our countrymen, Poccoke and Windham, and became an attraction to the mind and an object to the ambition of the student whose name was destined to be associated with them. Horacé Benedict de Saussure, born of a scientific family, the nephew of Bonnet, the Genevese botanist and philosopher, who has become known to the world as a mountaineer and a climber of Mont Blanc, came twenty years later. In truth he was far more of a mountain traveller and a scientific observer, a geological student, than a climber. When looking at his purple silk frock-coat (carefully preserved in his family's country home on the shore of the Lake of Geneva), one realises the difference between the man who climbed Mont Blanc in that garment and the modern gymnast who thinks himself *par excellence* the mountaineer.

De Saussure did not confine his travels to Savoy or to one group; he wandered far and wide over the Alpine region, and the four volumes of his 'Voyages' contain, besides the narratives of his sojourn on the Col du Géant and ascent of Mont Blanc, a portion of the fruit of these wanderings.

The reader who would appreciate De Saussure's claim as the founder of the Scientific Exploration of Mountains must, however, be referred to the List of Agenda on questions calling for investigation placed at the end of his last volume. It explains the comparative indifference shown by De Saussure to the problems connected with glacial movement and action. His attention was absorbed in the larger question of earth-structure, of geology, to which the sections exposed by mountains offered, he thought, a key; he was bitten by the contemporary desire for 'A Theory of the Earth,' by the taste

of the time for generalisations for which the facts were not always ready. At the same time, his own intellect was perhaps somewhat deficient in the intuitive faculty: the grasp of the probable or possible bearing of known facts by which the greatest discoverers suggest theories first and prove them afterwards.

The school of De Saussure at Geneva died out after having produced Bourrit, the tourist who gloried in being called the Historian of the Alps, a man of pleasant self-conceit and warm enthusiasm, and De Luc, a mechanical inventor, who ended his life as reader to Queen Charlotte at Windsor, where he flits across Miss Burney's pages as the friend of Herschel at Slough and the jest of tipsy royal dukes. Oddly enough, the first sound guess as to glacier movement was made by one Bordier, who had no scientific pretensions. I reprinted many years ago the singular passage in which he compared glacier ice to 'cire amollie,' soft wax, 'flexible et ductile jusqu'à un certain point,' and described it as flowing in the manner of liquids.* He added this remarkable suggestion foreshadowing the investigations of Prof. Richter and M. Forel: 'It is very desirable that there should be at Chamonix some one capable of observing the glaciers for a series of years and comparing their advance and oscillations with meteorological records.' To the school of Geneva succeeded the school of Neuchatel, Desor, and Agassiz; the feat of De Saussure was rivalled on the Jungfrau and the Finsteraarhorn by the Meyers of Bern. They in turn were succeeded by the British school, Forbes and Tyndall, Reilly and Wills, in 1840-60.

In 1857 the Alpine Club was founded in this country. In the half-century since that date the nations of Western Europe have emulated one another in forming similar bodies, one of the objects of which has been to collect and set in order information as to the mountains, and to further their scientific as well as their geographical exploration.

What boulders, or rather pebbles, may we profitably add to the enormous moraine of modern Alpine literature—a moraine of which it is to be hoped for the sake of posterity that the torrent of time may speedily make away with some of the lighter portions?

For fifty years I have loved and at frequent intervals wandered and climbed in the Alps. I have had something of a grand passion for the Caucasus. I am on terms of visiting

* *Alpine Journal*, ix. 327.

acquaintance with the Pyrenees and the Himalaya, the Apennines and the Algerian Atlas, the mountains of Greece, Syria, Corsica, and Norway. I will try to set in order some observations and comparisons suggested by these various experiences.

As one travels east from the Atlantic through the four great ranges of the Old World the peaks grow not only in absolute height, but also in abruptness of form, and in elevation above the connecting ridges. The snow and ice region increases in a corresponding manner. The Pyrenees have few fine rockpeaks except the Pic du Midi d'Ossau; their chief glacier summits, the Vignemale, Mont Perdu, the Maladetta, correspond to the Titlis or the Buet in the Alps. The peaks of the Alps are infinite in their variety and admirable in their clear-cut outlines and graceful curves. But the central group of the Caucasus, that which culminates in Dykhtau, Koshtantau, and Shkara, 17,000-ft. summits (Koshtantau falls only 120 ft. below this figure), has even more stately peaks than those that cluster round Zermatt.

Seek the far eastern end of the Himalaya, visit Sikhim, and you will find the scale increased; Siniolchum, Jannu, and Kangchenjunga are all portentous giants. To put it at a low average figure, the cliffs of their final peaks are half as high again as those of Monte Rosa and the Matterhorn.

In all these chains you will find the same feature of watersheds or partings lying not in but behind the geological axis. This is the case in the Alps at the St. Gotthard, in the Caucasus for some 40 miles west of the Dariel pass, in the Himalaya, in Sikhim and Nepal, where the waters flowing from the Tibetan plateau slowly eat their way back behind Kangchenjunga and the Nepalese snows. The passes at their sources are found consequently to be of the mildest character: hills 'like Wiltshire downs' is the description given by a military explorer. It needs no great stretch of geological imagination to believe in the cutting back of the southern streams of Sikhim or the Alps, as, for instance, at the Maloya; but I confess that I cannot see how the gorges of Ossetia—clefs cut through the central axis of the Caucasus—can be ascribed mainly to the action of water.

I turn to the snow-and-ice region. Far more snow is deposited on the heights of the Central Caucasus and the Eastern Himalaya than on the Alps. It remains plastered on their precipices, forming hanging glaciers everywhere of the kind found on the northern, the Wengern Alp, face of the Jungfrau. Such a peak as the Weisshorn looks poor and

bare compared with Tetnuld in the Caucasus or Siniolchum in the Himalaya. The plastered sheets of snow between their great bosses of ice are perpetually melting; their surfaces are grooved, so as to suggest fluted armour, by tiny avalanches and runnels.

In the Aletsch glacier the Alps have a champion with which the Caucasus cannot compete; but, apart from this single exception, the Caucasian glaciers are superior to the Alpine in extent and picturesqueness. Their surfaces present the features familiar to us in the Alps—icefalls, moulins, and earthcones.

In Sikhim, on the contrary, the glaciers exhibit many novel features, due no doubt mainly to the great sun-heat. In the lower portion their surface is apt to be covered with the *débris* that has fallen from the impending cliffs, so that little or no ice is visible from a distance. In the region below the *névé* there are very few crevasses; the ice heaves itself along in huge and rude undulations, high gritty mounds, separated by hollows often occupied by yellow pools which are connected by streams running in little icy ravines—a region exceptionally tiresome, but in no way dangerous to the explorer. In steep places the Alpine icefall is replaced by a feature I may best compare with a series of earth-pillars such as are found near Evolena and elsewhere, and are figured in most text-books. The ice is shaped into a multitude of thin ridges and spires, resembling somewhat the Nieves Penitentes of the Andes—though formed in a different material.

Great sun-heat acting on surfaces unequally protected, combined in the latter case with the strain of sudden descent, is no doubt the cause of these phenomena. Generally the peculiarities of the great glaciers of Kangchenjunga may be attributed to a fiercer sun, which renders the frozen material less liable to crack, less rigid, and more plastic.

A glacier, as a rule, involves a moraine. Now, moraines are largely formed from the material contributed by sub-aërial denudation—in plain words, by the action of heat and cold and moisture on the cliffs that border them. It is what falls on a glacier, not that which it falls over, that mainly makes a moraine. The proof is that the moraines of a great glacier which flows under no impending cliffs are puny compared with those of a little one that lies beneath great rockwalls.

Take, for example, the Norwegian glaciers of the Jostedal's Brae and compare them with the Swiss. The former, falling from a great *névé* plain or snowfield, from which hardly a crag protrudes, are models of cleanliness. I may cite as

examples the three fascinating glaciers of the Olden valley. The Rosenlauri glacier in Switzerland owed the purity which gave it a reputation fifty years ago, before its retirement from tourists' tracks, to a similar cause—its source in a vast snow-plateau, the Wetterkessel.

One peculiarity very noticeable both in the Himalaya and the Caucasus I have never found satisfactorily accounted for. I refer to the long grassy trenches lying between the lateral moraine and the mountain-slope, which often seem to the explorer to have been intended by Providence to form grass paths for his benefit. They may possibly be due to the action of torrents falling from the hillside, which, meeting the moraine and constantly sweeping along its base, undermine it and keep a passage open for themselves. There are remarkable specimens of this formation on both sides of the Bezingi glacier, in the Caucasus, and on the north side of the Zemu glacier in Sikhim.

Water is one of the greatest features in mountain scenery. In Norway it is omnipresent. In this respect Scandinavia is a region apart; the streams of the more southern ranges are scanty compared with those of a region where the snowfall of two-thirds of the year is discharged in a few weeks. Greece stands at the opposite pole. By what seems a strange perversity of Nature, its slender streams are apt to disappear underground, to reissue miles away in the great fountains that gave rise to so many legends. Arcadia is, for the most part, a dry upland, sadly wanting in the two elements of pastoral scenery, shady groves and running brooks.

The Alps are distinguished by their sub-alpine lakes—

‘Anne lacus tantos; te, Lari maxime, teque
Fluctibus et fremitu assurgens, Benace, marino?’

of Virgil. But perhaps even more interesting to the student are the lake-basins that have been filled up, and thus suggest how similar lakes may have vanished at the feet of other ranges.

I know no more striking walk to any one interested in the past doings of glaciers than that along the ridge of the mighty moraine of the old glacier of Val d'Aosta, which sweeps out, a hill 500 feet high, known as ‘La Serra,’ from the base of the Alps near Ivrea into the plain of Piedmont. Enclosed in its folds still lies the Lago di Viverone; but the Dora has long ago cut a gap in the rampart and drained the rest of the enclosed space, filling it up with the fluvial deposit of centuries.

It is, however, the tarns rather than the great lakes of the Alps which have been the chief subjects of scientific disputation. Their distribution is curious. They are found in great quantity in the Alps and Pyrenees, hardly at all in the Caucasus, and comparatively rarely in the part of the Himalaya I am acquainted with.

A large-scale map will show that where tarns are most thickly dotted over the uplands the peaks rise to no great height above the ridges that connect them. This would seem to indicate that there has been comparatively little sub-aërial denudation in these districts, and consequently less material has been brought down to fill the hollows. Again, it is in gneiss and granitic regions that we find tarns most abundant—that is, where the harder and more compact rocks make the work of streams in tapping the basins more lengthy. The rarity of tarns in the highlands behind Kangchenjunga, perhaps, calls for explanation. We came upon many basins, but, whether formed by moraines or true rock-basins, they had for the most part been filled up by alluvial deposits.

In my opinion, the presence of tarns must be taken as an indication that the portion of the range where they are found has until a comparatively recent date been under snow or ice. The former theory, still held, was that the ice scooped out their basins from the solid rock. I believe that it has simply kept scoured pre-existing basins. The ice removed and the surrounding slopes left bare, streams on the one hand have filled the basins with sediment, or, on the other, tapped them by cutting clefts in their rims. This theory meets, at any rate, all the facts I have observed, and I may point out that the actual process of the destruction of tarns by such action may be seen going on under our eyes in many places, notably in the glens of the Adamello group. Professor Garwood has lately employed his holidays in sounding many of the tarns of the St. Gotthard group, and his results, I understand, tend to corroborate the conclusions just stated.

I desire here to reaffirm my conviction that snow and ice in the High Alps are conservative agents; that they arrest the natural processes of sub-aërial denudation; that the scouring work done by the glacier is insignificant compared with the hewing and hacking of frost and running water on slopes exposed to the open sky without a roof of névé or glacier.

The contrast between the work of these two agents was forced upon me many years ago while looking at the ground from which the Eiger glacier had then recently retreated.

The rocks, it is true, had had their angles rubbed off by the glacier, but through their midst, cut as by a knife, was the deep slit or gash made by the sub-glacial torrent. There is in the Alps a particular type of gorge, found at Rosenlauri, at the Lower Grindelwald glacier, at the Kirchet above Meiringen, and also in the Caucasus, within the curves of old terminal moraines. It is obviously due to the action of the sub-glacial torrent, which cuts deeper and deeper, while the ice above protects the sides of the cutting from the action of the atmosphere.

One more note I have to make about glaciers. It has been stated that glaciers go on melting in winter. Water, no doubt, flows from under some of them, but that is not the same thing. In January the end of the Rosenlauri glacier is dry; you can jump across the clear stream that flows from the Lower Grindelwald glacier. That stream is not meltings, but the issue of a spring which rises under the glacier and does not freeze. There is another such stream on the way to the Great Scheideck, which remains free when frost has fettered all its neighbours.

I should like to draw your attention before we leave glaciers to the systematic efforts that are being made on the Continent to extend our knowledge of their peculiarities. The subject has a literature of its own, and two societies—one in France, one in other countries—have been constituted to promote and systematise further investigations, especially with regard to the secular and annual oscillations of the ice. These were initiated by the English Alpine Club in 1893, while I was its president. Subsequently, through the exertions of the late Marshall Hall, an enthusiast on the subject, an International Commission of Glaciers was founded, which has been presided over by Dr. Richter, M. Forel, and others; and more recently a French Commission has been created with the object of studying in detail the glaciers of the French Alps. A number of excellent reports have been published, embodying information from all parts of the globe. There has been, and is, I regret to say, very great difficulty in obtaining any methodical reports from the British possessions oversea. The subject does not commend itself to the departmental mind. Let us hope for improvement: I signalise the need for it. Of course, it is by no means always an easy matter to get the required measurements of retreat or advance in the glacial snout, when the glacier is situated in a remote and only casually visited region. Still, with good will more might be done than has been. The periods of advance and retreat of glaciers appear

to correspond to a certain extent throughout the globe. The middle of the last century was the culmination of the last great advance. The general estimate of their duration appears to be half a century. The ice is now retreating in the Alps, the Caucasus, and the Himalaya, and I believe in North America. We live in a retrogressive period. The minor oscillation of advance which a few years ago gave hopes to those who, like myself, had as children seen the glaciers of Grindelwald and Chamonix at their greatest, has not been continued.

Attempts are made to connect the oscillations of glaciers with periods of sunspots. They are, of course, connected with the rain or snowfall in past seasons. But the difficulty of working out the connection is obvious.

The advance of the glacier will not begin until the snows falling in its upper basin have had time to descend as ice and become its snout; in each glacier this period will vary according to its length, bulk, and steepness, and the longer the glacier is, the slower its lower extremity will be to respond. Deficiency in snowfall will take effect after the same period. It will be necessary, therefore, to ascertain (as has been done in a tragic manner on Mont Blanc by the recovery in the lowest portion of the Glacier des Bossons of the bodies of those lost in its highest snow) the time each glacier takes to travel, and to apply this interval to the date of the year with which the statistics of deposition of moisture are to be compared. If the glacier shows anything about weather and climate, it is past, not contemporary, weather it indicates.

Another point in which the Asiatic ranges, and particularly the Himalaya, differ from the Alps is in the frequency of snow avalanches, earthfalls, and mud-slides. These are caused by the greater deposition of snow and the more sudden and violent alternations of heat and cold, which lead to the splitting of the hanging ice and snows by the freezing of the water in their pores. I have noticed at bivouacs that the moment of greatest cold—about the rising of the morning star—is often hailed by the reports of a volley of avalanches.

The botanist may find much to do in working out a comparison of the flora of my four ranges. I am no botanist: I value flowers according, not to their rarity, but to their abundance, from the artist's, not the collector's, point of view. But it is impossible not to take interest in such matters as the variations of the gentian in different regions, or the behaviour of such a plant as the little Edelweiss (once

the token of the Tyrolese lover, now the badge and bane of the Alp-trotter), which frequents the Alps, despises the Caucasus, reappears in masses in the Himalaya, and then, leaping all the isles of the tropics, turns up again under the snows of New Zealand. I may mention that it is a superstition that it grows only in dangerous places. I have often found it where cows can crop it; it covers acres in the Himalaya, and I believe it has been driven by cows off the Alpine pastures, as it is being driven by tourists out of the Alps altogether.

The Italian botanists, MM. Levier and Sommier, have given a vivid account of what they call the Makroflora of the Central Caucasus—those wild-flower beds, the product of sudden heat on a rich and sodden soil composed of the vegetable mould of ages, in which a man and horse may literally be lost to sight. Has any competent hand celebrated the Mikroflora of the highest ridges, those tiny, vivid forget-me-nots and gentians and ranunculuses that flourish on rock-island 'Jardins' like that of Mont Blanc, among the eternal snows, and enamel the highest rocks of the Basôdino and the Lombard Alps? A comprehensive work on a comparison of mountain flora and the distribution of Alpine plants throughout the ranges of the Old World would be welcome. We want another John Ball. Allied to botany is forestry, and the influence of trees on rainfall, and consequently the face of the mountains, a matter of great importance, which in this country has hardly had the attention it deserves.

From these brief suggestions as to some of the physical features of mountains I would ask you to turn your attention to the points in which mankind come in contact with them, and first of all to history.

I fancy that the general impression that they have served as efficient barriers is hardly in accordance with facts, at any rate from the military point of view. Many great captains—Hannibal, Hasdrubal, Cæsar, Charles the Great, and Napoleon—passed the Alps successfully. Hannibal, it is true, had some difficulty, but then he was handicapped with elephants. Many years ago I showed that Servius, the greatest authority in Rome in the days of Augustus, had no doubt as to where Hannibal crossed the Alps, and proved that it was not by any Aostan pass.* The Holy Roman emperors constantly moved forwards and backwards. Burgundy, as the late Mr. Freeman was never weary of insisting,

* See *Alpine Journal*, Nos. 81, 89; *P.R.G.S.*, October, 1886, and May, 1899.

lay across the Alps. So till our own day did the dominions of the House of Savoy. North Italy has been in frequent connection with Germany; it is only in my own time that the Alps have become a frontier between France and Italy. But questions of this kind might lead us too far. Let me suggest that some competent hand should compose a history of the Alpine passes and their famous passages, more complete than the treatises that have appeared in Germany. Mr. Coolidge, to whom we owe so much, has, in his monumental collection and reprint of early Alpine writers, just published, thrown great light on the extensive use of what I may call the by-passes of the Alps in early times. Will he not follow up his work by treating of the Great Passes? I may note that the result of the construction of carriage roads over some of them was to concentrate traffic; thus the Saas passes and the Gries were practically deserted for commercial purposes when Napoleon opened the Simplon. The roads over the Julier and Maloya ruined the Septimer. Another hint to those engaged in tracing ancient lines of communication. In primitive times, in the Caucasus to-day, the tendency of paths is to follow ridges, not valleys. The motives are on the spot obvious—to avoid torrents, swamps, ravines, earth-falls, and to get out of the thickets and above the timber-line. The most striking example is the entrance to the great basin of Suanetia, which runs not up its river, the Ingur, but across a ridge of over 9,000 feet, closed for eight months in the year to animals.

From the military point of view mountains are now receiving great attention in Central Europe. The French, the Italians, the Swiss, the Austrians have extensive Alpine manœuvres every summer, in which men, mules, and light artillery are conveyed or carried over rocks and snow. Officers are taught to use maps on the spot; the defects in the official surveys are brought to light. It is not likely, perhaps, except on the Indian frontier, that British troops will have to fight among high snowy ranges. But I feel sure that any intelligent officer who is allowed to attend such manœuvres might pick up valuable hints as to the best equipment for use in steep places. Probably the Japanese have already sent such an envoy and profited by his experience.

A word as to maps, in which I have taken great interest, may be allowed me. The ordnance maps of Europe have been made by soldiers, or under the supervision of soldiers. At home when I was young, it was dangerous to hint at any

defects in our ordnance sheets, for surveyors in this country are a somewhat sensitive class. Times have altered, and they are no longer averse from receiving hints and even help from unofficial quarters. Since the great surveys of Europe were executed, knowledge has increased, so that every country has had to revise or re-execute its surveys. In three points that concern us there was great room for improvement—the delineation of the upper region as a whole, and the definition of snow and glaciers in particular, and in the selection of local names. In the two former the Federal Staff at Bern has provided us with an incomparable model. The number of local names known to each peasant is small, his pronunciation is often obscure, and each valley is apt to have its own set of names for the ridges and gaps that form its skyline. Set a stranger, speaking another tongue than the local *patois*, to question a herdsman, and the result is likely to be unsatisfactory. It has often proved so. The Zardezan is an odd transcription of the Gias del Cian of *patois*, the Gite du Champ in French. Grand Paradis is probably a corruption of Granta Parei, an apt description of the great screen of rock and ice of the highest mountain in Italy, though that name is now given to a neighbouring peak. The Pointe de Rosablanc was formerly the Roesa Bianca, or white glacier. Monte Rosa herself, though the poet sees a reference to the rose of dawn, and the German professor detects ‘the Keltic *ros*, a promontory,’ is a simple translation of the Gletscher Mons of Simler, or rather Simler’s hybrid term is a translation of Monte della Roesa. Roesa, or Ruize, is the Val d’Aostan word for glacier, and may be found in De Saussure’s ‘Voyages.’

An important case in this matter of mountain nomenclature has recently come under discussion—that of the highest mountain in the world. Most, if not all, mountaineers regret that the name of a Surveyor-General, however eminent, was fifty years ago affixed to Mount Everest. The ground for this action on the part of the Survey was the lack of any native name. Some years ago I ventured to suggest that the 29,002-foot peak (No. XV. of the Survey) was probably visible from the neighbourhood of Katmandu, even though the identifications of it by Schlagintweit and others might be incorrect, and that since some at least of the summits of the snowy group east of that city are apparently known in Nepal as Gaurisankar, that name might, following the practice which gave its name to Monte Rosa in the Alps, legitimately be applied to the loftiest crest of the mountain group of which the Nepalese Gaurisankar formed a part.

Recently by the kindness of Lord Curzon, acting on a suggestion of my own, Captain Wood, a Survey officer, has been deputed to visit Katmandu and ascertain the facts. He has found that, contrary to the opinion of the late General Walker and the assertion of Major Waddell, Peak XV. is visible from the hills round the capital, and that the two highest snow-peaks visible from the city itself in the same direction are known to the Nepalese 'nobles' as Gaurisankar.*

These latter peaks or peak are about 36 miles distant from Peak XV., but are connected with it by a continuous line of glaciers. According to the principles that have prevailed in the division of the Alps, they would undoubtedly be considered as part of the same group, and the name, which, according to Captain Wood, is applied to a portion of the group, might legitimately be adopted for its loftiest peak.

But the chiefs of the Indian Survey take, as they are entitled to, a different view. They have decided to confine the name Gaurisankar to one of the peaks seen from Katmandu itself. I do not desire to raise any further protest against this decision. For since, in 1886, I first raised the question, its interest has become mainly academical. A local Tibetan name for Peak XV., Chomo-Kankar, the Lord of Snows, has been provided on excellent native authority, confirmed by that competent Tibetan scholar, Major (now Colonel) Waddell, and I trust this name may in the future be used for the highest mountain in the world. The point at issue is mainly one of taste. Indian surveyors may see no incongruity in naming after one of their own late chiefs the highest mountain in the world. But in this view they are, I believe, in a small minority.†

I would urge mountain explorers to attempt in more distant lands what the late Messrs. Adams-Reilly and Nichols, Mr. Tuckett, and Lieut. Payer (of Arctic fame) did forty years ago with so much success in the Alps, what the Swiss Alpine Club have done lately—to take a district, and working from the trigonometrically fixed points of a survey, where one exists,

* See 'Report on the Identification and Nomenclature of the Himalayan Peaks as seen from Katmandu, Nepal.' By Captain H. Wood, R.E., with Preface by Colonel St. G. Gore, C.S.I., R.E. Calcutta: 1904. 3s.

† See, for more recent discussions of this question in periodicals, *Proceedings of the Royal Geographical Society*, N.S., 1885, vii. 753; 1886, viii. 88, 176, 257; 1891, xiii. 108; *Geographical Journal*, 1903, xxi. 294; 1904, xxiii. 89; xxiv. 356; *Alpine Journal*, 1886, xii. 438; 1902-3, xxi. 33, 317; 1904, xxii. 56; *Petermann's Mitteilungen*, 1888, xxxiv. 338; 1890, xxxvi. 251; 1901, xlvii. 40, 289; 1902, xlviii. 14.

fill it in by plane-tabling with the help of the instruments for photographic and telephotographic surveying, in the use of which Mr. Reeves, the map curator to the R.G.S., is happy to give instruction. An excellent piece of work of this kind has recently been done by Mr. Stein in Central Asia.

There are, I know, some old-fashioned persons in this country who dispute the use of photography in mountain work. It can only be because they have never given it a full and fair trial with proper instruments.

Lastly, I come to a matter on which we may hope before long to have the advantage of medical opinion, based for the first time on a large number of cases. I refer to the effects of high altitudes on the human frame and the extent of the normal diminution in force as men ascend. The advance to Lhasa ought to do much to throw light on this interesting subject. I trust the Indian Government has taken care that the subject shall be carefully investigated by experts. The experience of most mountaineers (including my own) in the last few years has tended to modify our previous belief that bodily weakness increases more or less regularly with increasing altitude. Mr. White, the Resident in Sikhim, and my party both found on the borders of Tibet that the feelings of fatigue and discomfort that manifested themselves at about 14,000 to 16,000 ft. tended to diminish as we climbed to 20,000 or 21,000 ft. I shall always regret that when I was travelling in 1899 on the shoulders of Kangchenjunga the exceptional snowfall altogether prevented me from testing the point at which any of our ascents were stopped by discomforts due to the atmosphere. Owing to the nature of the footing, soft snow lying on hard, it was more difficult to walk uphill than on a shingly beach; and it was impossible for us to discriminate between the causes of exhaustion.

Here I must bring this, I fear, desultory address to an end. I might easily have made it more purely geographical, if it is geography to furnish a mass of statistics that are better and more intelligibly given by a map. I might have dwelt on my own explorations in greater detail, or have summarised those of my friends of the Alpine Club. But I have done all this elsewhere in books or reviews, and I was unwilling to inflict it for a second time on any of my hearers who may have done me the honour to read what I have written. Looking back, I find I have been able to communicate very little of value, yet I trust I may have suggested to some of my audience what opportunities mountains offer for scientific observations to mountaineers better qualified in science than the present

speaker, and how far we scouts or pioneers are from having exhausted even our Alpine playground as a field for intelligent and systematic research.

And even if the value to others of his travels may be doubtful, the Alpine explorer is sure of his reward. What has been said of books is true also of mountains—they are the best of friends. Poets and geologists may proclaim—

‘The hills are shadows, and they flow
From form to form, and nothing stands.’

But for us creatures of a day the great mountains stand fast, the Jungfrau and Mont Blanc do not change. Through all the vicissitudes of life we find them sure and sympathetic companions. Let me conclude with two lines which I copied from a tomb in Santa Croce at Florence—

‘Huc properate, viri, salebrosum scandite montem,
Pulchra laboris erunt præmia, palma, quies.’

A PILGRIMAGE TO MONTE VISO.

By WM. ANDERTON BRIGG.

NO mountain in the Alps is more happily named than Monte Viso, for none is better seen of all men, whether they be climbers of the high peaks or dwellers in the plain. It stands so near the great valley of the Po and so far from any rivals that it is clearly visible from all sides, and is a striking feature in the view, not only from the plains, but also from almost every peak in the Western and Central Alps.

The late Mr. Wm. Mathews was the first to climb the Viso,* and Mr. Coolidge contributed an exhaustive article to the ‘Journal’ in 1881.† These and a note on its recent history‡ render any further description of the peak, on my part, unnecessary. And if English climbers had visited and described it as often and as well as our French and Italian climbers—I refer especially to Sig. Guido Rey’s paper in the ‘Bollettino’ (vol. xx. No. 54), M. de Cessole’s in the ‘Revue Alpine’ (vol. x. p. 33), and Sig. Valbusa’s exhaustive monograph in a recent issue of the ‘Bollettino’ (vol. xxxvi. No. 69)—I should have had no excuse for this article. But the Viso lies so far south of the ordinary track that few English climbers seem to visit it, and none, so far as I know, have written

* *Peaks Passes and Glaciers*, 2nd series, vol. ii.

† *Alpine Journal*, x. 458.

‡ *Ibid.* xxii. 186.

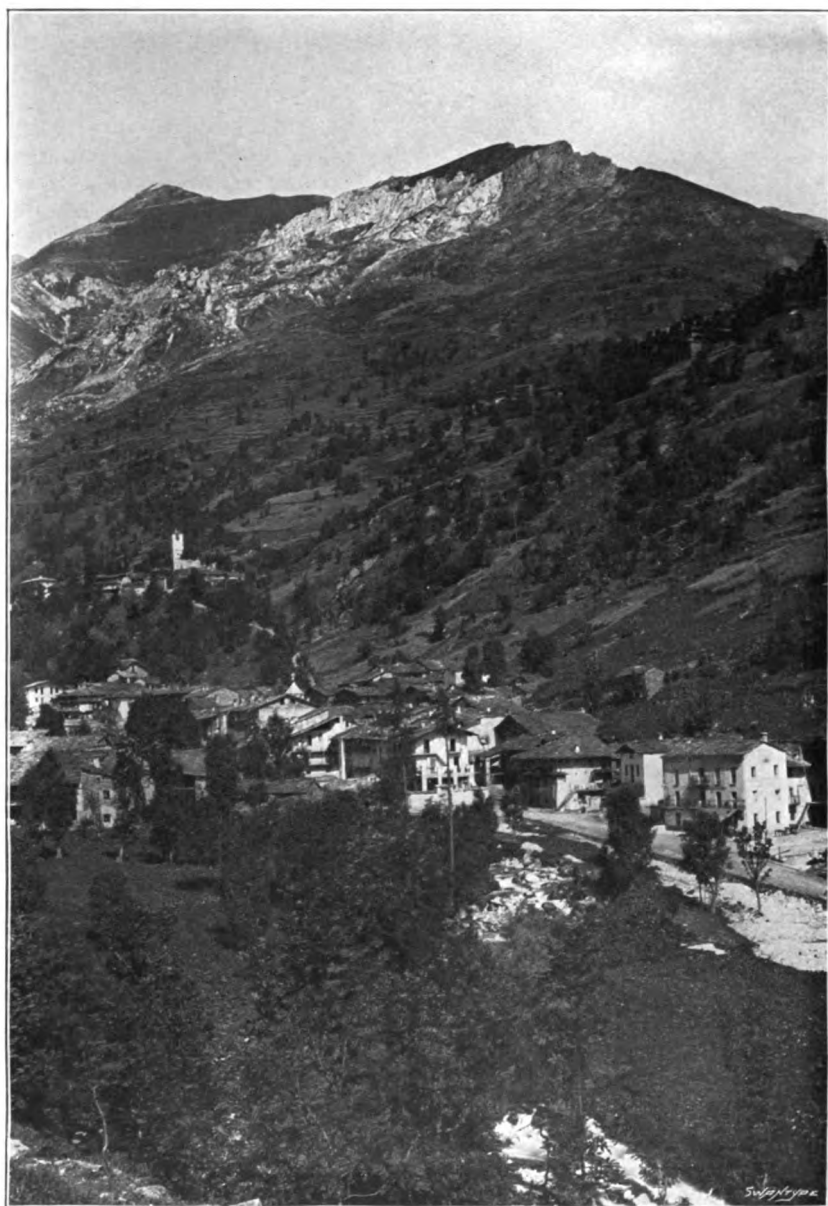


Photo. by Eric. Greenwood.

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CRISSOLO.

about it recently; while recent experiences, even on better known mountains, have always some value.

The Viso is usually climbed from Crissolo in the Po valley, and less frequently from Castel Delfino in the Val Varaita, and on the French side from Abriès in the Queyras valley. There are carriage-roads to all three places connecting them with the railway, and one of these would have been our quickest and easiest way of reaching the mountain. But we were old-fashioned enough to prefer the more seemly if slower way of approaching the presence of a great mountain by reverent stages, just as one does the shrine of a great temple or the throne-room of a great monarch, by successive courts and ante-rooms, for so are its beauties enhanced. The pilgrim mountaineer who has approached Mont Blanc by way of the Tarentaise or the High Level Route is in a much better frame of mind to appreciate its beauties than the sleepy and dust-covered *voyageur* who is bundled out at the Chamonix railway station or at the Hôtel Royal at Courmayeur.

There are three great 'pilgrim ways' to the Viso—from the south by way of the Maritime Alps, from the west by the Dauphiny and the Cottian Alps, (itself their crown and glory), and from the north, as we approached it, by a traverse across the Waldensian Valleys.

These valleys, which are, roughly speaking, three in number—the Val de Pragelas, Fènestrelles, or Perosa, the Val Germanasca, and the Val Pellice—all run from west to east into the plain of Piedmont and pour their united waters into the Po. The district drained by them is encircled on the north by the valley of the Dora Riparia, down which the Chambéry-Turin Railway runs, and bounded on the south by the valley of the Po. Much has been written about them and their history in other branches of literature, but nothing, so far as I know, in these pages, and not much in Alpine works at all. They lay, indeed, in the route of Sir Martin Conway's journey along 'the Alps from End to End,' but I suspect, from his guarded allusions to them, that he circumvented them by road or rail. The new 'Ball,' however, contains all the traveller and climber can want, and makes any detailed description of our route unnecessary. The maps especially we found very useful.

Susa, in the Dora Riparia Valley, would have been the best starting-point for our trip, but we decided to begin at Modane on the French side of the Tunnel. We made it the starting point of a pilgrimage northward to Mont Blanc in

1901, already described in these pages,* and to make another from it southward would complete a few more links in our acquaintance with the main chain of the Alps.

We took train from Chambéry to Modane on the morning of July 25, 1908, after sending off our heavy luggage to La Bérarde in the Dauphiny, and drove up the Mont Cenis road as far as Bramans, whence a walk through the pine woods in occasional rain brought us, in three hours, to Les Planais, where we found decent accommodation, not in the rude chalets we had expected, but at a small mountain inn (the Refuge du Mont Cenis). A company of French Alpine troops and a suspicious gendarme who asked for our passports showed that we were approaching the frontier.

Envious mists had prevented us seeing anything but the lower slopes of the Alps of the Tarentaise on the north side of the Arc Valley, and we were not much luckier next day.

We left at 7 A.M. (July 26), and, after following the Petit Mont Cenis road to the Fesse chalets, mounted by a steep footpath through a wood, and along a hillside to the Savine chalets in three hours—guided thither by one of the shepherds whom we came across in the mist, just when we had lost our bearings. Another hour took us to the Lac de Savine at the foot of the easy slopes of the Dents d'Ambin, and we were tempted to do what 'Ball' seems to expect of all wanderers like ourselves, and 'spitz the col' by climbing the peak. But there was no time, and it may be taken as a general rule that for a guideless party to attempt this addition to the day's work means getting down to the night's quarters much later than is comfortable.

We accordingly went on to the frontier close at hand, where the path crosses the Col de Clapier and plunges down steep slopes into the Clarea glen. There was a *douanier's* hut on the col, but no fortifications or soldiers, and the gendarmes only inquired after contraband tobacco.

The first part of the path is carried down a rock staircase called the Escalier, and it was not easy to imagine how Hannibal, who is supposed by some writers to have chosen this route for invading Italy, got his elephants down it. Even mules would find it difficult. Henri Arnaud, however, led his little band of heroes this way in their '*glorieuse rentrée*' into their own country in 1689, and we could sympathise with them in being compelled by their enemies to

* *Alpine Journal*, xxi. 215.

turn up over the steep cliffs on the right hand instead of going straight down to the valley.

More fortunate than they, we made our way down the glen, stopping for milk at the Molaretto chalets, and walking delicately along the outer edge of a 'wasserleitung' which is built up against the cliff, and forms the only path out of the lower end of the glen to the smiling orchards and meadows of Jaillon below. We had a striking view of the great valley of the Dora Riparia, bounded on the south by the Waldensian hills, which we hoped to cross on the morrow, and guarded at its outlet towards Turin by the white monastery of St. Michel la Cluse, perched on a high promontory of rock. The view is almost if not quite as fine as that of the Dora Baltea from above Aosta.

We dropped down into the Mont Genis road some miles above Susa by winding narrow lanes, whose smooth cobblestone pavements the natives were making even smoother by the sleds on which they were carrying their hay down to the village, and reached the town at 7 P.M.

We spent an hour next morning (July 28) looking at the old Cathedral, where the bronze triptych made to commemorate the ascent of the Roche Melon in 1958 was being exhibited in preparation for the approaching annual pilgrimage up that mountain, and at a well-preserved Roman arch erected to record the submission of King Cottius, and inscribed with the names of the fourteen Alpine tribes who owned his sway, and we did not get away until 8.30 A.M.

We reached Meana in one hour by a winding lane, and then, crossing under the railway and up through a chestnut glade, reached and followed the many zigzags and long reaches of a splendidly engineered carriage-road to the Col des Fenêtres in four hours from Susa. It was a hot day, and as the only *cantine* (a military one) was closed, we had to be content with milk at some chalets, which were dirty even for Italy. How much better these things are managed in Tirol!

We had been surprised at the absence of traffic on a road so well adapted for it, and not until we reached the fort at the top and found that the road, instead of going down into the valley on the other side, was continued along the hillside to the W. in the direction of the frontier, did we realise that it had been built, not as a highway, but for military purposes, just as the king's paths in the Eastern Graians have been built for sportsmen and not for tourists.

A sentry met us on the col and asked for our passports and—cameras! The former, of course, we gladly showed, but

our three 'camerarii' (if I may coin the word) were unusually reluctant to produce the latter, although each of them, like Simeon, had one in his sack's mouth. The 'model,' however, whose artistic efforts are confined to 'posing in the foreground' and suggesting impossible 'subjects,' came forward and displayed the useful but inartistic contents of his sack with such apparent goodwill and innocence, that the sentry, though suspicious, reluctantly allowed us to depart without more trouble, being, in fact, told to do so by a sergeant who had strolled up. and we went on our way with mixed feelings, for the true artist would rather lose his clothes than his camera. We had fewer cases of 'shocking exposure' than usual after this, which was, of course, explained by the 'lack of subjects.'

The reason for all this vigilance became apparent as we went down the green uplands to Fènestrelles and saw on our left a great fortress, running up the hillside, and guarding the highway up the valley over the Col de Sestrières and the Mont Genève to Briançon in France, so that the Italian Government naturally objects to any casual stranger photographing it.

Fènestrelles is a little town lying at the foot of this fortress, with a large church built, as the inscription on its imposing façade proudly states, by the great Louis, to commemorate the extirpation of heresy in these parts. We saw a man threshing ('willeying' is, I believe, the technical term) wool on its front steps by means of a flail made out of a piece of iron wire with a small hook at the end.

We slept at a quaint little inn built round a small courtyard, where we dined in the company of Italian tourists and officers, and listened to the regimental buglers in the village street as they played the good-night on brazen horns which seemed still to echo with

that long stern swell
That bids the Romans close.

We left next morning at 7 A.M. (July 29), and, crossing the stream, mounted upwards by the ruins of an old fort, whose embrasures, pointing down the valley, told of a time when the upper part of the valley belonged to France, and, following a wooded glen, traversed the interminable mule-track beyond to the Col d'Albergian, which we reached in 6 hrs., from Fènestrelles. We had some good views of the country to the N., and noted especially the Bessanese at the head of the Val d'Ala, whose last rocks had foiled one of our party in 1899.

We had seen the inevitable fort as we approached the col, and expected more trouble, but the Italian officer who met us there was kindness itself, and took us down to his little barracks and gave us an excellent cup of coffee. He spoke very fair English, the first and last we heard during our walk, and seemed very pleased to meet any one from the outside world, after his six weeks' sojourn among the mountains. He had about thirty men under him, stationed in simple but scrupulously clean barracks with cubicles in the sleeping quarters.

We spent an hour there, and, after hearty farewells, made our way down through the mountain mist, over ugly cliffs and stony wastes to the Ortière chalets in the Val del Piz, where we stopped for more coffee-boiling with a Protestant herdsman, whose intelligent features suggested inherited tendencies. We went on past Balsiglia, with its natural rock fortress, where Arnaud's little band defied for some days the united armies of France and Savoy, and at Champ de Salse called upon the Protestant pastor, M. Tron. He was unfortunately away from home, but Madame Tron was good enough to give us afternoon tea, and her son accompanied us for a mile on our road down the valley, here called the Val Massello.

We had to hurry down past the chestnut groves and limpid torrents foaming into marble basins of this lovely valley, and it was falling dark when we reached Perrero at 8.20 p.m.

Small as Perrero is, it is said to support two inns—one being of the Roman Catholic interest and the other the Protestant—but we only discovered the former (the H. Caccia Reale), or rather the enterprising landlord lay in wait for us, and took us in and cooked us a good supper, late as it was. The rooms of the inn are built round a courtyard, and can only be reached by outside staircases, which are inconvenient than those built on our system, but more economical of space and better ventilated, besides giving careless architects who may have 'forgotten the staircase' a second chance.

We left next day (July 30) at 8.30 a.m., and walked a mile or two down the valley, past a mill for grinding talc, which is brought down from the hillside on a wire rope, and, crossing the stream, walked up through the maize fields and orchards of the Riclaretto hamlets to the bare grassy uplands which encircle the head of a great glen running eastward down to St. Germano. We traversed round from here to the Col de Seiran, admiring the blue outlines of the Eastern Maritime Alps in the far S., and went down to Pra del Torno in the Val Angrogna—a lovely wooded valley, now peaceful and

deserted, but the scene of some bloody fighting in the bad old days.

These valleys owe much to the generosity of English sympathisers, but Pra del Torno might well have been graced by a more suitable church, built as it is in the Scotch Gothic style, appropriate perhaps in Thrums or Drumtochty, but terribly out of keeping with its lovely surroundings here.

We followed the valley down to Torre Pellice (or La Tour as it is commonly called), bathing on the way in a splendid pool, and stopping for afternoon coffee at the Pome d'Oro, in the hamlet of St. Lorenzo. The path mounts high above the stream to reach this place, and sinks again to La Tour, through woodlands and meadows, and past white campaniles grouped in true Italian fashion.

We reached La Tour at 7.30 P.M., and found excellent quarters at the Hôtel de l'Ours. La Tour is the capital town of these valleys, with a college and several cotton-spinning mills, and cheerful well-made streets. It would have been a good centre for exploring the remoter valleys, but we had not seen yet the Viso, or indeed any other mountain worth climbing; and the more ardent spirits among us were getting restive, and made disparaging allusions to rambles in Lakeland and mountaineering on mule-tracks. So we decided to make a push for Crissolo by the Colle delle Porte, the nearest way.

We accordingly left La Tour, crowded with peasants come in for the fair, at 7 A.M. the next day (July 31), and walked down the level road to Luserna, where the road for the Colle delle Porte crosses the Pellice river and mounts by the W. side of the Rora Glen. But we read the map in 'Ball' carelessly, and, crossing the Rora stream, mounted up through a wood on its eastern side, and it was not until we saw the village of Rora, far below on the other side of the glen, that we realised our mistake, and it then seemed too late to return. We accordingly followed the path up to the head of the valley, where excellent flagstones of unusual size were being quarried and carried down one at a time in frail mule-carts, and coming out above at a single chalet, marked Montoso in Ball's map, found ourselves suddenly looking straight down on 'all the Italian plain.' It was indeed the view of a lifetime. Not, as so often, veiled in mist, but glowing warm in the afternoon sun, the green grey plain lay like a great sea lapping the foot-hills of the Alps, seamed with straight dusty roads and winding stone-strewn river beds, and dotted with red-roofed towns—Bricherasio, Pinerolo,



Swiftype

Eric Greenwood, photo.

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MONTE VISO FROM COL. BERNARD.

Cavour, Villafranca, and the rest—whose very names are as music. On the eastern horizon shone the white roofs of Turin and the Superga, to the S.E. Saluzzo nestled at the foot of a long hill promontory, and in the far S. lay Cuneo, a thin line of pearl, backed by the blue range of the Maritime Alps.

For once the frozen ridges of the high Alps, seen but dimly in the far N., had to give place to the subtler beauties of the historic plain, and we gazed long and lingeringly.

Chaucer must surely have seen this view when he sang :

There is at the west end of Itaile,
 Doun at the root of Vesulus the colde,
 A lusty playn, abundant of vitaile,
 Wher many a tour and town thou maist byholde
 That foundid were in tyme of fadres old,
 And many anothir delitable sight
 And Saluces [Saluzzo] is this noble country hight.

We wended our way upwards over swelling mountain pastures round the head of a great 'combe' which ran down in darkling folds to the plain, and, turning westward at 6.30 P.M., struck the Col Bernard (which, by the bye, is not mentioned in 'Ball'), but which is, I think, just to the S. of the Pta d'Ostanetta of Ball's map, and at last—and at once—the great Viso soared up into the evening sky, half hidden in streaming clouds. It was a dramatic *coup d'œil*, worthy to compare with the first view of the Ortler from the Stelvio, the Dent Blanche from the Trift-joch, or the Matterhorn from the last turn in the Zermatt road.

It was clouding over and daylight fast departing, but, like true pilgrims, the 'camerarii' stooped down and paid homage in their wonted fashion.

Crissolo, in the narrow valley of the Po, was hidden by the low hog-backed hill which divides that valley from the affluent torrent of Tossiet, but we could see the white tower of St. Chiaffredo's shrine that overhangs the village, and, racing eagerly down the intervening alps, we passed through several smaller villages, and, joining the road from the Colle delle Porte, felt our way down into Crissolo at 9 P.M.

And so at length was our five days' pilgrimage accomplished, not, indeed, without labour, but not without reward. Swelling snow fields, pitiless rock slabs, and steep ice slopes are good; but so also are sunny alps, cool woods, and clear rushing streams. And over these valleys, moreover, broods a haunting glamour and a pathos, subtle but penetrating, and not easily shaken off.

Crissolo is still much as Mr. Coolidge and Mr. Freshfield described it in these pages more than twenty years ago,* and the Hotel del Gallo, where we stayed the first night, is still open. But we preferred the new and quieter Hotel della Corona, with its tiny bedrooms, open staircases, and sunny balconies.

We found the place full of Alpine soldiery, come down for the Sunday's rest—tall gunners from the Abruzzi, sturdy infantry, and smart Bersaglieri. There were a few visitors, mostly Italians come to see the famous source of their great river, but there were no climbers.

We spent our first off-day in this pleasant spot, and I ask for none better. There are not many 'side-shows.' St. Chiaffredo's Church, a quarter of an hour's walk away on the hillside, is worth a visit, with a splendid view of the Viso from the terrace in front, and a collection of votive offerings on its walls—muskets of the Emancipation time, fetterlocks, crutches, and such like. There is also a cave (del Rio Martino) which the others, less idle than myself, spent a couple of hours in visiting, but their reports were not enthusiastic. 'Speleology' is perhaps an acquired taste, and I was led to believe that there is something to be said for Mark Twain's plan of doing some part of a trip by deputy.

We had been told that Claudio Perotti, to whom we had sent a post-card, was the best guide, and we were lucky enough to find him at liberty. He is a sturdy red-bearded man of forty, full of strength and energy, Syndic of the Commune, and holder of the 'World's Record' for the Viso (200 odd not out). With larger opportunities he would have made a great name among guides. He can speak French.

He showed a touching confidence in our climbing powers, and straightway decided that we must cross the mountain by its N.E. face by a route, as we afterwards learnt, taken first by Mr. Coolidge, in 1881, and only twice repeated since, with a variation at the beginning, which avoids the dangerous 'Coolidge couloir.' Had we known more about it, we might have weakened in favour of the ordinary route by the S. face, but *beati ignorantes* has many good days to answer for.

We were four in number, and we expected Perotti would have asked for at least one other guide, but he laughed at the idea, and only asked that the sacks might be sent round to the Quintino Sella hut on the other side:—a suggestive contrast to the guides of Sulden, who, this year, refused to

* *Alpine Journal*, vol. x. p. 453.



F. Capello

F. Capello, photo.

THE VISO AND VISOLOTTO, FROM THE COLLE DELLA GIANA.

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take our party (all members of the Club) up the Cevedale, a mountain which can be climbed up and down again from the hut in three hours, unless each one of us had a separate guide!

We walked up from Crissolo in the afternoon of August 2 to the Piano del Re, a wild mountain alp at the foot of the Viso, and slept at the Albergo Alpino, a decent mountain inn which would be none the worse for a 'spring clean.' The river Po rises close by among great boulders, even as Chaucer sings:

the Po out of a welle smal
Taketh his firste spryngyng and his sours.

All good Italians have to see this place once, but then fortunately do not require the accessories of mountain railways and tea-gardens which some other nations seem to think a part of their Nature worship.

The Viso had been hidden in mist as we walked up, but this had disappeared before bedtime, and it was fine when we started next morning (August 3) at 3.50 A.M. Two hours took us by the Col dei Viso path to the foot of the rocks, where we roped, and began the climb by a rock couloir a little to the E. of the snow couloir by which Mr. Coolidge made the first ascent of this the N.E. face.

We spent the next nine hours on this splendid rock face, making our way by gullies and traverses and rock pitches, climbing strenuously but slowly, for we were five on the rope and not in good form, and Perotti was suffering from a cold. We followed the route taken by Sig. Guido Rey and M. de Cessole, and, except for the first bit, by Mr. Coolidge, and their descriptions, of which summaries appeared recently in the *Journal*,* are so clear and full that any by me would be superfluous. I was last on the rope and not, therefore, well placed for getting an accurate impression of the difficulties of the climb. When the men in front have tackled a difficult bit and are anxious to get on, there is a tendency for the man below to make use of the rope in order to oblige them. And whilst there were some places where the rocks were a bit rotten and others where one had to fumble a bit for holds, there was nothing supremely difficult. We had good weather, the snow slope near the top was in splendid order, the rocks were free from ice, and no stones fell, so that we had no excuse for being so long as we were.

We had plenty of time during the ascent to admire the

* *Alpine Journal*, vol. xxii. p. 136.

view to the N. Mont Blanc and the Tarentaise Graian and Pennine ranges in turn were greeted as old friends, not always, however, without discussion, at the rope's length, as to their identity, and it is indeed wonderful how many different names a peak may have given to it under such circumstances. Mont Blanc alone, like a true monarch, wore his crown of clouds; the rest stood bare—Grande Casse, Grand Paradis, Grand Combin, and queen of them all, Monte Rosa, glowing through the haze like a great opal. It is in distant views like this that snow mountains assert their supremacy, and the great Matterhorn, dwindled to a mere *aiguille*, made a poor show in that stately company. There was some haze in the far east, and I cannot positively say that we saw the Ortler or the Bernina group; but when we were on the Disgrazia this year we thought we saw the Viso. Nor do I remember being much struck with the view over the plain; I remember better the blue ridges of the Maritimes standing out sharply against the clear sky. The Mediterranean was not visible. On the French side lay a welter of grey brown mountains and the Alps of Dauphiny.

We reached the summit at 3.20 P.M., but did not stop long, as there was a cool wind, and we were anxious to get down to the Q. Sella hut, where the two porters we had sent over the Col dei Viso with our sacks would be waiting for us.

We took a long time to get down the easy S. face, which is all rock, and only reached the hut by some delightful glissades over winter snow at 6.15 P.M. We had long given up our original plan of going down to Castel Delfino the same evening, and were looking forward to a fairly comfortable night at the hut. But when we found there was no wood for the stove and only two or three blankets, we hesitated, and when we found further that the hotel people had contented themselves with putting the extra food we had ordered into the bill, and not into the sacks, we decided to make a push for the valley, for we had finished all our other provisions. Perotti could not go with us, as he had to get back to Crissolo that night for another party, but we vainly imagined that there must be a path which we could follow even in the dark, and accordingly set off.

All went well at first. The path was good, although covered in places by winter snow, but the night was drawing in and the little lakes we passed looked very cold and cheerless. But soon we came to the head of the gloomy Forciolline glen, and the path seemed to disappear into the torrent.

'Ball's' directions are not always plain sailing, even in day-

light, and when we read in the dim twilight that in coming *up from Castel Delfino* 'it is necessary to climb up the steep 'rocky barrier on the W. side of the stream by a green gully 'and a rocky hollow and over a shoulder, in order to gain the 'upper basin' where we were standing, our hearts sank within us, for there was nothing but a steep slope of rock on that side, and we were much too tired to play tricks on it. But we could not stop there all night, and as there seemed more chance of finding an outlet on the left-hand side we went on. The glen, however, grew narrower and more broken, and although we tried sometimes to fancy we were on a path it was a sorry make-believe, and we had to content ourselves in the end with scrambling down the big boulders, keeping close to and sometimes crossing the roaring torrent, which in one place made quite a respectable waterfall, until, with the last gleam of daylight, the rocks opened out a bit and we found ourselves on more level ground. M. de Cessole, in his paper, calls this glen 'fastidieux,' and I thank him for the word.

The village was still hours away down in the valley, and so far as we could make out from the map there were no chalets near, although there were plenty of enormous rocks which looked for all the world like chalets in the deceitful moonlight. So, as it was a warm night, we decided to accept the fate which comes to all climbers sooner or later, and sleep out.

We chose a big rock with sufficient shelter against the thin night breeze, but none against the dewfall, put on what extra clothing we had with us in our bags, took our suppers as eaten, and made the best of it. It was not really cold, and with a full moon and a starry sky to keep us company we slept tolerably, and envied no one, and rose at sunrise refreshed, but still hungry. There was, of course, no bill to pay, and our Treasurer was as pleased with this new source of economy as the Chancellor of the Exchequer would be with a new source of revenue.

We found, of course, on starting that we had been sleeping not far from the path, and not more than half an hour above the first chalets (those of Soulières) in the woods below, where we stopped on our way down for some milk. We reached Castel Delfino in the hot Val Varaita in 3 hrs., and spent the day there, feeding on strange meats (the afternoon tea was made from herbs) and sleeping in the cool shadow of an old tower built in the fourteenth century by the Dauphins of France, when the higher parts of the valley still belonged to them.

We stayed at the Auberge de la Croix Blanche, a common

country inn with only one living room, but decent beds, a poor exchange for the sweet spaciousness of the previous night. There is, I believe, another hotel (the Hotel di Francia) which I have seen described as *aliquanto primordiale*, and I cannot think of a better epithet for ours.

We might have got away by the carriage road down the valley to Turin, but it seemed more becoming to leave 'the presence' of the great mountain as we had entered it—reverently and on foot; so we decided to 'retire backward,' as it were, into France by way of the Col de Lautaret to Maljasset in the Val d'Ubaye.

We chose this route in preference to that which leads by the Col d'Agnel to Abriès in the Guil Valley, as Mr. Coolidge's description of Maljasset in the Journal* and in 'Ball'† had made us anxious to see it.

Either route would lead us up to the head of one valley and down the corresponding valley on the other side, which after all is an easier and more natural method of travelling than our previous switchback plan of crossing mountain ridges diagonally.

We left Castel Delfino without any regret at 6.30 A.M. (August 5), taking a mule with us to carry the sacks as far as the col, and walked up the Val Varaita in the hot morning sun, past the picturesque villages of Bellino and Celle, which latter we found blocked with a train of mountain artillery, to the 'grangia,' or alp of Cejol. The parish priest of Celle walked with us for an hour—a stout hearty man, who seemed glad of any one to talk to in this quiet valley.

The Pelvo d'Elva towered up on our left hand and looked most unattractively steep and barren in the hot sun.

Beyond Cejol the mule-track leads through a narrow defile, aptly called the Barricata, which must be much exposed to avalanches in the spring, and up green pastures gay with flowers, to the Lautaret chalets in the centre of a wild *cirque* of jagged rock peaks called the Dents de Maniglia.‡ We stopped a few minutes to cook some food and gather the 'chive' which grows wild here—the only place where I have found it in the Alps—and then, having dismissed the mule, ascended by easy scree slopes to the col, where we expected to find soldiers, or at any rate gendarmes, as it is on the frontier between France and Italy. But the route is so little used apparently that neither country seems to think these precautions

* *Alpine Journal*, vol. x. p. 123.

† P. 37.

‡ *Alpine Journal*, vol. xv. p. 290.

necessary. We had a farewell glimpse of the Viso from the chalets, and a view of the Dauphiny Alps from the col.*

We jogged quietly down the long green valley on the other side to Maljasset, trying to find a path, with indifferent success, through the steep wood which overhangs the eastern shores of the Lac du Paroird, once a fine sheet of water, but now only a mud flat, and in the end wading the stream that flows through it.

Maljasset, or Maurin, as it is commonly called (which we reached at 5.30 P.M.), does not seem to have altered at all in the twenty-five years which have elapsed since Mr. Coolidge described it in these pages, and has yet to make the first step towards becoming worthy of its claim to be 'one of the finest mountaineering headquarters of the S.W. Alps.' † Some mountaineering centres are born great, others achieve greatness, others, again, appear to resent even having greatness thrust upon them; and Maljasset is one of them. There is, indeed, an inn (*chez André*), but it is of the rudest kind, with only one bedroom, which we found already occupied, and we had to sleep in the 'best bedrooms' of the landlord's friends in the village. Nor were there any guides hanging about, and the only unemployed person was a gendarme, who asked for our passports and flattered us by suggesting we might be English officers come to study the frontier!

But, after all, a centre must have a circumference, and a mountaineering centre must have some mountains round it. And, although Maljasset has such peaks as the Chambeyron and the Font Sancte, they are not snow mountains. One is almost tempted to apply to it the remark of Dr. Johnson to a young poet, and say that the claims of Maljasset will be remembered when those of Zermatt and Chamonix are forgotten—but not till then!

It would not be a bad place, however, to spend a few quiet days in, and some allowance must be made for the 'jaundiced eye' of mountain lovers who had been 'mountaineering' for a fortnight without cutting an ice step, and were pining for the keener air of the Dauphiny Alps.

There is a carriage road down the Val d'Ubaye, and, following the good mountaineering rule of never walking when you can ride, we packed ourselves next morning (August 6) into the only vehicle of which the village boasted, a crazy two-wheeled pony cart, and started at 7.30 A.M. with as much dignity as a bumpy road would allow. The first hour took

* See further as to this col, *Alpine Journal*, vol. x. p. 350.

† *Ball*, p. 87.

us down a wild and barren tract to the Châtelet, a great rocky barrier through which the torrent has forced a narrow gorge, and the second through a fertile valley basin to St. Paul sur Ubaye, where we lunched at the Hotel Brémond, and then, in the hot noontide, turned up to the W. and left the Ubaye valley by the well-graded carriage road of the Col de Vars. We had a fine view from the top of the Brec de Chambeyron in the E. and the Pelvoux in the W., and, descending on the other side by rolling pastures and pine woods, finally zigzagged down a very striking mass of limestone weathered into fantastic shapes into the town of Guillestre, in the valley of the Guil, at 5.30 P.M., thankful for having escaped any more serious mishap to our carriage than a broken backboard.

The best hotel at Guillestre has been closed, and the others are not very good.

We drove down to the railway station next morning, passing under the ramparts of Mont Dauphin, took train to La Bessée, drove to Ville Vallouise, slept at the new inn (clean and good) at Ailefroide, and crossed next day by the Col du Sélé—our first and last glacier excursion—to La Bérarde, where we picked up our luggage and correspondence, rested Sunday, and went home next day by way of Bourg d'Oisans, Grenoble, and Chambéry.

If I have pitched the story of our little pilgrimage in a minor key, I would plead that Alpine music is not all grand opera nor yet all musical comedy, and there is still room, I trust, for the humbler melody of the 'oaten flute.'

THE TRIDENT DE LA BRENVA.

BY THE EDITOR.

I SPOKE of my main object in going to the Alps in 1902 to neither small nor great save to my old friend Tempest Anderson, who had just returned from a close inspection of the eviscerated Soufrière, and had narrowly escaped the vengeance which Mont Pelée deals out not only to those who dwell at his feet but also to such as presume even from a distance to examine the methods of his murders. His talk was of Wallibu and Rabaka and such like euphonious streams, and recent memories of them drowned the appeal of the Dora Baltea and Arveyron: so I departed alone.

I had set my heart on the Trident de la Brenva and was ablaze to set my feet on him too. So after a delightful little



THE TRIDENT DE LA BRENVA FROM THE GÉANT GLACIER.

visit to Cogne and Piantonetto I set out with the sinews of war—that is to say, with François and Sylvain Pession—for Courmayeur. We varied the climb to the Rifugio Torino, under the Col du Géant, by taking to a torrent who was of a very complaisant and, I may say, somnolent disposition and allowed us to share his bed. A ptarmigan pretended strange infirmities to lure us from her young—very tiny chicks indeed, but, like the young of larger creatures, gifted with strange powers of expostulation. Doubtless the mother bird remains under the delusion that she fooled us. Then we found *Gentiana acaulis* in flower. Then a young man descended sportively in front of his party with an occasional backward glance to see if his mistress's eyebrow was raised high enough in wondering admiration. He gambolled with Terpsichorean facility and all the light-heartedness of youth. 'C'est le frère d'un chamois,' said one of my companions. A much less complimentary relationship suggested itself to the other. My very good friend Signor Bareux recognised us before we reached the little platform on which the Rifugio is built. He came down a little way to meet us. We shook hands. We exchanged greetings. We asked after mutual friends. Signor Bareux is not only genial himself; the genuine warmth of his reception would awaken a thrill of geniality even in a stranger, and we were old friends. We were all pleased with each other and showed it.

The next day was not fine enough for serious climbing, but there were changeful cloud effects and glimpses of mountains near and far, and many of the choicest and noblest of my friends were bid to memory's feast.

On the second day we started betimes. We reached the col and turned to the left. Soon we halted for a look at the well-known view. There is La Vierge; there is the Géant, bareheaded, in respectful homage; but a world of ice lies between them—after so many centuries, like the wedded pair in Lord Houghton's song—they are 'strangers yet.' We soon arrived at the foot of the great wall which divides the Géant and Brenva glaciers and is crowned by several imposing rock towers, the most stately of them being Le Trident. A brief reconnaissance decided us to make our attack on a rib of rock that runs down to the W. of our peak. When he had crossed the bergschrund François was soon busy with his axe. The ice chips rained down thick and fast, and as I turned up the collar of my coat I felt that we had, so to speak, opened the first parallel of our siege work. On this formidable wall we spent three hours twenty minutes.

The whole of it was very steep ; in many places the snow was rotten and of a backsliding character, and François had much hard work to win his way. Once or twice as I looked up I wondered why he was so long in negotiating a matter of three or four steps which appeared comparatively easy, but when I reached the spot I soon discovered the reason. He chose his route with great judgment. At last we crawled into the sun, and very welcome was his warmth. Then a few feet more brought us to the crest of the great ridge which divides the Géant and Brenva glaciers. The former we know pretty well ; the latter was now revealed to us in all its grandeur.

We then walked along the ridge to the south side of the Trident, and it soon became evident that some rock-climbing of the choicest character was before us.

We took off our coats and deposited our ice axes on the snow. The guides climbed the lower part of the great tooth above us with some difficulty. I followed with more. And then, after creeping upwards a little way, we came to the chimney. This proved to be something unusual—I might almost say unique.

It was in mountain-climbing what is represented at Afghan banquets by

A cinnamon stew of the fat-tailed sheep,
And he who hath never tasted the food,
By Allah, he knoweth not bad from good.

I cannot pretend to portray the fascination of this chimney, so well appointed in excitements and lavishly furnished with delights. The lowest part of it was not so bad—I ought rather to say, so good—as the upper portion. I had the benefit of two ropes, so that I could hardly come to grief ; but when I got some way up if I did not wish to hang in the air like the morsel at the end of a fisherman's line—though handled by the guides with all that sympathetic consideration which the worthy Isaac Walton enjoined upon his disciples—I was constrained to set my back against one side of the chimney and my feet against the other whilst I enjoyed an uninterrupted view of the wondrous receptivity of the void below. Up this part I got with comparative ease as I discussed with myself the question how the leader (François) had managed it. The last bit, however, involved not an ascent directly upwards, but sideways to the right, and very much more troublesome. Moreover it was not altogether clear that the aperture was sufficiently broad to let my body through. Before I had entered the chimney I had shouted to

the men, 'Have you got to the top?' 'Yes, but the very top is reserved for you.' So that there was every inducement to make every possible effort. Moreover by this time François was visible, with a smiling face, and was giving me counsel as well as hauling in the rope. I accepted the former for the sake of the latter as I worked myself sideways and upwards at the same time. As I struggled on I began to agree with the hook-nosed fellow of Rome. Let me have men about me, or at any rate above me, that are fat—for following through cracks would thus be easy.

It was, figuratively speaking, the choicest morsel of a very choice menu. When I had eventually struggled out of the cleft, allusions to 'cracks' on famous aiguilles in our neighbourhood seemed quite in place. And when I finally reached the actual top, which my good-natured comrades had refrained from mounting, the cup of happiness was at last offered to my lips.

Then did I with a light heart and fluent tongue describe to my guides how Dr. Anderson had given me as a silver-wedding present a glorious photograph of our peak, and how I daily looked at it with apprehension lest some foot other than mine should first be placed upon it. Of that there was no longer any fear. And now whenever my eyes wander to the photograph as the rain pours down dismally, or the wind howls furiously, I taste afresh the joy of our climb.

The height, something over 12,000 ft., was not great, it is true, but the quality of the climb was of the choicest character, and so likewise was the view. Mont Blanc and the Mont Maudit at close quarters were too impressive for any mere words to do them justice. We gazed upon the glories of the inner ice world.

What pleasures have great princes more dainty to their choice? None—emphatically none!

We descended by a different route to the west—much easier, as it turned out. One place was exciting. The rock was cleft clean in two—the depth of the chasm being, I should imagine, over fifty feet. How Sylvain crossed I do not remember, but when I got to the chasm I recollect that with my body aslant I could just reach across and was pulled into an upright position on the other side by Sylvain. One place below, I seem to recall, required the rope to be fastened over a cut in the rock, and then we reached our morning's route without hindrance.

We got back to our coats and the ice axes, and then the question arose, How were we to regain the Rifugio? Even-

tually we decided to make for the Col de la Tour Ronde. We should have descended the Brenva glacier to Courmayeur had not the men been afraid that Signor Bareux would then think that we had met with a serious accident. At first we made fair progress, but soon the snow amongst the rocks grew deep and rotten, and it was no uncommon occurrence to sink in almost up to one's waist. Then a thick mist came down upon us and discomfited us entirely.

Where *was* the Col de la Tour Ronde? It was quite impossible to say, but calculating as well as I could in such an emergency—for though I had not been on this particular ridge before I knew the map fairly well—I persuaded the men to turn down to our left towards the Géant glacier.

It was very misty and the slope was steep. What we might meet with we knew not, but downwards we went. Sylvain led. To begin with things might have been worse; before long they became so. I may here whisper parenthetically that we heard afterwards at Courmayeur that the Tour Ronde col was considered to be much more difficult than usual this summer. It was indeed even suggested that it was impossible! How pleasant it is to have so grateful a side-light thrown on one's little exploit! How satisfactory to hear others emphasise the difficulties which one has conquered, though it must be owned that here, as so often in more commercial transactions, the middleman scores most!

Flakes of loose ice here and there covered the snow. The making of a staircase was no sinecure. I had never previously heard François grumble at the steps provided for him. He has himself a long stride, and the steps he makes, always excellent, are sometimes a good way apart, but here he growled out a condemnation of Sylvain's staircase. I was not displeased to hear him, for thereby fell credit to the uncomplaining, and I personally felt fairly satisfied, for if I had slipped I had François's strong arms to hold me up. Sylvain gave us his opinion of the slope in words that carried conviction, and went on with his work, when all of a sudden the wannish glare of a weird gleam of sunshine penetrated the mist and showed us the Géant glacier at no great distance below, and showed also that the bergschrund was provided with a bridge that to our vapour-vexed eyes seemed the most desirable boon possible. So down we went and reached our track of the morning without further trouble.

A short time took us to the Rifugio, where, to be Wordsworthian, we found 'forty feeding like one.' Unto them we

joined ourselves, and for once the sauce to meat was not ceremony but the total absence of it.

So we conquered the Trident, a rock to me almost as dear as was to Galatea's creator

That shape of vital stone
That drew the heart out of Pygmalion.

IN MEMORIAM.

MARIE CLAUSEN.

The death, on July 14 last, at the age of 67, of Frau Clausen, removes the last of the famous trio whose names must be for all time linked with the development of Zermatt as a mountaineering and a tourist resort. Others may follow, none can ever replace them.

There is no need to tell again the story of how Alexander Seiler, of Blitzingen, came to Zermatt in the year 1854; or how Dr. Lauber's little inn which had been the meeting-place of so many pioneers in Alpine exploration, science, and art, became absorbed, while it formed the nucleus of the new venture. From the outset, Marie Cathrein, Frau Seiler's sister, took a leading part in the management of the business. Her father was engaged in trade, and as a girl she had practice in bookkeeping and correspondence, thus beginning her technical training at an early age. Still more valuable, in connection with her father's business she learnt the art of dealing with all sorts and conditions of men.

Herr Seiler was quick to recognise the possibilities of the Riffelberg, and when the first mountain inn was opened on its slopes in 1859 he naturally and very wisely placed his most trusty lieutenant in charge. There Fräulein Marie Cathrein, afterwards Frau Clausen, began a career of management which lasted continuously for nearly forty-five years, twenty-five of which were spent at the old house, and twenty in the new Riffelalp Hotel, to which she moved on its opening in 1884.

The Riffelberg Hotel from the very beginning had its own peculiar *cachet*, inspired altogether by the strong individuality of its manageress. This feature was never lost, and even in the huge establishment lower down the hill, which succeeded, but never really supplanted the old house, the dominating influence could always be felt. The *clientèle* at the hotels on the Riffel always differed slightly in character from that of Zermatt itself; and, indeed, Frau Clausen accomplished independently for the Riffel what Seiler and his wife succeeded so completely in doing at Zermatt. Frau Clausen was very much more than the manager of a successful hotel. She was a rare hostess. In the old Riffelberg, where she played her part in a smaller sphere, her influence was more easily recognised, for it pervaded the whole place. The new-comer never

failed to meet with a welcome as from an old friend who had been longing to greet him, and the 'ancien' had the sensation always of returning home as he entered the door.

Frau Clausen had a rare capacity for work combined with great business aptitude, and a love of punctuality and order which alone rendered it possible to carry on her duties in times of pressure. She not only managed her hotel, but she also ruled it in the minutest detail of every department. It was with considerable hesitation that she moved from the old to the new house, and took on, almost singlehanded, the enormous amount of extra labour entailed. Year after year the work increased. The summer season lengthened, the pressure became more pronounced: the period of preparation, too, necessarily extended, while the anxieties augmented as the risk involved by an unsuccessful season became greater. Yet she was always more than equal to the task.

There is no need here to dwell on her unfailing charm, high intelligence, and her quiet and dignified manner. There was a touch of the 'grande dame' about her, softened and rendered attractive by an extremely sympathetic nature. She never appeared hurried; and even when the pressure of work was greatest she could always find time for a talk with an old friend or for a kind action. Though she probably never spoke a malicious word in her life, she was a shrewd judge of character, and in her dealings with her subordinates was firm as well as just.

When a young girl she was attracted by mountaineering, and on July 15, 1862, Fräulein Cathrein—as she then was—and Alexander Seiler, together with Miss Walker, Mr. Frank Walker, and Mr. Horace Walker, made the ascent of Monte Rosa. The mountain had probably only been ascended by one lady previously. Anton Ritz acted as guide for Seiler and his sister-in-law, and Melchior Anderegg for the other party. It is surely fitting that the *Alpine Journal* should contain some record of one who was so true a lover of the mountains, and played her part in life so well.

C. T. D.

THE ALPINE CLUB LIBRARY.

The following additions have been made since July:—

New Books and New Editions. Presented by the Publishers or Authors.

(Foreign works may be obtained through Mr. David Nutt, 57 Long Acre, London, W.C.)

Alexander, Mrs [ps. i.e. Mrs Annie French Hector.] A second life. A novel. 8vo, pp. 189. London, Hutchinson [1904]. 6d.

The heroine, with the connivance of a guide, leads people to suppose she has been killed by falling into a crevasse on the Mer de Glace. This is her way of getting a separation from a hated husband.

The first edition was published by Bentley in three vols, in 1885.

Benesch, F. *Spezialführer auf die Kaxalpe.* 3., vermehrte und verbesserte Aufl. 8vo, pp. xii, 166; map, ill. Wien, Artaria, 1904. Kr. 4

- Biendl, Hans.** Das Sextental und seine Berge. Herausgegeben vom Verschönerungsverein in Sexten. 8vo, pp. 55; plates.
Verlag d. Verschönerungsverein in Sexten, 1904
- Bozen-Gries und seine Bergwelt.** Illustriertes Pracht-Album. Obl. 4to. pp. 19; plates. Bozen, Auer, 1904. Kr. 1.20
Text in English, French, and German.
- Casanova:** Collection Guides-Casanova; see Gressoney, and Ratti, C.
- Corcelle, J.** Les Alpes de Savoie. Flore—Faune—Phénomènes physiques. 8vo, pp. 67. Chambéry, Perrin, 1903. Fr. 2
Articles reprinted from 'La Nature.'
- Ferrand, H.** Albert Molines, 1843-1903, alpiniste. 8vo, pp. 27-53; portrait. In 'Albert Molines,' Imprimerie co-opér. 'la Laborieuse,' Nîmes. 1903
A small brochure containing funeral orations at the grave of M. Molines in 1903.
— see 'Club Publications,' S.T.D. Annuaire.
- Gordon-Stables, Dr W.** In regions of perpetual snow. A story of wild adventures. 8vo, pp. viii, 316; col. ill. London, Ward Lock, 1904. 5/-
Adventures on the glaciers of the Himalayas. Suitable for a Christmas present to a boy.
- Grébaupal, Armand.** Au Pays Alpin. D'Aix à Aix. Roy. 8vo, pp. 234; ill. Paris, Combet (1902). Fr. 3.50
- Gressoney.** La Vallée de Gressoney et le massif du Mont-Rose. Guide-manuel du touriste dans la Vallée d'Aoste. 8vo, pp. xii, 64; map, ill. Turin, Casanova [1904]. Fr. 2
- Gross, Chanoine Jules.** Le héros des Alpes—Au Grand-Saint-Bernard—Drame et poésies alpestres. 2me édition. 8vo, pp. 301. Paris, Fischbacher: Genève, Jullien [1903]. Fr. 3.50
'Aux vaillants Membres des Clubs alpins je dédie ce drame qui raconte la fondation du premier refuge alpin et ces poèmes qui fêtent les splendeurs des hautes cimes.'
- Gruber, Hans.** Die Goldberg (Sonnblick)-Gruppe in den Hohen Tauern. Touristischer Spezialführer. 8vo, pp. 79; maps. Innsbruck, Edlinger, 1904. M. 1.80
[Hector, Mrs A. F.]; see ps. Alexander, Mrs.
- Hess, Hch.** Spezialführer durch das Gesäuse und durch die Ennsthaler Gebirge zwischen Admont und Eisenerz. 4. Aufl. 8vo, pp. viii, 195; plates. Wien, Artaria, 1904. K. 4.80
The first edition was published in 1884.
- Magni, Fermo.** Guida illustrata della Valsassina. 8vo, pp. viii, 243; maps, plates. Lecco, Magni, 1904
- Morison, Margaret C.** A Lonely Summer in Kashmir. 8vo, pp. x, 281; plates. London, Duckworth, 1904. 7/6 net
Light sketches of travel, with some good plates of mountain and river scenery.
- Norway.** A Norwegian Ramble among the Fjords, Fjelds, Mountains, and Glaciers. By One of the Ramblers. 8vo, pp. 232; plates. New York and London, Putnam, 1904. 3/6
- Rabl, J.** Illustrierter Führer durch Salzburg und das Salzkammergut. Hartleben's Illustr. Führer, Nr. 15. 4. vermehrte Aufl. 8vo, pp. viii, 299; maps, plates. Wien und Leipzig, Hartleben, 1904. M. 4.50
- Ratti, Carlo.** Guida per il villeggiante e l'alpinista nelle Valli di Lanzo. Collezione Guide-Casanova. 8vo, pp. 223; map, ill. Torino, Casanova, 1904. L. 2.50
- Reid, H. F., et Muret, E.** Les variations périodiques des glaciers. 9me rapport. Commission internationale d. glaciers. 8vo, pp. 36. In Arch. d. Sc., Genève, vol. xviii. 1904
Most European glaciers appear at present to be stationary or decreasing. Reports on glaciers in the Caucasus, Tian-Shan, and N. America are also given.

- La Savoie pittoresque.** Bulletin trimestr. des Syndicats d'initiative de la Savoie, no. 29. 8vo, pp. 80; map, ill. Chambéry et Aix-les-Bains, 1904
- Sennett, A. R.** Across the Great Saint Bernard. The Modes of Nature and the Manners of Man. 8vo, pp. xvi, 544; ill.
London and Derby, Bemrose, 1904. 6/- net
A popular work on part of Switzerland and on some Swiss industries. Appendix on glaciers and on meteorological phenomena.
- Szontagh, Dr N.** Tátraführer. Wegweiser in die Hohe Tátra und in die Bäder der Tátragegend. Unter Mitwirkung des Ungar. Karpathen-Vereins. 2. Aufl. 8vo, pp. 218; maps. Budapest, Singer & Wolfner, 1904
- Valais.** Journal illustré des stations du Valais. Organe de l'Industrie hôtelière valaisanne. Rédacteur en chef: Jules Monod. 4to, ill. Vols 1 and 2. Genève, 1903, 1904
- Waltenberger, A.** Allgäu, Vorarlberg und Westtirol, nebst den angrenzenden Gebieten der Schweiz. 9. Aufl. 8vo, pp. xiii, 318; maps.
Innsbruck, Edlinger, 1904. M. 4
- Williamson, C. N. and A. M.** The princess passes. A romance of a motor. 8vo, pp. viii, 323; ill. London, Methuen (1904). 6/-
A pleasant bit of fiction. The St Gothard, the Gt St Bernard, Chamonix, and other Swiss scenes are described.

Older Books.

- A., F. E. S.** Sport in Ladkh. Five letters from "The Field." 4to, pp. 32, plates. London, Cox, 1895
Hunting the ibex, burhel, ovis ammon, goa, shapoo.
- [Bartoli, G.] ps. Martagon.** Montagnes & Montagnards. Première série. Pyrénées—Catalogne—Ile de Majorque—Provence. 18mo, pp. ii, 407.
Paris, Lemerre, 1901. Fr. 3.50
Mountaineering, including first ascents in the Pyrenees, etc., 1879 onwards. Part appeared first in the 'Bull. de la Sect. du C. A. F. du Sud-Ouest.'
- Biddulph, M. S.;** see Forester, T., Norway, 1850.
- Brunsoni, Prof. Edmondo.** Guide Colombi. Guida delle Alpi Ossolane e regioni adiacenti. Parte prima. Tra Locarno e il Sempione. 8vo, pp. xii, 191; maps, ill. Bellinzona, Colombi, 1901
- Drevet, L. Xavier.** Le Grand Pic de Belledonne. Bibliothèque du touriste en Dauphiné. 8vo, pp. 45; ill. Grenoble, Drevet, 1876
- Forbes, Major H. F. Gordon.** The road from Simla to Shipki in Chinese Thibet and various minor routes: with a few hints for travellers. 8vo, pp. 45; map. Calcutta, Spink, 1893
- Forester, Thomas.** Norway in 1848 and 1849: containing rambles among the fjelds and fjords of the central and western districts; . . . with extracts from the journals of Lieut. M. S. Biddulph, R.A. 8vo, pp. xvi, 483; map, tinted lithographs from Biddulph's drawings. London, Longmans, 1850
- Kālidāsa.** Méhadūta; or, cloud messenger. Translated into English verse with annotations by H. H. Wilson. 8vo, pp. 70.
Calcutta, Chandra Vasāka, 1872
A poem descriptive of the passage of a cloud over the Himalayas and other hills of India. There is great doubt as to Kālidāsa's date—probably 6th century—and as to whether the poems ascribed to him are by one writer or several writers. His poems have been much translated into various languages.
- v. Klaproth, Julius.** Voyage au Mont Caucase et en Georgie. 2 vols, 8vo; map. Paris, Gosselin, 1823
The journey was made in 1807-1809. The original German edition was published at Halle in 1812-1814.
- Tableau historique, géographique, ethnographique et politique du Caucase et des provinces limitrophes entre la Russie et la Perse. 8vo, pp. 187.
Paris et Leipzig, Ponthieu, 1827

de Lassus, B. Minuit & aurore au sommet du Grand Vignemale. 8vo, pp. 84. Saint-Gaudens, Abadie, 1892

This is no. 15 of 50 copies printed.

Louis, J. A. H. The gates of Thibet. A bird's eye view of independent Sikkim, British Bhootan, and the Doora as a doorga poojah trip. Second edition. 8vo, pp. 182; map, plates.

Calcutta, Catholic Orphan Press, 1894

Martagon, ps.; see [Bartoli, G.]

Munroe, Kirk. Rick Dale. 8vo, pp. viii, 333; ill. London, Arnold [1896]

A story for boys, including a description of an imaginary ascent of Mount Rainier.

Norway. Notes on a yacht voyage to Hardanger Fjord and the adjacent estuaries. By a yachting dabbler. 8vo, pp. xxvii, 105; map, tinted lithographs. London, Longmans: Keswick, Ivison [1855]

[Parsons, Wm.] A poetical tour, in the years 1784, 1785, and 1786. By a member of the Arcadian Society at Rome. 8vo, pp. 208.

London, Lithographic Press for Robson & Clarke, 1787
pp. 16-27: 'The death of Amyntor, an elegiac ballad, Occasioned by the unhappy fate of Mr. Le C—, of Geneva, who was killed by a fall from a Precipice in Savoy, the Author having been one of the Party that was with him at Chamouni.' This was written in 1784. Also 'Ode to the Lake of Geneva, Written at the Chateau de Chillon, near Vevay, after a tour to the Glaciers of Chamouni and through the lower Valais.' On p. 85 occurs this curious note: 'The rosy hue on the summit of Mont-Blanc, seen on a fine evening from the neighbourhood of Geneva, must draw the attention of the most careless observer. It is on this account sometimes call'd Monte Rosa by the Italians.' The poems were reprinted, pp. 72-85, with a plate, in the Author's 'Travelling Recreations,' 2 vols, 8vo: London, Longmans, 1807. Parsons was a very minor poet, for some years one of Mrs Piozzi's coterie in Florence.

Pennington, Rev. Thos. Continental excursions; or, tours into France, Switzerland, and Germany, in 1782, 1787, and 1789. With a description of Paris and the glaciers of Savoy. . . . 2 vols, 8vo.

London, Rivingtons, 1809

— A journey into various parts of Europe . . . 1818, 1819, 1820, and 1821. . . . 2 vols, 8vo. London, Whittaker, 1825

Includes Pyrenees, Dauphiné, Switzerland.

Vincenzo, Dr Beltrame. La montagna. Divagazioni igieniche popolari. (2da edizione.) 8vo, pp. 352. Torino, Frassati, 1899

Sulle ascensioni alpine—montagne e ghiacciai—aria, climatologia, male di montagna—la montagna nella cura: ecc.

'Paol, guide pagando,
In cima al Monte Bianco s' è portato.
Bravo! Bene! Ma quando
Ei fu lassù, che fece? è ritornato.'

Club Publications.

C.A.F. Annuaire, 30. 1903

Among the articles are;—

V. de Cessole, Le Corno Stella.

H. Granjon de Lepiney, Ortler.

J. E. Kern, Aig. de Bionnassay.

V. Gros, Le Pic Cédéra.

E. Gallois, Le Mont Athos.

H. Ferrand, Les premières cartes du Dauphiné.

Commission française des glaciers.

Marche des caravanes scolaires.

Dauphiné. Soc. des Touristes. Annuaire, 29, 1903. 1904

The articles are;—

M. Paillon, Les massifs de la Vanoise.

J. Offner, Quelques cols peu connus.

D., Les skis en Dauphiné.

- MM. Flusin, Jacob et Offner, Observations glaciaires dans le massif du Pelvoux en août 1903.
 E. Chabrand, Comment naît et meurt une montagne.
 H. Ferrand, Albert Molines, une vie d'alpiniste.
 With reference to the last, see also under 'New Books.'
- D.u.Oe.A.-V. Haida.** Stadt Haida in Deutschböhmen und Umgebung. 8vo, pp. 26; map, ill. [1904]
- **Hochland in München.** I. Jahresbericht. 8vo, pp. 16. 1904
- Innsbruck, Akad. Alpenklub.** Jahresbericht 11, 1903-4. 8vo, pp. 84. 1904
 Contains, pp. 1-52, Dr F. Hörtnagl, Die Berge des Glockturmkammes.
- Soc. d. Alpinisti Tridentini.** Bollettino dell' alpinista. Rivista bimestrale. Folio. No. 1. Juli, 1904
- Société de Géographie de France:** La Géographie. Bulletin. Tome ix. 8vo, ill. Janvier-juin, 1904
 pp. 24-29: Voyage de M. Tsybikov à Lhasa. pp. 249-256: F. Bullock-Workman, Exploration des glaciers du Kara-korum.
- Zürich. Akad. Alpen-Club.** VIII. Jahresbericht, 1903. 8vo, pp. 20; plate of Fallgletscher and Dom. 1904
 Report on the Mischabelhütte, new tours by members in the Caucasus and elsewhere; etc.

Pamphlets and Magazine Articles.

- Alpine travel, The art of.** 8vo, pp. 206-216; ill. In Cornhill, vol. 6, no. 32. August, 1862
- Alps.** The love of the Alps. 8vo, pp. 24-35. In Cornhill, vol. 16, no. 91. July, 1867
- A bye-day in the Alps. 8vo, pp. 675-685. In Cornhill, London, vol. 29, no. 174. June, 1874
- Baker, E. A.** The closing of the highland mountains. 8vo, pp. 616-624. In the Independent Review, London, Unwin, vol. 3, no. 12. September, 1904
- Bosazza, F.** L' alpinismo nel 1903. 8vo, pp. 11. Reprinted from Rassegna Nazionale, Florence, vol. 26, no. 552. 16 Agosto 1904
- [Browne, Rev. G. F.]** How we slept at the Châlet des Chèvres. 8vo, pp. 317-333; ill. In Cornhill, vol. 8, no. 45. September, 1863
- [—]** How we mounted the Oldenhorn. 8vo, pp. 702-718; ill. In Cornhill, vol. 9, no. 64. June, 1864
- The two above were reprinted, without Du Maurier's Illustrations, in 'Off the Mill.'
- Chamonix.** Au Pays du Mont-Blanc. Annecy-Chamonix. Excursions dans la Haute Savoie. 8vo, pp. 31. Annecy, Syndicat d'Initiative [1904].
- D., M. F.** Sunrise from the Righi. By the author of 'Letters from the Coast of Clare.' 8vo, pp. 616-626: 670-680. In Dublin University Mag. vol. 23, nos. 187-138. May, June, 1844
- Deutsche Alpenzeitung.** 7. Band. 4. Jahrg. 4to, ill. April-September, 1904. M. 6

As in previous years, this excellent periodical is devoted largely to mountaineering. There are the following, for instance, among the articles:—

- L. Geissler, Am Ortler.
 F. Simon, Hochtouren in der Montblanquette.
 A. Zimmermann, Innsbruck für Hochtourer.
 E. Naef-Blümer, Eine Tödifahrt.
 P. Hübel, Touren in den Karmischen Voralpen.
 Dr Bröckelmann, Hochtouren in Jötunheim.
 H. Gruber, Bergfahrten in den Mannldwand.

The illustrations vary much in quality. On the whole they are good, and some from original sketches are excellent. There are many items of news about Alpine Clubs, huts, and literature.

- Gannett, Hy.** Altitudes in Alaska. Bull. U.S. Geolog. Survey, no. 169. 8vo, pp. 13. Washington, Government Printing Office, 1900
 The following are among the heights calculated by the U.S. Surveyors:—
 Mount McKinley 20,464 ft. | Cross Mountain 15,900 ft.
 Mount St. Elias 18,024 „ | Mount Vancouver 15,666 „
 Mount Wrangell 17,500 „
- Gourdon, Maurice.** Mon ascension au Néthou (Pic d'Aneto: 3,404 m.) pendant l'hiver de 1879. 8vo, pp. 8. Reprinted from Rev. de Comminges, 1891. Saint-Gaudens, Abadie, 1891
- Gribble, Francis.** The making of an alpine guide. 8vo, pp. 431-438; ill. In The Treasury, Palmer, London, vol. 3, no. 23. August, 1904
- Climbs and climbers. 8vo, pp. 544-551; ill. In The Realm, London. September, 1904
- Hoek, Dr Henry.** Geologische Untersuchungen im Plessurgebirge um Arosa. 8vo. pp. 56; plates. In Ber. d. Naturf. Ges. zu Freiburg, 13. 1903
- Jacob, Robert.** A night on the Ortler Spitz. 8vo. pp. 480-486. In Cornhill, London, vol. 14, no. 79. October, 1866
- The Jungfrau Railway.** 8vo, pp. 463-468; ill. In World's Work and Play. October, 1904
- Le Cadet, Dr G.** Etude de l'électricité atmosphérique par beau temps au sommet du Mont-Blanc. Imp. 8vo, pp. 31; plates. Reprinted from Mém. Acad. d. Sc. Lyon. 1904
 Expériences:—1. L'enregistrement continu de la variation diurne du potentiel électrique en un point de l'air au-dessus du sol, par rapport au potentiel du sol: 2. Mesure de la chute normale de potentiel entre deux points de l'air, au-dessus d'une portion horizontal du sol neigeux du sommet: 3. Mesure de la déperdition de l'électricité positive et de l'électricité négative dans l'air au voisinage du sol.
- (McConeill, R. G., and Brock, R. W.)** Report on the great landslide at Frank, Alberta, 1903. 8vo, pp. 17; plates. In part 8 of the Ann. Rep.—Department of the Interior. Ottawa, Government Printing Bureau, 1904
 On April 29 of last year nearly half a square mile of rock, about 400 feet thick, fell 3000 ft. from the top of Turtle mountain, overwhelming a portion of the mining town of Frank, and leaving an undulating mass of débris across, and 500 feet up the other side of, the valley. Trees and houses at the sides of the fall seem to have been undisturbed, and one cannot gather from the numerous plates evidence of destruction by wind produced by the falling mass.
- Monod-Herzen, Ed. M.** Dans les Hautes-Alpes du Valais. 8vo, pp. 1-24: 328-353. In Biblioth. Universelle, Lausanne, vol. 35, nos. 103-4. Juillet, août, 1904
 Climbing in 1903. 'High route' to Zermatt, Dent d'Hérens, Weisshorn, Lyskamm, Dent Blanche, Matterhorn.
 At Zermatt the author finds 'un peu d'Anglais, maigres, hâves, silencieux, lugubres et impolis; en revanche, des Allemands en quantité, gras, beaucoup trop à leur aise: . . . Plusieurs familles écossaises, agréables à voir, gracieuses, aimables, charmantes.' But he also says 'les touristes sérieux rencontrés dans les cabanes sont agréables, sans distinction d'origine.'
- Oddone, Emilio.** Per lo studio della temperatura dell'aria alla sommità del Monte Rosa. 4to, pp. 400-408. Reprinted from RC. della R. Accad. dei Lincei, vol. 13. 24 aprile 1904
- Paulcke, W.** Geologische Beobachtungen im Antirhätikon. 8vo, pp. 42; map. In Ber. d. naturf. Ges. zu Freiburg, 14. 1904
- Reid, H. F.** The variations of glaciers, IX. 8vo, pp. 252-263. In Journ. of Geology, Chicago, xii, no. 3. April-May, 1904
- The relation of the blue veins of glaciers to the stratification, with a note on the variations of glaciers. 8vo, pp. 703-706. In C. R. IX Congr. géol. internat. de Vienne, 1903. Wien, 1904

- Richings, Emily A.** Mountain shrines of Japan. 8vo, pp. 113-120. In *The Gentleman's Mag.* Chatto & Windus, London, vol. 297, no. 2084.
August, 1904
- Schulz, Aug.** Das Schicksal der Alpen-Vergletscherung nach dem Höhepunkte der letzten Eiszeit. 8vo, pp. 266-275. In *Centr. bl. f. Mineral., Schweizerbart, Stuttgart*, no. 9. 1904
A review of Penck and Brückner's 'Die Alpen im Eiszeitalter.'
- [Stephen, Sir Leslie.]** The regrets of a mountaineer. 8vo, pp. 539-555. In *Cornhill*, London, vol. 16, no. 95. November, 1867
Reprinted in 'The Playground of Europe.'
- Stevens, Hazard.** The ascent of Takhoma. 8vo, pp. 513-530. In *Atlantic Monthly*, New York, vol. 38, no. 229. November, 1876
- Stock, E. E.** A scramble on the Wellen Kuppe. 8vo, pp. 1025-1029; ill. In *Leisure Hour*, London. October, 1904
- Vidal, P.** Ascension du Canigou par Pierre III roi d'Aragon, en 1285. 8vo, pp. 359-367. In *Rev. d'histoire et d'archéol. du Roussillon*, 4me année, no. 12, Perpignan. December, 1903
Salimbene's Latin text, with translation and notes.
- Wilson, H. Schütz.** Mountaineering with ladies. 8vo, pp. 553-560. In *Tinsley's Mag.* London, vol. 15. November, 1874
- The Peak of Terror. 8vo, pp. 585-595. In *Gentleman's Mag.*, London, N.S. vol. 15. November, 1875
- An ascent of the Matterhorn. 8vo, pp. 549-560. In *Gentleman's Mag.*, London, N.S. vol. 16. November, 1876
- The three above are reprinted in 'Alpine ascents and adventures.'
- The Alpine season of 1882. 8vo, pp. 226-236. In *Tinsley's Mag.*, London, vol. 37. September, 1885

ALPINE ACCIDENTS IN 1904.

THE season of 1904 has been remarkable for its fine weather, for the excellent condition of the mountains, and for a notable absence of Alpine accidents, properly so called. A considerable number of lives have been sacrificed in edelweiss gathering and on sub-alpine heights, but we are thankful to say that there are, in marked contrast to previous years, no great mountaineering catastrophes to record except those on the Ober-Gabelhorn and the Grand Paradis. In the latter accident we lament the loss of two of the younger members of our Club, who were both men of promise in climbing as were also their companions.

THE ACCIDENT ON THE GRAND PARADIS.

IN accordance with a plan arranged in the early summer Messrs. L. K. Meryon, T. L. Winterbotham, W. G. Clay, and the Rev. W. F. Wright met in August in the Graian Alps for a series of climbs without guides. Mr. Wright (who had been climbing in the Oberland for a fortnight without guides) met Mr. Meryon and Mr. Winterbotham at Cogné, and on August 13 they ascended the Herbetet by the east ridge, and descended to Dégiroz, where they met Mr. Clay, who had been detained in England. The four returned to Cogné on the 15th over the Grivola. Mr. Wright remained there for a week's reading, while the other three crossed

the Tour du Grand St. Pierre to the Piantonetto hut, from which they ascended the Roccia Viva and the Becchi de Tribulazione, and then took the high level route to Pont in Val Savaranche, where Mr. Wright rejoined the party. For some days after this the weather was very unsettled, and much snow fell, but during the week they traversed the Becca di Monciair and ascended the four summits of the Punta di Broglio, some of the party also ascending the Tresenta. The weather settled later in the week, and on Monday, the 29th, they started from the Victor Emmanuel hut to climb the Herbetet by the difficult south arête. The ridge was climbed in good time and without any serious difficulty being encountered, but, owing to a late start, they did not get back to the hut until 8.45 p.m. They started again, however, at 4 a.m. on Tuesday, the 30th, intending to ascend the Grand Paradis and follow the ridge northwards as far as the Becca di Montandeyné, descending to Cogne. As they were starting Alois Kalbermatten, of Saas, who happened to be at the hut with a party, asked them where they were going, and on being told he warned them to be careful, as there was much ice on the ridge. There was no suggestion that they should take a guide, and in this and many other points the somewhat sensational accounts which appeared in the daily papers were quite incorrect. They all wore crampons, and reached the top of the Grand Paradis without roping at 7.30, overtaking other parties on the way. Here their own notes end, but they appear to have stayed some time at the top, and no doubt breakfasted there. At about 8.50 they were seen through a telescope by a friend, who was watching them from above Cogne, leaving the rock summit and proceeding northwards along the ridge of the snow summit, where they were at about 9.10. They were at this time roped. Meryon was leading, and apparently he was followed by Wright and Winterbotham, Clay being last. They continued down the north arête, and were seen to be going slowly, cutting steps. They reached rocks again at about 10 o'clock, and continued thence to the col between the Grand and Petit Paradis. Shortly afterwards they were seen and hailed by a party who were crossing the mountain from Cogne, and who were breakfasting under the rocks which descend to the Tribulation Glacier north of the mountain. At that time they were apparently trying to find a route down to the glacier, but the rocks were in bad condition, and after about half an hour they returned to the ridge. Shortly afterwards they appeared to the friend who was watching them from above Cogne to cross to the west side of the ridge, and they were not seen again.

The party was expected that evening at Cogne, but they had written to say that they might not be in till very late, and as it was thought that, owing to the state of the weather, they had probably descended to the Val Savaranche, no anxiety was felt. On Wednesday afternoon, however, as nothing was heard of them, telegrams were sent to Dégioz and Pont, and on learning that they were not there a search party started from Cogne at 2 a.m. on Thursday and searched the Cogne side of the ridge without result. On

Friday the search party crossed to the Val Savaranche, and found the bodies at about 4 P.M. on the Lavetiau Glacier.

It seems clear from their movements after leaving the summit of the Grand Paradis, and from the position of the bodies, that they had abandoned their original plan of traversing the Becca di Montandeyné and intended to take a shorter route to Cogne, but that, finding the rocks and snow on the E. side of the mountain in bad condition, they had decided to retrace their steps and return over the summit of the Grand Paradis. A party of climbing friends, accompanied by a guide of Val Savaranche who had helped to bring down the bodies, went to the foot of the col on the Lavetiau Glacier on September 9 and made a careful examination of the slopes above, which confirmed the opinion of the guides who found the bodies that the party were returning from the col to the top of the Grand Paradis, and had reached the highest point of the patch of rock on the arête (about halfway up the ridge), and had gone some thirty yards or so beyond it along the ice-steps which they had cut in their descent of the ridge a few hours before, when one of them must have slipped from his step, pulling the others down. About 100 ft. below the crest they must have fallen over a small rock cliff, and from this point there is a continuous ice slope down to the place where the bodies were found, some 20 ft. below the bergschrund, which is there crossed by a smooth avalanche trough. They must have fallen in all some 1,700 ft. There were no signs of a cornice on the ridge, and the steps which they had cut along the ridge were visible for some days afterwards, so it does not seem possible that snow-steps softened by warm weather could have caused the accident.

Several parties crossed the mountain on the day of the accident, and they agree that the snow and ice were in a very unfavourable condition. The snow was soft and 'sliding unpleasantly,' and 'the rocks were in very bad condition, with glaze and fresh snow.' The weather was fine until midday, though it showed signs of change. At midday the mists came up, and in the late afternoon heavy rain and snow fell.

All the members of the party were in good condition, and had had very considerable and varied experience in climbing both with and without guides. They were well acquainted with each other's capabilities, and they climbed with care. Their letters show that they did not overestimate their powers.

Both at Cogne and Dégioz the inhabitants of the valleys were most helpful and sympathetic. At Cogne the curé, himself a mountaineer, took an active part in organising the search parties sent out by the mayor, and at Dégioz the syndic and the secretary of the commune gave every help in arranging the formalities of the funeral.

As soon as the friends arrived the bodies were buried side by side in the corner of the churchyard at Dégioz at the foot of the campanile of the old church, the coffins being carried by guides from Cogne and Val Savaranche.

THE ACCIDENT ON THE OBER-GABELHORN.

PROFESSOR DR. ERNST DEMELIUS and a very capable though still young guide, Josef Tembl, of Sulden (Tirol), have fallen victims to one of those dangers of the mountains which cannot be guarded against even by the greatest care and experience. Dr. Demelius was struck by a very heavy rock which he detached while pulling himself up by it, and was hurled into the depths below. The guide, Tembl, who was in front and roped to Dr. Demelius, was dragged down with him. Dr. Demelius and his guide, together with the well-known brothers Cenzi and Heinrich von Ficker, with the guide Dangel junior, of Sulden, as well as Herr Th. Mayr, passed the night at the Trift Hut, above Zermatt. On July 28 the whole party set out to climb the Ober-Gabelhorn (4,095 m.). Dr. Demelius and his guide were near the summit, and the party were only fifty mètres below the absolute peak, when the terrible catastrophe occurred. The Ober-Gabelhorn is, in consequence of the rotten character of the rock, a treacherous peak. In the Swiss newspapers it was reported that the party had deviated slightly from the usual route, but this, even if it were the fact, is of small importance. Herr von Ficker hurried down to Zermatt to convey the sad news. The body of the Rector was found on the Trift Glacier, and he must therefore have fallen a considerable distance. The body of the unfortunate guide was caught in the rocks about 500 mètres below the peak. Both bodies were taken to Zermatt. Dr. Demelius was a careful and experienced mountaineer, and his death was deeply and universally lamented. His brave guide, in spite of his youth (he was only thirty years of age), was one of the best of the Sulden guides, and besides the Eastern Alps had already climbed most of the more difficult Swiss peaks. Tembl had but the day before the catastrophe by which he lost his life assisted two persons who had got into difficulties upon the Matterhorn. He had been married for but six months, and intended soon to relinquish the occupation of a guide in order to attend to his inn.*

NEW EXPEDITIONS IN 1904.

Mont Blanc District.

AIGUILLE DE TRIOLET BY S. ARÊTE.—On July 9 Messrs. J. H. Wicks, E. H. F. Bradby, and C. Wilson, with Henri Rey, ascended this peak by the S. arête, descending to the Montanvert. Leaving the Triolet hut at 3.30 A.M., and breakfasting (6.10-6.35) below the bergschrund on the Col de Triolet route, they turned sharply to the right and ascended by a steep couloir (snow and ice) and by the

* This account is condensed from that given in the *Mittheilungen* of the D. & Oe. A. V.

rocks on its S. bank to a gap in the S. arête, slightly S. of the point where the ridge rises sharply towards the summit (8.45). Some rock towers were turned on the Pré de Bar side, and the foot of the steep rise reached, 9.30–10.10. From this point the rocks on the E. (Pré de Bar) side were chiefly made use of, the true ridge being followed for a short distance only, when about halfway up. The summit was reached 1–1.30, the depression between the Triolet and Petits Triolets 2.15, the Col de Triolet 4.5, the Couvercle 6.30–6.50, and the Montanvert 8.50. The ascent by the sky line of the S. arête will be, if feasible, a magnificent rock-climb. Considerations of time prevented the party from attempting it.

AIGUILLE DE TALÈFRE BY W. ARÊTE.—The same party (without Rey) on July 17 reached the col between the Talèfre and the Petites Talèfres from the Pierre Joseph glacier, and thence climbed by the W. arête to the summit, descending by the S.W. face. The rocks of the ridge offered good climbing, and, unless quite free from ice, would be, in places, very difficult. Montanvert 3.5.; bergschrund, 9; col on arête, 11.15; summit, 12.45–1.30; bergschrund 5; Montanvert, 9.15.

AIGUILLE DE LA BRENVA FROM N.W.—The same party, on July 26, made this ascent, descending by the S. arête and W. face. Starting from the Col du Géant at 6 A.M., the col between the Tour Ronde and the Aiguille de la Brenva was reached at 9.10. An hour and a half was spent exploring the N. arête, which was found impracticable, and the ascent was made by rocks on the Brenva side of the ridge. The summit was reached 1–1.50 and Courmayeur 8 P.M.

AIGUILLE VERTE* (4,127 m. = 13,541 ft.). **FIRST ASCENT FROM THE GLACIER OF NANT BLANC AND TRAVERSE.** *July 29, 30.*—SS. E. Canzio, G. F. and G. B. Gugliermi, and G. Lampugnani, without guides or porters, effected this ascent after two attempts, one in July 1903 and the other on July 27 of the present year. Leaving Chamonix on July 28, they bivouacked on the Nant Blanc Glacier. On July 29 they reached a second bivouac at about 3,900 m., on the rocky wall of the mountain. On the 30th, after reaching at noon 'la calotta terminale dell' Aiguille nel punto donde si origina la cresta Ovest,' they attained the summit at 6.30 P.M. The descent was made during the night by the usual way down the E. face.

Grand Combin District.

GRAND COMBIN (4,317 m. = 14,163 ft.) **FROM THE N.E.**—On August 29, Messrs. J. J. Withers and R. J. G. Mayor, with the guides Adolf Andenmatten and Andreas Anthamatten, both of Saas, left a bivouac on the Zessetta Alp at 3.30 A.M., and went down into the miniature valley which lies between the moraine of the Zessetta glacier and the slopes to the N. Following this round N.W. they reached the moraine on the left bank of the nameless glacier which lies S. of the S.E. arête of the Tournelon Blanc.

* *Rivista Mensile C. A. I.*, August 1904, p. 268.

This moraine they followed to its head, and then proceeded in the same direction up stone slopes to the base of a barrier of rock (5.15 A.M.). These rocks were climbed in 10 min., and the party found themselves on the nameless glacier above mentioned, which afforded at first easy going, but which steepened by degrees, and finally gave great trouble with a formidable bergschrund. Having passed this after some delay the party bore round to their left and over easy snowslopes reached the col between the Tournelon Blanc and point 3,622 m. of the Mulets de la Liaz (a descent from this col can be made by the route given on p. 16 of Conway's 'Pennine Guide' for the Mulets de la Liaz, and an easy pass can be so made from the Chanrion hut to the upper névé of the Corbassière glacier). In 10 min. the party reached point 3,622 m., above mentioned, and they then descended S. into the depression between that point and point 3,695 m. (7 A.M.) From this point, and at more or less the same level, the party proceeded to traverse round S.W. across the great N. face of the Grand Combin under a series of ice cliffs and icefalls, until they were close to the usual route by the 'Corridor.' This, however, it was impossible to reach at the same level, as it was cut off by a barrier of broken ice and rock. Accordingly the party turned S. and proceeded to cut up some steep snow and ice slopes till they were stopped by a line of great séracs which at first seemed impassable. At length a fissure was discovered which, after considerable trouble, enabled the séracs to be surmounted, and a short turn to the right over easier slopes brought the party on to the usual 'Corridor' route just at the top of the passage where there is so much danger of falling ice (10 A.M.). The 'Corridor' route was followed to the summit (12 noon), and on the return to the Panossière hut (4 P.M.), and Fionnay, after many halts, was reached the same evening.

Valpelline District.

CRESTA DI VAUFREDE.*—SS. U. de Amicis and G. Rey, with the guides Angelo and Amato Macquignaz and the porters B. Macquignaz and G. Pession, made the first traverse of the fine ridge between the Torre di Créton and the Punta Budden (the Tour and Bec de Créton of Ball).

Zermatt District.

EDELSPITZE † (GABELHORN OF ST. NICHOLAS) (3,135 m.) *August 13.*—The highest point of this peak was ascended for the first time by MM. Monod and E. Kern with the guide F. Furrer of Eytén. They gave it the name of Edelspitze, to distinguish it from the other two Gabelhorns in the Zermatt valley.

Bernese Oberland.

ROSENHORN (3,691 m. = 12,110 ft.) FROM THE EAST. *May 16, 1904.*—Mr. G. Hasler and Chr. Jossi, sen., descended in 1½ hr. direct from the summit over rocks to the foot of the peak.

* *Rivista Mensile C. A. I.*, October 1904, p. 374.

† *Ibid.* p. 371.

NÄSSIHORN (3,784 m. = 12,414 ft.) FROM THE EAST. *May 31.*—The same party, after having descended by the N.W. arête of the Gross Schreckhorn to the summit of the peak, descended in an almost straight eastern line over the crevassed upper part of the Lauteraarfirn, thus gaining the Lauteraar glacier at the foot of the Ewigschneehorn in 2 hrs. from the Nässihorn.

MÖNCH (4,105 m. = 13,468 ft.) BY THE N.E. FACE. *June 20.*—The same party, after having mounted from the Eiger glacier to the South Eigerjoch, thence went in 1 hr. to the bergschrund and cut up steps in the middle of the snow and ice wall straight to the summit, which was reached in $3\frac{1}{2}$ hrs. from the bergschrund.

EBNEFLUH (3,964 m. = 12,304 ft.) BY THE N.W. FACE.* *June 23.*—Whereas the first party gained the summit ridge by a circuitous way, partly over difficult and iced rocks, the same party as above from the bergschrund ($3\frac{1}{2}$ hrs. from the Roththal Hut) cut steps straight up the face of the mountain, always to the right of the rocks and Mr. Macdonald's route, in $6\frac{1}{2}$ hrs. to the west arête of the summit, which was reached in $\frac{1}{2}$ hr. more.

HUGISATTEL (4,089 m. = 13,416 ft.) FROM THE N.E. *July 8.*—Mr. G. Hasler and Fritz Amatter, descending from the Finsteraarjoch in a south-easterly direction for $\frac{1}{2}$ hr., followed the ridge to the right, at first consisting of snow and then of rocks, which get very hard high up, leading straight up to the Hugasattel, which was reached in $8\frac{3}{4}$ hrs. from the Finsteraarjoch. The ridge often merges into the face of the mountain and is not safe from falling stones. The summit of the Finsteraarhorn was reached in $\frac{1}{2}$ hr. more.

FINSTERAARHORN (4,275 m. = 14,026 ft.) BY THE N.E. BUTTRESS. *July 16.*—The same party, after leaving the Pavillon Dollfus at 3.30 P.M. on the 15th, bivouacked at 9.30 P.M. on the lowest rocks of the very steep rocky rib which comes straight down from the summit. This rib forks at its lowest point, exactly south of the second naught of the figures 3,800 of the Siegfried map. They took to the left, south-easterly part of the fork and began to climb its rocks at 3.30 A.M. of the 16th. At 7.30 the height of the Studerhorn, 3,687 m., was attained, and now the rocks began to get difficult. It is not possible to follow the crest of the rib, which mostly rises in perpendicular walls, but one has to traverse on to either side, where progress is made by smooth and difficult gullies. At 2.40 P.M. they had reached about the height of the Hugasattel, 4,089 m., and shortly before had come upon two ropes which the 1902 party † had left behind, when bad weather obliged them to turn back. Here any further progress seems at first impossible, as a smooth grey rock tower bars the way. By a spare rope, left behind, they descended about 100 feet to the left, and had surmounted the tower by an iced gully at 3.15. Very difficult rocks now gave access to the south-

* Variation of Mr. Macdonald's 1895 route, *A. J.* vol. xviii. p. 45.

† Miss G. L. Bell, with Ulrich and Heinrich Fuhrer, July 31. See the *Bund*, No. 218, August 6-7, 1902.

easterly first summit of the Finsteraarhorn, which was reached at 6.20 P.M., and in 5 min. more the highest summit was attained. The descent was taken by the Grünhornlücke to the Concordia, where the party arrived shortly before 11 P.M.

THIEREGGHORN (S. 3,086 m.=10,125 ft.).—The highest point in the ridge leading south from the Bietschhorn to the Rhône valley. A bold-looking rock summit, forming the junction of three steep and very sharp ridges, from N., S., or E.; the W. face is steep, broken, and traversed by smooth slabs. On August 13 Mr. G. Winthrop Young and Mr. Robert Mayor, with a porter, left the Nest hut below the Bietschjoch at 5 A.M., and reached the ridge of the pass at 6. The descent of the curves of the Bietsch glacier called for some step-cutting in the cold of dawn, followed by a wearisome passage of an hour or more across the interminable séracs of *Im Râmi*. Striking a gully in the centre of the most northerly of the arms, curving westward from the Thieregg horn ridge, its rugged edge was followed comfortably to the tip of a small peak just north of the Thieregg horn itself, whose N. arête from here looks sufficiently formidable. Time, 9.10. Crossing the little notch of separation, the arête itself was attacked, and gave magnificent scrambling—granite, firm as iron, and so sharp that 50 ft. below its crest the rock often seemed but a few feet thick. The first difficulty, a large tower, might be turned on the right. The leader crept off to do so, but was driven back by reproaches from behind, only after a second attempt successfully negotiating the rugosities on its precipitous face. The ridge then took matters into its own hands, and its uncompromisingly smooth walls left no further gentle alternatives. The sharp summit came unexpectedly and all too soon at 10.15 (5½ hrs. with halt). In the fierce sun-glare the crags of the Bietschhorn looked most imposing, and the distant Doldenhorn almost transparent on the blue sky. After the customary rites and an inspection of the E. ridge, which should give a stiff climb from the Baltschiederthal, the summit was left at 11.30 by the S. ridge. If anything sharper and steeper than the N., progress was made at first either astride of its comb or on the hands. Turning over on to the W. face about the first big tower, easy chimneys and a gradual traverse northwards down the broken face, probably on the line taken by M. Gallet on his descent from the Alpelhorn ('Climbers' Guide,' i. p. 78), led at last, after some little search for the final chimney, on to the glacier (1 P.M.). A swift glissade down the hard snow of the little Augtskumme glacier and the party divided, Mr. Young descending in 1¾ hr. to Raron, Mr. Mayor returning with the porter across the W. ridge, long moraines, and the Bietschjoch to the hut, which he reached at 5 o'clock. In all 12 hrs.

STRAHLGRAT.—Point 3,380 m., S.=10,926 ft., and the next point to the N. towards the Klein Wannehorn. With the intention of visiting either the Strahlgrat or the Distelgrat, as distance might dictate, Messrs. Winthrop and Hubert Young, with Joseph Lochmatter and Clemenz Ruppen, left the Eggishorn Hotel at

5.45 A.M. on August 3. The thought of the Distelgrat at this late hour was soon abandoned, and indeed a traverse of its colossal prickles were best attempted from a camp somewhere *in den Disteln*. Avoiding the lower peaks of the Strahlgrat, which look somewhat dull and verdant, a long trudge up grass slopes and gentle glacier brought the party to an easy chimney in the S. wall of the ridge descending S.E. from point 3,330 m. By this ridge and some fairly steep crags on the actual peak the summit was reached at 9.40 (4 hrs.). Some conspicuous ochre-coloured pinnacles on the final ridge suggested to some of the party the name of *Senfspitze*. Between this and the Klein Wannehorn are two striking-looking rock horns, with an inclination towards one another, as seen from the S., somewhat like a lobster's claw. The idea had been to descend from here on to the little glacier on the E., following the route by which Mr. Withers's party crossed the ridge in 1893 ('Climbers' Guide,' ii. p. 26), and to attempt the E. wall of the peak, but the heat, the loose rock, and above all the length advised keeping to the actual arête. This proved very long, very rotten, and interests had to be invented. The final rocks of the peak introduced some variety, winding up with several big slabs with not overmuch hold, leading to a smooth and sporting crack of some 25 ft. on to the minute summit (12.30 P.M.—6½ hrs.). The point was at once christened *Die Klaue*. Time prevented a further advance on to the other claw or the apparently easy S. face of the Wannehorn. Descent was made by the snow-covered glacier on the W. to the Aletsch glacier, and some delicious headers into the icy and winelike waters of the upper Märjelen See ended a day of unbroken sunshine.

ESCHERHORN (S. 3,080 m.=10,105 ft.).—The upstanding rock-peak, a conspicuous object from the Grimsel, which marks the junction of the Unteraar and Finsteraar glaciers. There is apparently some confusion about the name. In the 'Climbers' Guide' (ii. p. 51) Mr. Coolidge bestows it on the next point southward in the chain (S. 3,101 m.), but by the Siegfried map and by local tradition it is attached to point 3,080 m., the more probable choice because the more noticeable and considerable peak. Further, from the summit it becomes apparent that point 3,080 m. is higher than any point within a considerably greater radius than one which would include point 3,101 m., as placed in Siegfried, and that the Eschergrat (see ii. p. 50) ridge connecting it with the supposed position of point 3,101 m. is not, as represented there, a snow arête, but a deeply cut rock ridge. Either the condition of the ridge has very materially altered or there is an error in the map, which has not unnaturally led the 'Climbers' Guide' to attribute the name of point 3,080 m. to a supposed higher but possibly misplaced peak, 3,101 m. Under any name point 3,080 m. is one of the finest small rock-climbs in the district. On August 6 Mr. G. Winthrop Young and Joseph Lochmatter, with the addition of Mr. Hubert Young and Clemenz Ruppen, left the Pavillon Dollfus at about 5 A.M. on an unpromising morning, and crossing the glacier

turned the end of the E. ridge of the peak by easy slopes and a large loose gully, which celebrated the passage by emptying its contents 4 min. later on to the glacier. The lower rocks are as dull and rotten as on the rest of this range, but the peak suddenly pulls itself together and throws up some fine walls of firm red granite. The E. ridge sharpens into an edge, broken by a cliff that defies all efforts. Bearing round to the left along the S. face of this final fortress, just above the Thierberg glacier, several rather hopeless-looking rifts were rejected before the slightly more promising face to the W. of the deepest of them, rather E. of the summit, invited attack. 'Here we have almost Chamonix' was Lochmatter's view of the climb. Crack, and corner, and knob, with fair anchorages but little hold. In one polished corner the leader used the skull of the second man, spread-eagled on small ledges, as an extended basis of operations; the rest used the rope alone. The gully was entered and crossed by a traverse at about two-thirds of the height. Probably it would have been better to follow it throughout. The top must have been reached about 10 to 10.30, but the only watch was broken. At first the S. ridge, leading to a deep notch and a slightly lower peak, was followed on the descent. This soon proved impossible, and turning over on to its W. face a varied but fairly short descent led to the hanging glacier, which the Siegfried map represents as overflowing this ridge. On one awkward shoot the whole available rope was used, doubled round a convenient excrescence. The Finster- and Unteraar glaciers were followed to the Hospice about 4.30 p.m. The peak would seem to offer no easy route, unless the big couloir in its N. face prove more practicable. A climb from the notch in the S. ridge looked very problematical. The W. face is composed of slabs. The E. ridge is cut off and the S. face is certainly difficult.

TYNDALLHORN.—Point 3,107 m.=10,194 ft., on the ridge parting the Ober- from the Unteraar glacier. The name has been suggested to harmonise with the names of other early glacier explorers also commemorated in this range. Leaving the Grimsel Hospice at 4 a.m. on August 5, Mr. Winthrop Young with Joseph Lochmatter reached the little glacier N.E. of the peak at 6.30. Skirting the ice and slabs on the west, they soon struck up the broken rocks of the north arête and reached the first conspicuous summit (point 2,806 m., S.) at 7. The climbing here became interesting. The next big tower, or rather step, was turned on the right, the third on the left; other smaller ones were taken direct. Two-thirds of the way up came the great difficulty, one apparent also from below, a huge almost sheer rise in the ridge, unassailable direct. An attempt was first made to traverse up and round it on the right (W.). This had to be abandoned, not from any great difficulty but from the dangerously rotten nature of the rock. The whole outer skin, as it were, is disintegrated to a depth of many feet and remains delicately poised against the hard core. The leader traversing gingerly out on three different levels was each time sent hurriedly back by a 'ruk, ruk' from far above and below him on the face. Finally the less

inviting left flank was preferred. A hundred feet of polished but fortunately cracked slab, at a fairly high angle, abutted on a sheer face, cleft by one unpromising-looking sixty-foot chimney. To secure anchorage the second man had to fix his axe into the crack between the upper edge of the slab and the face, and with one knee hooked round it, like the pommel of a side-saddle, pay out the rope. The chimney was not easy. The summit was gained by the comparatively simple crags on its N.W. face (9 A.M., 5 hrs.). The panorama from here is magnificent. Leaving the newly erected cairn at 10.30, and travelling fast, the whole ridge was followed eastwards to the Hinter Zinkenstock (3,042 m.)—broken but not uninteresting going—reached at 11.25. Mist and rain commencing, this point was left at 11.40, and the ridge followed, descending N.E., in order to reach the *Desorstock* (2,872 m.). Several possible points were crossed, but in the mist it was impossible to judge of their respective heights. Return was made by circling round the head of the small glacier on the crest, and crossing the next ridge back to the glacier of the morning. With the help of glissades the Unteraar glacier was reached at 2.45, and the superfluous half-hour of ascent to the Dollfus Pavillon finished in a downpour (4.10 P.M., 12½ hrs.).

SCHWEINBERG * (3,550 m.=11,647 ft.).—On August 19 Messrs. J. J. Withers and R. J. G. Mayor, with the guides Adolf Andenmatten and Andreas Anthamatten, both of Saas, left the Eggishorn Hotel at 3.50 A.M., and reaching the Aletsch glacier by the ordinary path crossed it to its right bank to a point immediately E. of the Olmenhorn (6.30 A.M.). After a ¼-hr. wait they mounted a broad snowy couloir coming down from the Olmenhorn for about 150 ft., and then turned N., mounting grass and stone slopes, gradually bearing round the buttress which comes down N.E. Passing under the S. branch of the glacier lying N. of the Olmenhorn, where falling stones were numerous, they reached a ridge between the N. and S. branches of the glacier last mentioned at 7.30 A.M. Leaving this point at 8 A.M. they climbed the same ridge to its top in 20 min., and crossed snow to the foot of a great gully well shown on the Siegfried map S. of point 3,550 m. The rocks on the N. side of this couloir were climbed without difficulty to a depression on the main ridge at the head of the couloir (11 A.M.). Here the party found Mr. Yeld's note showing he crossed the ridge on August 18, 1899, at this point. The party then climbed the small peak climbed by Mr. Yeld immediately to the N., and saw in front of them further along the ridge point 3,550 m., a very sharp rocky peak which looked particularly smooth and difficult. After leaving Mr. Yeld's peak the arête was followed, and soon changed from loose stones to good but exceedingly steep rock. Obstacles were turned on the W. side, and after a short but very interesting climb the summit was reached at 12.10 P.M. The top was left at

* *The Bernese Oberland*, G. Hasler, vol. i., 'no information save a mention in S. A. C. J. xxxiii. p. 183.'

12.45 P.M., and Mr. Yeld's pass reached at 1.45 P.M. Substantially the same route as that used in the ascent was followed, and the Eggishorn reached after many halts at 6.45 P.M. The Bernese Oberland 'Climbers' Guide' (vol. i. p. 110) places Mr. Yeld's pass above mentioned, which he named the Dreieckjoch, between the Klein Dreieckhorn (3,648 m.) and the Schweinberg. It will be seen from the above that this is a mistake, as Mr. Yeld's pass is S. of the Schweinberg (though Mr. Yeld took it to be N.).

NORWAY.

Justedalsbræ.

SPERLE TO TVÆRDALSÆTER. *August 7.*—The party consisted of Messrs. E. V. Slater and C. W. Patchell, with Johannes Vigdal of Solvorn as guide. From Sperle to Bakkedalstøt takes about 2¾ hrs. easy walking. Bakkedal, W. of the Støt, had been visited by two of the party in 1899.* To the N., between Bakkedal and Krondal, is another high-lying snow valley, from which the waters descend in a series of cascades on the N.E. of the Støt. On the present occasion the snow of Røikedalsfjeld was reached by the broad rib or shoulder which forms the N. side of Bakkedal proper. The col between Bakkedal and Tunsbergdalen was reached from the Støt in about 4 hrs., including halts, and a descent made in 1 hr. more to the small and partially ice-bound tarn shown on the Amtskart, which discharges its waters down the high rock wall bounding the great Tunsbergdalsbræ on the E. After some search a route was discovered leading down a break in the containing cliffs to the S. of the waterfall, and the dry ice of the glacier was followed to Tværdalsstøt in 4½ hrs., including halts. The whole expedition took some 12½ hrs.

TVÆRDALSÆTER TO SPERLE, VIA VASDAL.—The same party returned on August 8 by the above route. They left the Støt at 8.45, and crossed the snout of Tunsbergdalsbræ to its E. side. A tedious scramble up moraine-covered slabs and through scrub led to a high valley, rich in grass, but without any traces of cattle or goats. At its head were two or three small ice-bound lakes. The slopes of the Vasdalsbræ are gentle, but there were many crevasses. An attempt to get down too soon into Vasdal failed, and the party had to reascend and follow the snow on the S. side of the valley until they were right above the Støt, to which it was then easy to descend from the S.W. (7½ hrs. from Tværdalsstøt). About 2 hrs. more were spent in walking down the beautiful Vasdal to Sperle, which was reached at 6.30 P.M.

Tunsbergdalsbræ, the longest glacier in Norway, deserves to be better known. Tværdalsstøt is quite clean, and either of the above routes makes a far more interesting approach to it from Justedal than the long walk up the Leirdal from Alsmo.

NÆSDAL TO JUSTEDAL, VIA HAUGENAASE. *August 12.*—There was nothing new about this crossing except the descent, but it is

* A. J. vol. xx. p. 47.

worth noting that for a party pressed for time or driven off the Bræ by bad weather it is perfectly simple to come down the long buttress of Haugenaase direct to Haugenaase Sæter. From here a good path leads to the road in Krondal, just above its junction with the main valley. Time from Næsdal to Sperle, ascending the Tyveskar and descending over Haugenaase, about 14 hrs. actual walking. There is now no sleeping accommodation at the 'Restaurant' in Næsdal, but clean beds are to be had at the house of Anders Næsdal, the most southern of the farms. If a little money could be spent in cutting the trees and making a track in the lower portion of the Tyveskar, this would give an excellent approach to the Justedalsbræ from Nordtjord. The views during the ascent are most magnificent, far surpassing those in the adjacent Kvandal and Bødal.

Söndmöre.

DE TRE SÖSTRE (about 4,200 ft.).—The two highest of these peaks, which lie S. of the Jönshorn and form such a conspicuous feature in the scenery of the Hjørundfjord from Lille Standal, were ascended from Kolaas on September 5 by Messrs. E. V. Slater and C. W. Patchell. Leaving Kolaas at 6, they crossed the high southern Romedalskar between Kolaastind and Romedalshorn to the highest sæter in Lille Standal. From there they went up steep but easy ground on the N. side of Lille Standal, and crossing a broad gully reached a conspicuous gap in the ridge immediately under and to the W. of the lowest of the three peaks. The second (or central) peak presents a most extraordinary appearance from this point, and the rock scenery generally is equal to anything in Söndmöre. A traverse over snow and easy rocks led round the double-headed gully dividing the central from the third and highest 'sister' to a point on the arête of the former from which it was easy by another shorter traverse to the left to gain the glacier under the central peak. The final rocks were unexpectedly simple, though in places the arête was very narrow, and the central top was reached at 12.30. The glacier again provided a plain route to the highest and most northerly point, which was reached, after a halt of 35 min., at 1.45. The descent was made by nearly the same route, but time was saved in Lille Standal by contouring round the head of the valley under the rocks of the Romedalshorn and joining the morning's route close below the tarn under Romedalskar. The whole expedition from Kolaas took 18½ hrs., of which 2½ were spent in halts. The easiest way of getting at this most fantastic mountain is undoubtedly from the farm in Lille Standal, which can be reached by boat or steamer, but where no accommodation is to be had. The route from Kolaas is long and laborious, owing to the distance, the height and steepness of Romedalskar, and the détour necessary in order to get at the accessible N.E. side of the mountain. From the Hjørundfjord, on the other hand, the three ridges, with their corresponding valleys,

will be found to provide direct and practicable routes to each of the three summits.

SÆTRETINDERNE.*—The easy and obvious way to the highest point of this mountain from the glacier in Fladdal was found by the same party on September 6. Favoured by fine weather they were able to avoid all the difficulties caused by fog to Mr. Raeburn's party, who made the first ascent in 1908, and thus reached the top from Kolaas in something under 4 hrs.' actual going. The view, especially of the whole glacier basin of Kolaastind, exactly opposite, flanked by its wild arêtes and crowned by its tower-like summit, is full of interest and beauty.

LOFOTEN, ARCTIC NORWAY.

The party consisted of Professor J. N. Collie, Dr. J. Collier, Messrs. H. Woolley, E. C. C. Baly, W. C., W. E., and A. M. Slingsby.

THE HIGHEST LANGSTRANDTIND. *July 29.*—Messrs. Collie, Collier, Woolley, and W. C. Slingsby started with the intention of exploring the recesses of the wild, deep, narrow, and hitherto nameless glacier-filled gorge above their camp at Reknæs, which they venture to call the Trangedal, then to make their way, if possible, up a steep gully on to a high-lying glacier, out of which spring several sharp peaks; to take their pick of these, to cross a high glacier pass, and to descend to well-known ground on the Kjændalsbræ, and from thence through Kjændal to camp.

This was satisfactorily accomplished, and it proved to be an exceptionally interesting and beautiful expedition. The portal through which the Trangedal is entered is very grand. On each side it is guarded by an all but perpendicular mountain, and the tongue of the glacier terminates at the head of a wild gorge, a mighty Piers Ghyll. Resisting with difficulty the temptation to climb up a steep ribbon of snow to a narrow and deep gap in the mountain wall, and through it to make a most sporting glacier pass, the party made their way to a high corner of the glacier, out of which a steep and broad gully led to higher regions. A sharply tilted snow bridge, which a few weeks later entirely disappeared, formed the only available route over a deep bergschrund. A pleasant climb, partly on rock, partly on snow, led them up to the top of one of the Langstrandtinder, where Collie and Woolley recognised a cairn which they had erected a few years previously.

The views of Rulten, the Hegraftinder, and of scores of pointed and still unclimbed peaks of Lofoten, the beautiful fjords, the wide Arctic Ocean, and the far distant black peaks and snow domes on the mainland of Norway and Sweden were indescribably grand, and no doubt the cameras did their duty well and nobly.

A second peak was climbed very pleasantly, and, to the surprise of the builders, a cairn was discovered on its rugged summit. A

* A. J. vol. xxii. p. 72; N. T. F. *Aarbog*, 1904, p. 103.

little further N.E. a magnificent but terribly forbidding aiguille rose precipitously out of the snows. Little hope of being able to climb this was either felt or expressed, as three of the party well knew its wholly inaccessible N.E. face, that which is well seen from Digermulkollen. A steep descent was then made down a gully, where stones were loose and troublesome, to a little glacier visible from the camp. Here the party made their way merrily towards a broad *skar* and the Kjændalsbræ. Suddenly the leader gave a chuckle, put a pretty curve on the rope, and pointed upwards. Nature, as usual, was kind; a most convenient snow gully, tucked nicely away in a corner, was revealed and promised a feasible route far up into the heart of the mountain. The gully led to the base of a mountain wall, at each end of which was a high crag. One of them was the top. Which? There was no time for both. Fortunately the northern one was chosen. After 200 ft. of difficult rock a snow wreath was reached. This led easily to the summit, the highest and undoubtedly the grandest of the Langstrandtinder. A large stone was dropped over the edge. After a fall of over 1,000 ft. it struck the Kjændalsbræ at least 30 ft. beyond its guardian bergschrund. The views, if possible, were more beautiful than ever. After carefully descending to the snow a glissade was taken almost to the pass, and a merry descent was made by the Kjændalsbræ and the grand gorge below, and in the early morning the party was welcomed by the two ladies who honoured the camp with their company as well as by the ever trusty Kristian, who soon supplied a well-earned meal. This was a royal day.

KJÆNDALS NÆBBE. *August 5.*—J. N. Collie, E. C. C. Baly, and W. C. and A. M. Slingsby. This remarkably fine aiguille, which so often plays hide and seek among the scudding clouds, beckoned the party both last year and this so persistently that its invitation could no longer be ignored.

Up through the glen of Kjændal, away over its ice to the pure snows, and after a steep ascent up hard névé, a deep gap was reached on the N.W. side of the peak. A direct ascent being impracticable, the party climbed a little way down a chimney leading with horrible pitches towards the Trangedal. Then a traverse was made on the S.S.W. side. The climbing was of the very best Chamouni aiguille type—up, down, through, over, under, and along all sorts of awkward places. The last 150 or 200 ft. were terrible to look up at, and as to climbing them, it was clearly out of the question. A few small cairns were built here and there, merely to record a failure. Mightily crestfallen the party slowly wormed their way back by the ledges, chimneys, letter boxes, and edges to the gap. The steep snow was carefully descended, and when the thoughts of most of the party dwelt on loaves and fishes below, Collie proposed that an attempt should be made on the E. side.

The glacier was soon traversed and rocks were reached. For 150 ft. all went well; then came the usual walls. Wriggling like an eel the leader got up the corner of a steeply tilted 100-ft. slab and a rock wall, and then drew the rest up. Good but easy climbing

ensued for a short time. Then came a series of horrid slabs, like books on an untidy bookshelf. Here was much shoving up and a corresponding pulling. A brilliant piece of work was done by Morris Slingsby up the edge of a huge slab. On the top of this was a ledge about a foot square. Above the ledge was a bulging rounded rock, the top of which was some 9 ft. or 10 ft. above the ledge. Over this rock was the way, or nowhere else. Collie stood on the ledge; two others, wedged more or less insecurely, held him in. Morris then climbed on to Collie's shoulders, and, thanks to much recent practice in gymnastics, he managed to get over the obstacle. Little pitches and steep snow led to the top. Few mountains have such a summit as Kjændals Næbbe. It is the northern portal of the Trangedal, out of which it springs with a superb precipice. The rock upon which the cairn was erected overhangs this precipice, and it was a gruesome place to stand upon and to look over. On the descent, by means of some clever engineering, hitches were made with the rope, which enabled the last man to come down with relative ease. It was again early morn when the party got down to camp, and were reproved by the would-be sleepers for what was thought to be an unseemly manifestation of exuberant animal spirits.

Both the east and the west Rulten peaks were reascended by some of the party, with but slight alterations from the routes taken in 1903. The glacier in Eiderraaddal was revisited. Attempts were made on two fine mountains, but all in vain, as the bad weather would not permit of success, and finally the party were driven south to lovely Moskenæsö.

OLSTIND. *August 17.*—Messrs. Collie, Woolley, Baly, and W. C., W. E., and A. M. Slingsby. On the arrival of the party at Reine, this fine peak had been pointed out by Herr Harald Sverdrup, who said that on several occasions its summit had been proved to be inaccessible. This strong recommendation naturally made the party wish to try the ascent. Herr Sverdrup, who is an excellent sportsman, was invited to join in the expedition, but, much though he would have liked to do so, he was prevented by other engagements.

The party rowed in Woolley's beautiful boat from their camp at Engelsnæs—Angel's Promontory—across the mouth of the Kirke fjord to the foot of the mountain. The south face consists principally of one gigantic slab of rock, capped by grass-flecked crags. Across this slab is one ledge, steep in some parts, but inclining only gently upwards in others, towards the east. It may be continuous, or possibly it is broken off in two places. A steep chimney, in which are at least two bad pitches, descends from the western end of this ledge. Clearly this sporting route was the one to be tried. After mounting steep slopes, where the Norse haymakers were busy at work with their sickles, the party reached what seemed to be the most hopeful place to climb up the crags and into the chimney, the bottom of the latter apparently being guarded by an unclimbable slab. On these thirsty crags 5½ hrs.

were spent, the climbing becoming more difficult as height was made. The fact that the haymakers far down below were constantly looking up was anything but reassuring. Well do the party remember an old rowan tree in a gully, and the corner above it, nor do they forget the two great slabs where the leader was shoved up by a man who himself was supported by two others. All to no purpose. A retreat was ordered. When halfway down, a traverse was made towards the chimney above the great slab, and, though the chimney itself seemed to offer no road upwards, to the surprise of all an easy way down at the edge of the slab was discovered to the grass slopes. After lunch the party turned towards the mouth of a great central corrie. At the bottom of this was a huge impracticable pitch 200 ft. in height. This was turned by climbing up a grass- and birch-covered slope, from which a steep strip of grass between slabs of rock led to a flattish ledge, which dwindled to a sensational narrowness, and a sharp corner round which was the floor of the corrie. Interesting climbing succeeded; a great ghyll was ascended, and without further difficulty the top was reached. In addition to building a cairn a fire was made of the peat which, oddly enough, was found on the summit.

KLOKKETIND. TWO LOWER PEAKS. *August 19.*—Messrs. Collie, Woolley, Baly, and W. C., W. E., and A. M. Slingsby. This mountain was attempted from the north. By traversing along two wide ledges a great gully was reached. This mostly consisted of steep hard snow, and it led the party to a narrow gap visible from Reine. They then turned up the eastern ridge, and were pulled up by a horrid-looking slab and crag above. One of the two youngsters climbed this brilliantly, and even with the rope above them the others did not find it easy. A second difficulty occurred on the top of the first crag, a slab without holds, sloping two ways, steeply upwards, and also slightly down from the crag on the face of which it lay. It was a horrid place, but was safely climbed. Interesting rather than difficult climbing led to a little peak, then to a second. Beyond this was a square 'cut-off,' and the highest peak stood up across this rubicon, and very untempting it appeared. It will hardly do to say that it could not be climbed from here, but prudence would not allow an attempt to be made on this occasion.

The descent needed great care and considerable engineering skill.

HERMANSTIND AND THE WESTERN PEAK OF HERMANDALTIND. *August 21.*—The same party climbed the Hermansdaltind, which had been ascended by three of them in 1903. On a visit to the remote and romantic Hermansdal the owner of the valley pointed out a grand peak as being the highest in the island—in fact, the Hermansdaltind. This, however, was not the case, as the top of that noble mountain is not visible from the valley after which it takes its name. Clearly, then, the peak overshadowing Hermansdal should be called the Hermanstind, and to make the name doubly appropriate it was ascended by Hermann Woolley and the present writer, an easy matter when ascending the great peak. The western

peak of the Hermansdaltind, which consists of magnificent crags, was later climbed by A. M. and W. C. Slingsby.

THE MITRE. BISKOPS HUE. August 22.—Messrs. Collie, Baly, and W. C., W. E., and A. M. Slingsby. Across the Bunæs Fjord, from the camp on the promontory, rose a remarkable couple of aiguilles, which usually were spoken of as the Dru and the Little Dru, to which, indeed, they bear a striking resemblance. Though they possessed no Norsk names, the higher one especially invited a closer acquaintance. Kristian ferried the party over the fjord, and a most beautiful cattle and goat track led to the back of the peak. The climb began at the very top of a pass leading over to Hermansdal, and it proved to be a most excellent rock-climb, of ledge and face character, where there were many interesting pitches, and where much combined climbing was necessary. A delightful uncertainty as to the result was kept up to the very last, and there was not a dull yard to be found on the mountain. The inhabitants of the farms below, who were cutting grass on the mountain-sides, responded heartily to the jödels which were indulged in when the top was reached. Some of the party considered this to be the best expedition which was undertaken this summer in Lofoten.

THE CANADIAN ROCKIES.

Miss Gertrude E. Benham writes as follows from Glacier House, Glacier, British Columbia, September 28, 1904:—

‘On July 18 I left Lake Louise Chalet and walked over to Moraine Lake, in the Valley of the Ten Peaks, with Christian Kaufmann, intending to camp there for some days, and, if possible, make the ascent of some of the ten peaks which had not yet been climbed. The next morning we started about 5 for Hiji, or No. 1, the ten peaks being named after the Indian numerals 1 to 10. In this country, where nearly all the peaks are named after persons, it is a relief to find a few with other names, but the quaint name of Hiji has since been changed to Mount Fay, although there was a smaller peak already named after Professor Fay. We scrambled through bushes and muskeg to the moraine of the glacier, and then turned to the left over snow slopes to the foot of a steep gully between Nos. 3 and 4, up which we climbed, partly on snow and partly on the rocks at the left. Having reached the top of the pass, we made a short halt for breakfast, and then continued our way over a vast snowfield surrounded by peaks except where it sloped down to Prospectors Valley. We soon climbed up on to the slope of one of the peaks on our left, but after traversing the slope for a short time we crossed a ridge, and then saw that the peak we took to be Hiji, and our intended goal, was far across the snow field. Accordingly we scrambled down some rather steep rocks and snow till we regained the level, and trudged on towards a snow slope on the peak, where ascent seemed possible, but which we found extremely unpleasant, as the snow was soft, and towards the top were many loose stones, which rolled down at the least touch. The

view from the ridge was very interesting. We could see into Consolation Valley and into a valley beyond where there was a beautiful lake, similar to Lake Louise, but with a curious-looking dam of stones and rocks across one end. We hurried as fast as we could along the ridge and back, as we feared night might come before we had descended the steep gully on our homeward way. As we passed by Mr. Wilcox's camp, just before reaching our own, we described to him where we had been. I then found that we had not been up Hiji, but on a nameless peak, and not one of the ten. The next morning we again started to attempt Hiji. We climbed again up the steep gully, and tramped over the snow field, but this time kept more to the left, and succeeded in getting up the right peak. The weather was perfect and the view magnificent. After staying some little time on the summit, while Christian made a 'stone-man,' we descended to the snow field, and then, as it was still early in the day, we thought we would try No. 2, which had never yet been ascended, as well. This peak was mostly rock-climbing, while No. 1 was snow, and while halting for lunch I found some little plants of saxifrage growing in the clefts of rock, which turned out to be a new variety, unknown to any of the botanists of these parts, and which has, I believe, been named after me. We reached the summit, and then descended the other side, over steep rocks and snow, down to near the pass at the head of our gully, and so back to camp. Two days after we again climbed this now familiar route, on the way to No. 6, also unascended. This time we turned to the right after reaching the top of the pass, and skirted along the base of Nos. 4 and 5 till we reached No. 6. But we found the mountain was impossible from this side, so we had to traverse over loose stones and snow till we reached the further side. The ascent was steep and near the top the rocks were so rotten that we feared they might fall at any moment. The summit is a long narrow ridge of rocks, so insecurely balanced that one scarcely dared to touch them. As we were descending we saw smoke in the valley, and feared our camp was on fire, but we found it was the forest, about ten minutes' walk from the camp, and fortunately the wind was blowing away from it; but I was afraid to sleep much that night, with the fire so near, and it was some weeks before it was finally extinguished. Another peak which I climbed by a new route was Mount Stephen. I left Lake Louise at midnight with Hans and Christian, crossed Abbott Pass down to Lake O'Hara, then skirted round Mount Odaray into Cataract Valley and up a snow slope leading to a ridge of Mount Stephen, which had not previously been ascended. This was mostly of rock of the usual rotten nature which one finds in these mountains, and we were not sure whether we might not find some impossible wall or somewhat to bar further progress. However we worked our way along slowly, and arrived at the summit about 7.30 P.M. We then hastened down by the usual route, and after taking a short sleep and rest when we got down to the level we continued our descent by lantern light, arriving at Field at 9 A.M. While camping in the

Yoho Valley I made the ascents of Mounts Gordon, Balfour, and Collie by what I believe to be new routes, as I think they had only been climbed previously from the Bow Lake side, from the accounts and maps that I have seen.

ALPINE NOTES.

'THE ALPINE GUIDE.'—Copies of Vol. I. of the new edition of this work, price 12s. net, and of Hints and Notes, Practical and Scientific, for Travellers in the Alps' (being a new edition of the General Introduction), price 3s., can be obtained from all book-sellers, or from Messrs. Stanford, Charing Cross.

THE LIBRARY CATALOGUE is now printed, and may be obtained, bound in cloth, on application to the Assistant Secretary, 23 Savile Row. Price 3s.; postage, 4d.

THE ALPINE CLUB OBITUARY.—W. G. Clay (1903), L. K. Meryon (1904).

TWO CORRECTIONS.—In 'A. J.,' vol. ix. p. 112, line 5, for Geo. S. Foster read G. E. Foster. In 'A. J.,' vol. xxii. p. 219, line 22, for E. G. Foster read G. E. Foster.

TO SKI-RUNNERS.—Mr. W. R. Rickmers will be in Adelboden from January 1, 1905, to February 1, and hopes that many members or their friends (also ladies) will take advantage of his offer to teach them ski-ing. Terms, none; conditions, enthusiasm and discipline.

From February 10 to 29 Mr. Rickmers will be found at Igls, above Innsbruck, and during the latter part of April on the Feldberg, Black Forest.

Please address: W. R. Rickmers, Radolfzell, Baden, Germany.

PROJECTED RAILWAY FROM TURIN TO MARTIGNY.—We take the following from the 'Geographical Journal' of October 1904:—'The "Tour du Monde" of June 11 last sketches this new railway project, which it considers likely to be put into execution before long. The line would have a total length of 157 kilometres (97½ English miles), with a maximum gradient of one in twenty, while the traction would be electric, power for this purpose being supplied by waterfalls. Breaking off from the line connecting Modane with Turin, the new line would cross the plains of the Canavese to Pont, entering the valley of the Orco and passing by a tunnel under the Paradis *massif*; then, mounting halfway up the left flank of the Aosta valley, it would pass Morgex and Courmayeur, whence, by tunnel under the Col de Ferret, it would run in Swiss territory along the Dranse to Martigny. The new line, it is pointed out, would have the advantage over the Mont Cenis, St. Gothard, and Simplon lines as the shortest route between North-Western Italy and the countries of Central Europe.'

THE WETTERHORN SUSPENDED RAILWAY.—We are indebted to the 'Railway Magazine' of October 1904 for the following notice:—'The new "Wetterhorn Railway" may be said to differ from

other mountain railways in that it is not strictly a railway at all. The carriages, instead of running on rails, are fixed upon two superimposed steel cables, and are put in motion by a third. They are in fact suspended in the air. The system has been found to be far less costly than that of the railway, and is claimed to be safer. Experiments of a very exhaustive character have recently been made with it, and it is stated that it is to be adopted by more than one of the big syndicates who have a commercial eye upon the tops of several other well-known mountains in preference to the railway proper, as was originally intended. The road which connects the Wetterhorn Hotel with the starting-point of the cable-way is finished. Work upon the hotel, which will stand close to the Alpine Club Cabin, has been commenced. A request has been submitted for the right to connect Grindelwald with the "glacier supérieur" by a railway, to facilitate the ascent. The high walls of rock, for some 1,000 mètres, as far as the Alpine Cabin, will be traversed in two sections. The arrival station of the first will be upon the great "Karwangen" buttress, whence the traveller will have a distance of about a hundred yards to walk in order to reach the starting-place of the second. The terminus is to be among the great, stern, and weather-worn rock peaks just below the Cabin, where, as on the summit of the Jungfrau, it is proposed to erect a restaurant.'

REVIEWS AND NOTICES.

Handbook for Switzerland and the Adjacent Regions of the Alps. Nineteenth edition. Completely remodelled and thoroughly revised. With thirty-four travelling maps and plans. (London: Edward Stanford. 1904.) 10s.

It is always a pleasure to greet an old friend, and the older the friend the greater the pleasure. Sixty-six years ago 'Murray's Guide to Switzerland' first saw the light. To-day we welcome the nineteenth edition. Naturally many changes are manifest, but the book in the past has won golden opinions from all sorts of people, and to-day deserves to enjoy the proper accompaniment of age in troops of friends. The book announces itself as 'completely remodelled and thoroughly revised.' As to the first of these statements there can be no doubt; as far as our examination has gone there is every indication that the second statement is equally true.

It is, of course, quite needless to do more than briefly notice so well known a book. One great change in this edition is that 'it has been thought best to omit any account of that portion of the French and Italian Alps which extends, roughly speaking, south of the Col de la Seigne.' When we reflect on the excellence of the New 'Ball'—which we have often tried and never found wanting—we think that this change will commend itself to those who patronise the new 'Murray.' Of course this restriction of the districts covered has enabled the editor to give a fuller treatment of the part

actually included, 'which extends from the Col de la Seigne to the Reschen Scheideck Pass.'

The scheme of the book has been rearranged, some new routes have been added, and the Introduction 'has been carefully overhauled and revised in many points.'

We have always felt a grateful friendship towards 'Murray's Switzerland,' and are glad to see an old friend brought up to date. The book in many cases gives excellent historical information; e.g. in the account of Aosta on p. 120:—

'The district is, and always has been, a piece of Gaul on the Italian side of the Alps . . . an outpost of Gaul within the bounds of Italy. . . . It always showed a tendency to attach itself to the master of Burgundy rather than to the master of Italy. . . . It belongs, in fact, to the same group of lands as Maurienne [Tarentaise], Vaud, Bresse, the Lower Valais, and the other dominions of the House of Savoy. . . . Since the first rise of the Savoyard power in the eleventh century Aosta has always been a cherished possession of the dynasty, and it still remains the last fragment of their once great Burgundian dominion on both sides of the Alps, on both sides of the Lemman Lake. . . . We thus see why the speech of the vale of Aosta is not an Italian but a Gaulish tongue. The old allegiance of the land was due not to the crown of Monza, but to the crown of Arles. . . . And what is true of language is equally true of architecture. There is not a trace of Italian work in the buildings of Aosta, save only the towers, with open arcades at the top, which are seen in some of the greater houses. Otherwise every feature is Burgundian. The doors and windows of houses and churches are such as are nowhere seen in Italy, but such as may be found anywhere from Dijon to Constance. Indeed, to an eye long accustomed to Italian forms it is a relief to see real mullions and mouldings. . . . There is nothing that can be called street architecture. And the military works of mediæval times consist only of the round towers added to the Roman walls, picturesque, but nothing more.—*Freeman.*'

One of the great features of this new edition is the number of the maps, most of them excellent. Take, for example, the map of Engelberg, Meiringen, the Grimsel, and the Furka which faces p. 245. What more could be wished for? What would we not have given for such a map on our first visit to the Alps?

Conway and Coolidge's Climbers' Guides.

The Bernese Oberland. Vol. ii. From the Mönchjoch to the Grimsel.

By W. A. B. Coolidge. (London: Fisher Unwin. 1904.) 10s.

This book, like its predecessors, will be warmly welcomed by climbers. For its accuracy and completeness the author's name is a sufficient guarantee. It is not necessary to review it at any length, as the method and arrangement, as well as the general excellence of the 'Climbers' Guides,' are well known, but we may say that we have examined it with some care, and found it most helpful. The history of such great peaks as the Wetterhorn, Schreck-

horn, and Finsteraarhorn will be found absorbing. As the author remarks in his preface, 'By an interesting coincidence this volume (in which the Wetterhorn is described) appears in the jubilee year of the first ascent of the Wetterhorn from Grindelwald (by Sir Alfred Wills, September 17, 1854), whence dates the origin of systematic mountaineering in the Alps.'

CORRESPONDENCE.

To the Editor of the ALPINE JOURNAL.

Wych Cross Place, Forest Row, Sussex :
September 4, 1904.

SIR,—I notice in the last number of the 'Alpine Journal' a reference to the Verstankla Thor, in the Silvretta group, a charming little pass I opened with François Dévouassoud in 1866, as 'longer and more arduous' than the other passes from the head of the Prätigau to the Lower Engadine. I do not know what the other passes may be, but the Verstankla Thor does not deserve these adjectives. It took us only five hours to walk from the Silvretta Club hut to Süss, and the way was in no sense 'arduous,' though not without danger from concealed crevasses for careless climbers.

I am yours obediently,

DOUGLAS W. FRESHFIELD.

We regret that owing to pressure upon our space several reviews have had to be held over.—EDITOR, A. J.

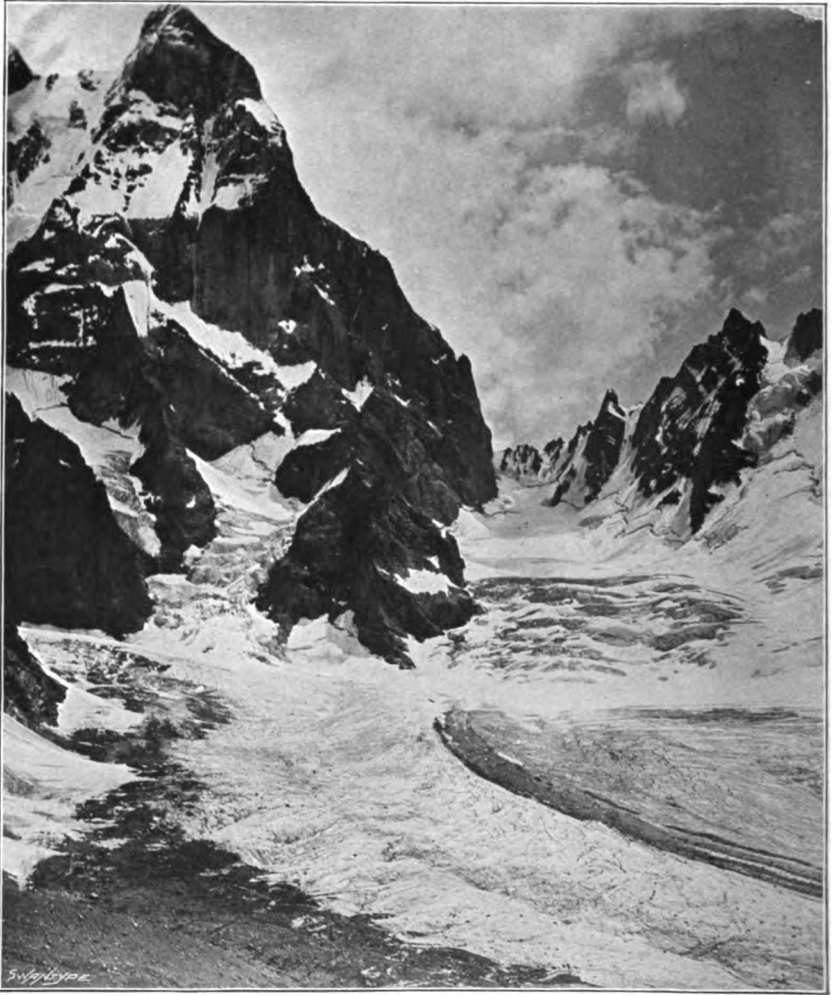


Photo. by W. R. Rickmers.

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SOUTH PEAK OF USHBA, WEST FACE.

THE
ALPINE JOURNAL.

FEBRUARY 1905.

(No. 167.)

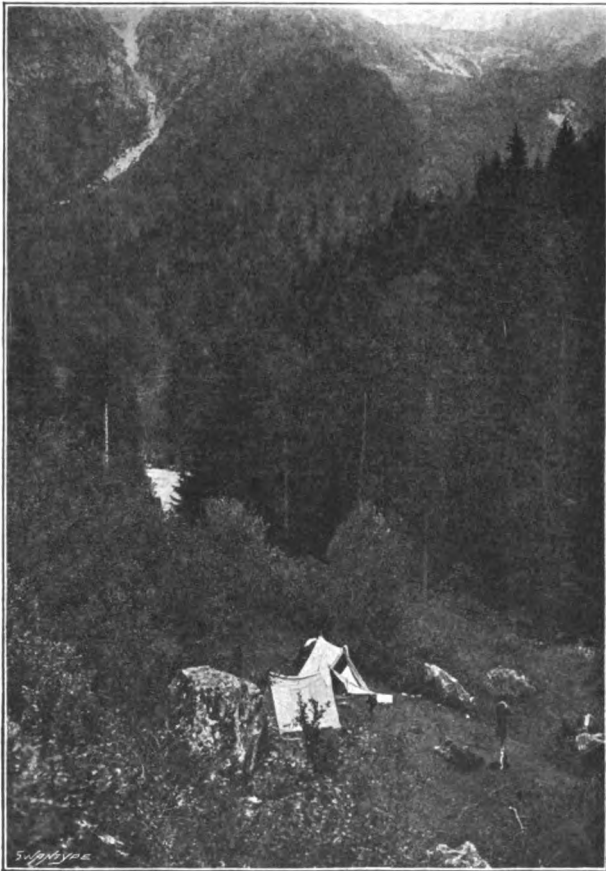
PERSONALLY CONDUCTED: SUANETIA IN 1903.

By W. RICKMER RICKMERS.

PART II.

UNDEFINABLE feelings, reminiscences of the past and premonitions of the future, agitated my soul when next day the three of us rode up to camp along that valley which I knew so well. They became full and strong when, arriving at the moraine of the Gul glacier, I saw the huge cairns of Ushba granite which Hacker and I had built eight years ago. With trembling hands I unfolded the weather-beaten piece of macintosh containing our cards of 1895, and to which my wife and I had added the record of our visit in the year 1900. Eight years! Youth thinks them long when peering forward with eager eye and fervid impulse; but how their content dwindles when we measure them looking backwards on the path of life, and how they vanish into nothingness when we make mountains the milestones of human time! This is the secret of the influence these exercise on mind and soul, that their immovable greatness gives us strength to bear the weakness of shattered hopes and to scorn the flimsiness of worldly success. They teach us to be true to ourselves, to stand firm through the storms that sprinkle us with grey or the brilliant sunshine which lays us bare; they tell us to march towards our fate with the stout heart of a rock, which cold and heat affect but outwardly, until the days are told and the inscrutable infinite is reached, where the lifetime of a mountain and a man count but as one. Herein lies the stern solace of the mighty peaks, that they are the earth's great individuals. Sea and desert are not units, but wide somethings; forest, glade, and pasture strike softer chords, tell other tales; coasts and rivers change; towns, fields, and hedge-

rows are but passing phantoms that the eye of our youth oft recalls in vain ; but the mountains are clear-cut personalities that do not alter within the memory of man. For us Ushba



[Photo by W. R. Rickmers.]

LONGSTAFF AND ROLLESTON'S CAMP ABOVE MUJAL.

and Tetnuld have never been young ; for us they will never grow old.

I added new names to the record in the cairn, and wondered if ever again in years to come I should stand there, and with whom.

Shouts on the mountain-side roused me from my dreams. The advance guard, Ficker, Scheck, and Schulze, were coming

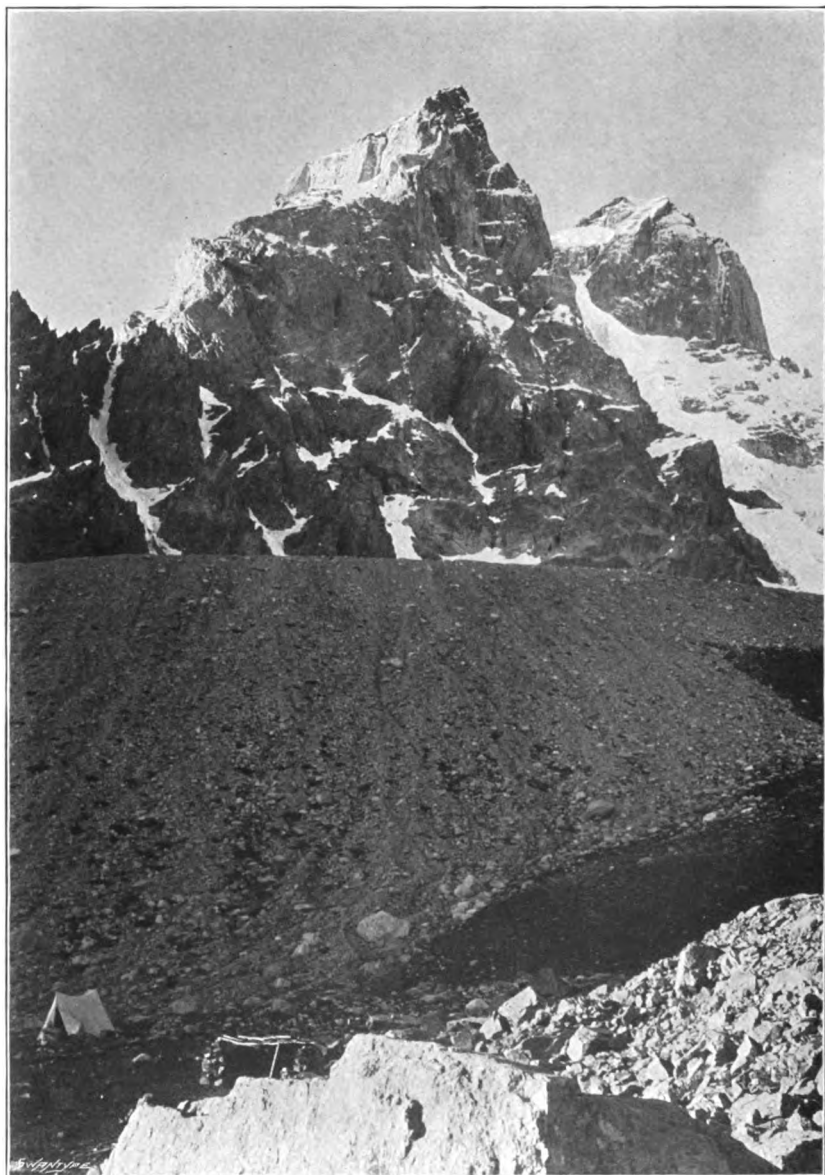


Photo. by W. R. Rickmers.

Swan Electric Engraving Co.

EAST FACE OF USHBA.

back from their quest, and with them was Muratbi, the hunter. They brought welcome news, and to me there was no doubt that they had found the key where I had always suspected it to be hidden. At first they had reached, like so many before them, the top of the great gully which is cut into the frontal spur of Ushba's southern peak. Quickly reading the refusal writ large on the walls of the notch, they descended a couple of hundred feet or so, and by a happy inspiration traversed into the rocks of the S.E. face as soon as it was possible so to do. They knew, as everybody does, that hereabouts is the lower termination of a narrow couloir, the thin white streak familiar to all who have seen Ushba from the E. And they, as all of us before, dreaded this funnel as the Sepoy once dreaded the cannon's mouth. So they took to the edge on its right (S.) and clambered over an exceedingly steep but solid and not unduly difficult staircase to the tiny col of the couloir in question. This very sporting bit took them 4 hrs. They now saw their way open to the 'Lower Field' (*i.e.* the *névé* under the summit wall): the problem of a quick approach to the final wall had been solved. Had it ever been solved before? Did Donkin and Fox climb the gully or the rocks? If so, they wanted to keep a secret, and they kept it.

My three friends now held the handle of the door, which only the dead had unlocked before them, and out of unselfish regard for me they decided to return before entering. Looking down the dark and narrow channel they weighed in their minds the grave alternative between the laborious descent over the precipitous arête or the quick, but perhaps risky, walk down the soft snow. After long reflection and much hesitation they boldly stepped into the easy road, where but few small fragments, detached by the sun from the wall above, were leisurely hopping towards the unknown. The first few steps gave assurance in the state of the snow and confidence to continue the row of deep, firm holes which their feet were punching into the filling of the cleft. Before they knew the end was reached, and a short traverse brought them back to their tracks of the morning. Thus the couloir, which looks so steep and forbidding from afar, had lost its imaginary terrors, which means that its danger from falling stones and slippery ice is not so great as a view from the distance would seem to suggest. From afar one takes for granted that it must be a very ugly couloir, but in reality it is a fairly innocent one as couloirs go. Let me here dwell on the curious fact that early in the season the great rock peak

Ushba is a pure snow climb, with the exception of one traverse and the final wall (400 ft.), whereas later, when the snow-fields have shrunk away from the edges and the gullies are hard ice, rock can be substituted at will almost all along the line, beginning at the point where the wide road of entry is left for the more narrowly prescribed line of ascent—*i.e.* the traverse out of the large couloir.

While my comrades were resting from the labours of the day I made an attempt to ski on the slopes of Gul Tau, the shale-covered hump on the eastern side of the valley; but the rays of the setting sun did not shine upon any valuable results, for the snow, furrowed by close flutings often a foot deep, derided all efforts at curving and swinging.

Early on July 20 five of us left the tents of Gul—the ‘*Uschbamädel*,’ her brother, Schulze, Muratbi, and myself—all laden like mules, for we carried the impedimenta for a heavy siege under the walls of the fortress; we did not trust to the dash of a random assault. In the upper gully we used the steps, now frozen hard, of yesterday’s descent, and from the notch at the top found two short strips of snow joined by a traverse, likewise over snow. These brought us safely to the Lower Field, though not without many an awkward and fearsome glance at the abyss which from the climber’s left foot shoots away towards a mysterious semi-darkness. That is the short way which the water from the melting névé has painted in blackish streaks down the ruddy granite of the western flank. Crossing the steep snow-field we kept along the edge, sometimes using the rocks, until at a height of twelve thousand feet or more we found an outcrop of slabs and boulders which seemed to offer the last and highest chance for a comfortable bivouac. Those who have seen our mountain from the west will remember how, on this side, the South Peak seems chiefly built out of a few enormous boldly cut blocks with sheer, straight sides. On the biggest of these rests the Lower Field, and here, if anywhere else in nature, we have a smooth and truly vertical plane of thousands of feet. On the very edge of this drop, between it and the giddy snow slope, we chose our camp. Lazily the day was spent in the broiling heat, which seems to ridicule the expectation of the biting cold of the night. Rarely, if ever, have mountaineers lived so luxuriously at such an elevation, for had not we a lady, a house wife, who not even in these surroundings could restrain the womanly impulse to help others? She prepared delicious ices of jam and snow, and made us feel quite at home.

While the afternoon progressed a thunder cloud collected round the pinnacles of Mazeri Tau, which, seen from here, bears a striking resemblance to the Monte della Disgrazia from the Cima di Rosso. It soon dispersed, however, and in the clear evening air we saw the light of our companions twinkling at the foot of the Kuish Glacier, so near and yet so far. In spite of the intervening mass of Ushba itself the view from our eirie embraced a wide circle from Elbruz to the Ossetian Mountains. Dongusorun is quite close, its easiest route of access being clearly visible. But of what was nearest to us in space and nearest to our minds we saw nothing but the invitation which the sphinx had called before: 'Come nearer.' Blank walls, bleak and silent, save for the occasional cracking of an icicle in the central cleft and the faint spluttering of the fragments as each marked its tiny reel-trace on the even white below.

There was no clue to probabilities, and all our talk was but idle speculation to wile away the hours. It was merely a toss up as to which corner one was to try first, S.E. or S.W., and, as the future proved, we lost the toss against fate, for had we tried the one and only corner first our party, with Schulze still in the freshness of the morning, might have had another tale to tell. We decided to begin with the S.E. ridge next day, and for the rest consoled ourselves with axiom one of the climbers' philosophy: 'Inaccessibility is a relative term.'

During the afternoon we had devoted some thought and energy to the construction of our bed. A slab, which we considered slightly inclined, was cleared from snow, and a rope fixed against which to rest the feet. The test of practical use, however, proved that the angle as estimated by the eye was superior to that required by the laws of comfort. The coefficient of friction was too high for danger, but too low for peace of mind and body. So after much wriggling, in spite of serious endeavours to lie still and not disturb the others, we all dispersed and sought rest in the more horizontal positions afforded by hollows in the snow. Thus, entrenched between the boulders and lying in scooped-out basins, we felt secure from the possibility of landing, by a speedy though circuitous route, on the Ushba Glacier, a fluffy ball of quilts, rugs, knapsacks, and humanity.

Comfort on the mountains is the study of a lifetime, and, like so many other things, often depends on trifles. Apart from the voluminous inventory of the rucksack the number of such important trifles is appalling. I have about twenty

pockets in my climbing outfit, and am in the habit of spending an hour or so on the eve of an expedition in distributing into them, as evenly as possible, my chocolate, aluminium spoon, drinking cup, sugar, matches, knife, money (if any), map, watch, handkerchief, pocket book, pencil, toothpick, sardine-opener, string, wire, gloves, pins, lantern, compass, goggles, glacier-salve, tobacco, pipe, together with odds and ends too numerous to describe. These must be entered on a list, and also the exact location of the pocket where to be found, and this list should be accessible at a moment's notice and under any circumstances, so that the man who, let us say, falls into a crevasse may without further loss of valuable time choose those items most useful to him in that situation. I confess, however, that a still higher plane of scientific adaptability has been reached by Muratbi, who can smoke cigarettes made out of bits of old newspaper and the tobacco scraps found in the folds of his one and only pocket.

The night, though clear, was not cold, but in spite of this the weather remained steady. We arose to the task of the day—July 21—when the first faint glimmer struck the rounded top of Dongusorun. Soon we were on our way, and by 6 o'clock had crossed over to the sunny S.E. corner, where Ficker and Schulze crawled about in all directions like flies on a wall. They returned with nothing but reports of hopeless smoothness and unfathomable precipices. So over to the other end, a journey apparently short in distance, but beset with many dangers to the hasty. At one time we found ourselves on a band of massive snow attached to a sloping ledge under the great wall. Here we were exposed to a steady downpour of the water from the Upper Field, from Ushba's top roof, and this water found its way to some hollows under the snow on which we walked. We cared not to ponder long over the potentialities of that semi-detached balcony, but hurried on to the extreme edge in the S.W., where the 'Red Corner' offers one just room enough between the perpendicularities of the above and the below to slink across rotten shale and insecure slabs to a snowy shoulder round the corner.

Here we lunched—it was about noontide—and then Ficker and Schulze went off to reconnoitre, leaving the rest of us behind to wait for orders to proceed. How shall I ever forget that snow shoulder under Ushba's summit, where she and I sat many hours, forgetful of the world below and ignorant of the future: I of the near future, which brought me to the verge of sudden death; she of the terrible summer's day one

year later when the cruel rocks of the Gabelhorn dashed a dear friend from her side? There we sat on the little patch of snow, and talked and drifted into the great problems that move humanity, and we shirked none, for in the mountains is truth. For a time we forgot why we were here, forgot that we were 12,000 feet, or more, above the sea, and in a spot whence danger guards the entrance and the egress. Above us was the unknown way to the great and glorious summit, below the awful precipice with the greenish séracs of the glacier in the deep; towards our left the pinnacled ridge of Mazeri Tau, with glistening streaks of ice and sharp black needles, while over the horizon beyond we saw the long, glossy wave of the Laila ridge, with the green whale-back humps descending from its sides. To us, to a woman and a man in earnest converse, these were but the fit surroundings in which to discuss the questions of life.

Suddenly there came a shout; we were to follow. We clambered up three hundred steps or thereabouts in the snow, and then found a rock wall and a cloud, and out of that cloud hung a rope. A voice from above commanded me to attach myself to that rope, and to leave the others behind, as it was getting late (3 P.M.). So the girl and the porter were left in suspense, and up I flew as fast as my comrades' hands could pull. My feelings can only be described as mixed. The scene was weird, and I had curious forebodings, or rather I was suffering from a moral depression and anxiety which I would have forgotten if nothing had happened. I was in that funny or desperate state when a man works away with a will without being conscious about the object of his toil and worry. My situation became uncanny, for I saw nobody, and a thunder cloud, which had gathered around, enveloped the scene in gruesome twilight. After the first thirty feet the rocks became very difficult, and I kept wondering to myself how any man could climb them unaided from above. Now and then, in long intervals, came a muffled shout from above, telling me to follow the tugging rope, and exerting my powers to their highest I gained the next pitch, out of breath and half-strangled by the indispensable help from hands working behind the scenes at a higher level. After each hot and frantic effort came the cold wait at the next stand, and these waits grew longer and longer. I had only two ideas in my mind—that of securing myself firmly and fixing the rope as well as was possible and the question, 'What is this? why am I here?' Now and then a lump of frozen snow, detached

from a crevice to free the handholds, came flying past, and I dared not watch its course in the space without. At one place the pause was longer than ever, and I was on the point of shouting to the two above to come back. With hands and feet I clung to the hollow in the rock, where only the edge of a slanting block, two feet square, provided standing room. My arm was stretched up high to grasp the hold, and the water which ran over the whole of the wall poured into my sleeve. Suddenly I shuddered, for I heard a curious grating noise, and, peering out from my recess, I beheld the soles of two hobnailed boots, toes upturned, facing valleywards. I knew enough to make me sick at heart, for a climber's feet should not tread air. Then came a long and agonising groan, then a short silence which seemed eternity. At last came Ficker's voice, bidding me render assistance, and saying that he was firm. A short scramble brought me to Schulze, the owner of the erratic boots, lying unconscious, but babbling in delirium, his blood painting crimson a little piece of snow near which he lay. Attempting the last and most difficult bit only twenty feet from the upper rim, with success almost in his grasp, he had slipped and fallen the full length of the rope. But Ficker was stout, and Ficker held, and the groan which I had heard was the plaint of him whose vitals were nearly torn out by the thrice-blessed rope; of him who saved three men. To him we owe most, for through him we have been spared to see Ushba from below with living eyes.

I bandaged Schulze's scalp with trembling hands, and then Ficker came down, that we might face the question of 'what now?' A sorry spectacle we should have been to others. Our teeth chattered; we were shivering with excitement, wet and cold; our eyes were full of terror. We had to face the ordeal of taking our helpless friend down the rocks which only he among us knew how to climb. One was prostrate and two had to work in a place which was barely safe for one to stand in. The ropes would have afforded material for the jokes of a humourist had the situation not been highly tragic. There were three ropes—the one between Ficker and me, the one by which we lowered Schulze like a sack, and the one on which we relied to help us down. At each stage they became terribly entangled, stiff and kinked as they were, and our cramped positions made the task of separating them each time an anxious and risky labour. At last, however, after many hours of weary work, when every nerve was strained to neglect no precaution, we reached the snow, and

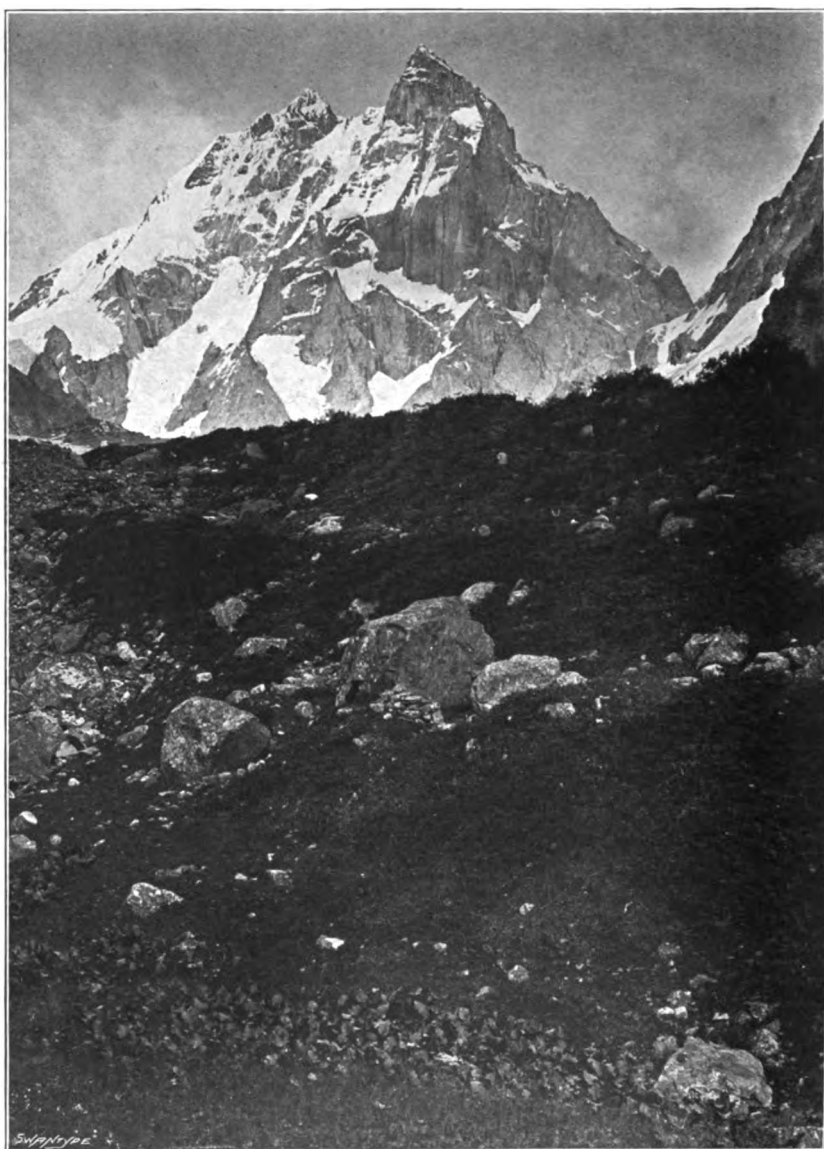


Photo. by W. R. Rickmers.

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USHBA FROM THE WEST.

no heartier sigh of relief can I recollect in all my life. One thing had proved a great boon to us, an incentive to be careful and slow, and that was the consciousness that our sister was waiting for us below. She and Muratbi received us silently, for they had seen men fighting for dear life. My companions had spent eight hours on Ushba's final wall; I five.

At the foot Schulze regained semi-consciousness and was able to walk down to camp roped between us. At nine o'clock at night we reached the sleeping-place amid thunder and lightning.

Next day the sun again shone brilliantly, and we descended to the Gul, thence to Betsho.

Here Ushba ends for me as a mere place of adventurous deeds. I had a wife at home, and moreover the impressions I had received within were deeper and grander than any later conquest could have roused in my soul. To me Ushba means more things than I can express. Cenci and Heinz von Ficker and myself went westwards to visit Shtavler. Not many days later five men filed up the winding path to Gul, and with them was Schulze, his head still bandaged. His constitution was strong, his daring great; the fall had only acted on his frame, not on his nerves or feelings. Undaunted he led his companions the way he knew so well, to attack the terrible rocks. With the wound in his head still fresh he grappled with the wall which had repulsed him, he climbed the place where he had fallen, and thus conquered Ushba, the Terrible,* the Caucasian Matterhorn.

Thus closes the first great chapter, the adventurous chapter of the exploration of the Caucasus. The human mind revels in comparisons, and there is poetry, if not significance, in analogy.

Mountaineering begins with Mont Blanc, Caucasian climbing with Elbruz, and in both cases the boldest and most famous rock peak has held out to the last to mark an epoch. The Matterhorn was ascended, and Elbruz fell in close proximity of time as the almost simultaneous ending and beginning of two classical eras. The postscript to Freshfield's stirring record reads, 'Ushba was climbed on the 26th of July, 1903.'

What more have I to tell? The deeds of the gallant knights of my crusade are history, and each man has had his say, each has shown his worth. The days of adventurous

* Said by Dadeshkeliani to be the meaning of 'ushbá.'

raids are not past, for we all would give the booty of Tamerlane and the treasures of Cortez for that proud moment of the modern 'conquistador' when with the last and highest step he plants his foot upon the glistening crown of an unconquered peak.

Well might I sing the praise of many another day, for there were many, and not one was blank for eye or ear or soul. The goblins of the sombre forests, the giants of the séracs, the elves that live in the Nakra flowers and the dryads that whisper in the birch glades of the Bal, the boisterous spirits of the banqueting hall with the songs of stalwart men and the rippling laughter of the girls—they are still with us in our waking dreams. But as Ushba is seen far and wide o'er all the Suanetian lands so the memory of Ushba stands ever-present in the scenery of our thoughts. Look how towards night it sheds its hood of cloud before the setting sun; see how it rises high above the pines of Gul—six thousand feet of rock piled upon ice, and ice piled upon rock. There it stands, the mighty union of the glowing, molten rocks upheaved and the frozen water embracing them from above; the awesome monument of the eternal battle between the fiery earth and the cold of the outer world.

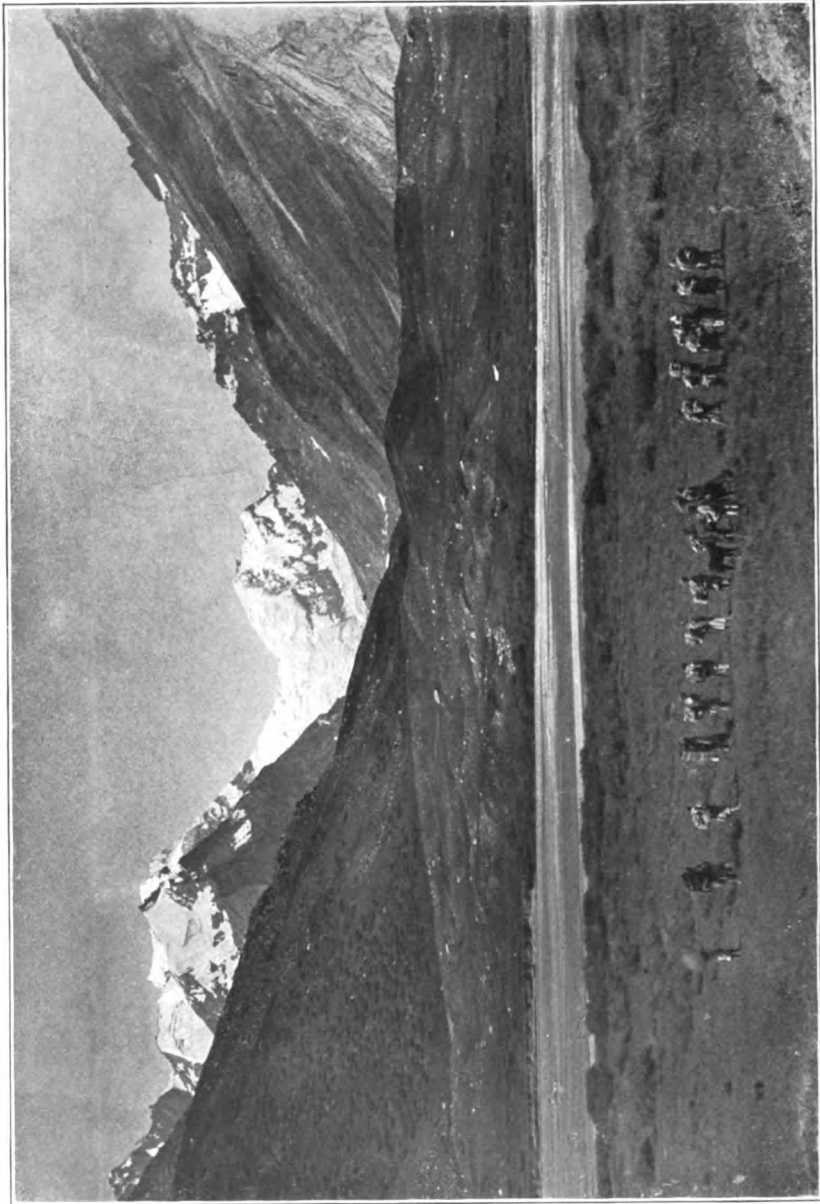
NUN KUN REVISITED.

BY DR. ARTHUR NEVE.

THE highest peaks in the Kashmir Himalayas are almost lost in the mists of distance and general inaccessibility, with the two notable exceptions of Nanga Parbat and Nun Kun. Both of these are on the great range of middle Himalayas, south of the Indus. And both dominate valleys, to whose fertility, doubtless, their own vast glaciers have greatly contributed, valleys which are now fairly populous. The Astor valley is the best known, for it is on the high road to Gilgit, the famous frontier fort of the Hindu Kush. But the Suru valley below Nun Kun, if less known, is no less accessible, and is decidedly more populous and fertile.

It is best reached by the Zoji route, the highway to Ladak, and Suru is but ten days from Kashmir.

In my account of the first exploration, published in this Journal for February, 1903, I gave a brief description of the position of the great peaks as seen from the Pakartse Pass, a few miles beyond Suru, and told how we forded the river, and ascended the Shafat Longma, and found a practicable



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THE SHAFAT VALLEY.

route to a high point on the eastern snow-fields of the highest peak. I must now bring the record up to date.

In the summer of 1903 a Belgian gentleman and his wife visited Kashmir for the sake of climbing, and in June they proceeded to Nun Kun. Mr. Sillem consulted me before starting, and I rendered what help I could in making the arrangements. They forded the river successfully, and, although hindered by occasional bad weather, succeeded in establishing a high camp at 17,500 ft., not far from the furthest point reached by the Rev. C. E. Barton and me. Difficulties in the matter of supplies also checked him, but on July 12, a brilliant day, with the snow in excellent condition, Mr. Sillem and two of the Kashmiri, with no special difficulty, ascended to the snow-field lying at a height of about 21,000 ft. on the saddle between the two great peaks.

He kindly supplied me with copies of some of the photographs he had taken at different parts of the ascent, and from the high snow-field, but unfortunately the clouds concealed the Dome Peak most of the day. His experience of the general climbing conditions was favourable, and he considered that there should be no very special difficulties in ascending any of the peaks, unless there was much ice on the arête leading W. Of course fine weather would be a *sine quâ non* at that great altitude.

In recrossing the Suru River, which had in the meantime become rather swollen by the melting snows, Mr. Sillem had some risky experiences, and his head porter was nearly drowned. However, next day a practicable ford was found and the whole of the party got safely over.

This adventure did not cause Mr. Barton and me any anxiety when we again reached Suru this year on August 1, but the event disconcerted us. At our old ford below the Shafat Chu we found nearly a foot more water than in 1902, and within a few yards of the bank I was soon lifted nearly off my feet, and, but for a rope, should have been carried away. However, we proceeded another mile or two, to above the junction of the Shafat River, and camped by a promising broad smooth stretch of river, hoping to ford early next day, before the snow water came down. At that point the river was about 150 yards wide, flowing in three streams, with narrow intervening pebble banks. The water fell only about four inches during the night. Mr. Barton led, roped with a strong porter and our Kashmiri cook.

He easily negotiated the first part, but half-way across the second and broader part the swift current turned them

slightly down into a deeper reach, where they were all three carried off their legs. For a few moments they even disappeared from view, but finally scrambled out on the other bank, and drew out the half-drowned cook. It was impossible for us to join them, or for them to stay there without food or clothing. So Barton, although badly bruised and bleeding from cuts, after a short rest rushed into the river higher up and waded down to mid stream, where I was able to join him and give him a rope. The natives refused to face the river again. So they set off along the bank on the further side, while we went up the valley looking for any ford by which they might rejoin us. None was found in the Rangdum valley, till a few miles beyond the monastery on the way to the Pense Pass. Travelling almost all night the two waifs succeeded in getting across the Pense stream in the early morning, and returned to camp the next afternoon.

Mr. Barton's injuries precluded the idea of his climbing on Nun Kun, nor had we any spare time to go round to the mountain by the head of the valley. So we turned reluctantly, he riding on a hill pony.

Below Pakartse there is a natural bridge, where the whole river has cut its way deep between two granite cliffs, and the boulders of the Tongul Glacier have jammed across the gorge and become covered by *débris*, thus bridging the river, which disappears from view for over a hundred yards. At Tongul we procured a riding yak, a behemoth which walked calmly over almost any sort of hillside, with Mr. Barton upon its back. For surefootedness it seemed to rival a goat. So we decided to have another look at the W. and S. side of Nun Kun, in continuation of our previous exploration of the Sentik La and upper Bhot Kol Glacier. I spent one night out in a *tente d'abri*, on a narrow ledge overlooking the extreme head of the Bod Zoj Nai. As on the previous occasion it rained in torrents, and at night froze hard, and it seems probable that the rainfall is at least three times as much on the S. slopes as on the N. slopes of the mountain. There did not appear any good line of access to the upper glaciers and snow-fields.

Starting at 5.30 next morning, I recrossed the Barmal Pass, and then, to obtain a better view, I ascended D 41 to the height of about 19,200 ft. This is a beautiful snowy cone continuous with the western arête of Nun Kun. There were two of our best porters with me. At first the snow was in splendid condition and we made rapid progress. We all wore crampons, and so needed to do no step-cutting. They were



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NUN KUN FROM BELOW SURU.

Engelhardt

quite new to the use of a rope, but handled it intelligently as we twisted round or scrambled across the numerous schrunds. These drove us out to the sunny arête, and there, as we ascended, the snow became very soft. Some new snow had also fallen during the previous night, which made the going rather slow. We had left the névé at the head of the glacier at 9 A.M. at a height of over 17,000 ft., and at noon we began to overlook the col between D 41 and the Dome Peak, and were several hundred feet higher than a similar col half a mile S.E., over which we looked down one of the glaciers at the head of the Fariabád Wardwan valley. Heavy clouds were now sweeping up from the Kashmir side, and we turned and descended, none too soon, for as we reached the glacier snow began to fall. By 2 P.M. we crossed the Sentik Pass, and it was very noticeable how abrupt was the transition in the snow level from the vast snow-fields extending down to 14,000 ft. on the Kashmir side, while on the Ladak side but little snow was visible below 17,000 ft. At our base camp no snow had fallen during those two days. Mr. Barton had climbed the ridge on his yak, and secured some good photographs with a full-plate camera.

Our return journey *via* the Umba La was quite uneventful and very pleasant. But from the Zoji Pass I carried out a long cherished project of visiting the Amarnath cave, a famous place of pilgrimage. Hitherto this has always been approached from the Lidar valley. Early in the summer it is also possible to go there from Baltal in the Sind valley, following almost exclusively up the vast snow-bridges, which at that time fill the otherwise impassable gorge. It was supposed that no pass existed from the Ladak road, which crosses the Zoji at a height of 11,500 ft., to the cave, which is over 13,000 ft. and only 5 miles S.E. Three years ago I reconnoitred from the Amarnath side. This year on our way to Nun Kun we had explored from the Zoji Pass up to the head of the Kani Patthar nullah, which, according to the Survey map, overlooks the cave. But we found the map in error, and from the col at the S.E. (14,600 ft.) overlooked the adjoining Gumber valley.

So on my return journey it was up the Gumber nullah that I turned near the seventy-first mile-post. Half a mile on was a large shepherds' encampment, at a point where avalanche snow still filled the nullah to a depth of 200 ft. Another mile on was a large flock of goats with a cave dwelling. We asked the goatherds if they knew the path. No, there was no path. Did they know that the famous cave of Amarnath

was in the next nullah? No, it might be in the Sahib's maps, but no one had ever been this way. Were there no goatherds in the Panjitarni valley? Yes, but there was no communication except by the Pailgam route. I had two men with me, one a local and decrepit man from the first village beyond the Zoji Pass, and the other a Kashmiri. Both were sceptical. The goatherds refused to accompany us, but an easy line was plainly visible on the lateral moraine along the E. of the glacier. At a bend in the head of the valley we kept up the rocks to the left, and came out on an easy snow-slope leading on to a snow-field over a mile broad each way. The height about 14,800 ft. In half an hour we crossed the snow-field (S. by 20 W.) and looked right down to the grassy knoll over the cave. We made our way down a steep couloir, a descent of 1,800 ft., and were quickly at our goal. The re-ascent took $1\frac{1}{4}$ hrs., on snow and scree, and we found an easy line to the W. of the couloir, crossing the ridge about 200 yds. W. of a curiously perforated cliff. There is one large circular aperture through which the sky is seen. From the top it is necessary to turn E. for half a mile. There we met our ancient porter, who had remained there.

The whole return journey from the cave to my camp on the Zoji only took $4\frac{1}{2}$ hrs. It is a route quite suitable for laden coolies.

It is my firm conviction that Nun Kun is a climbable mountain. It is by no means difficult of access, and a base for supplies and coolies is comparatively near. Some of the Suru coolies have shown themselves fairly capable and willing. They follow where well led and when their few wants are cared for. They are content with two pounds of 'satu,' parched flour, a day. They mix this with cold water, and eat it cold. Tea and tobacco are their only luxuries.

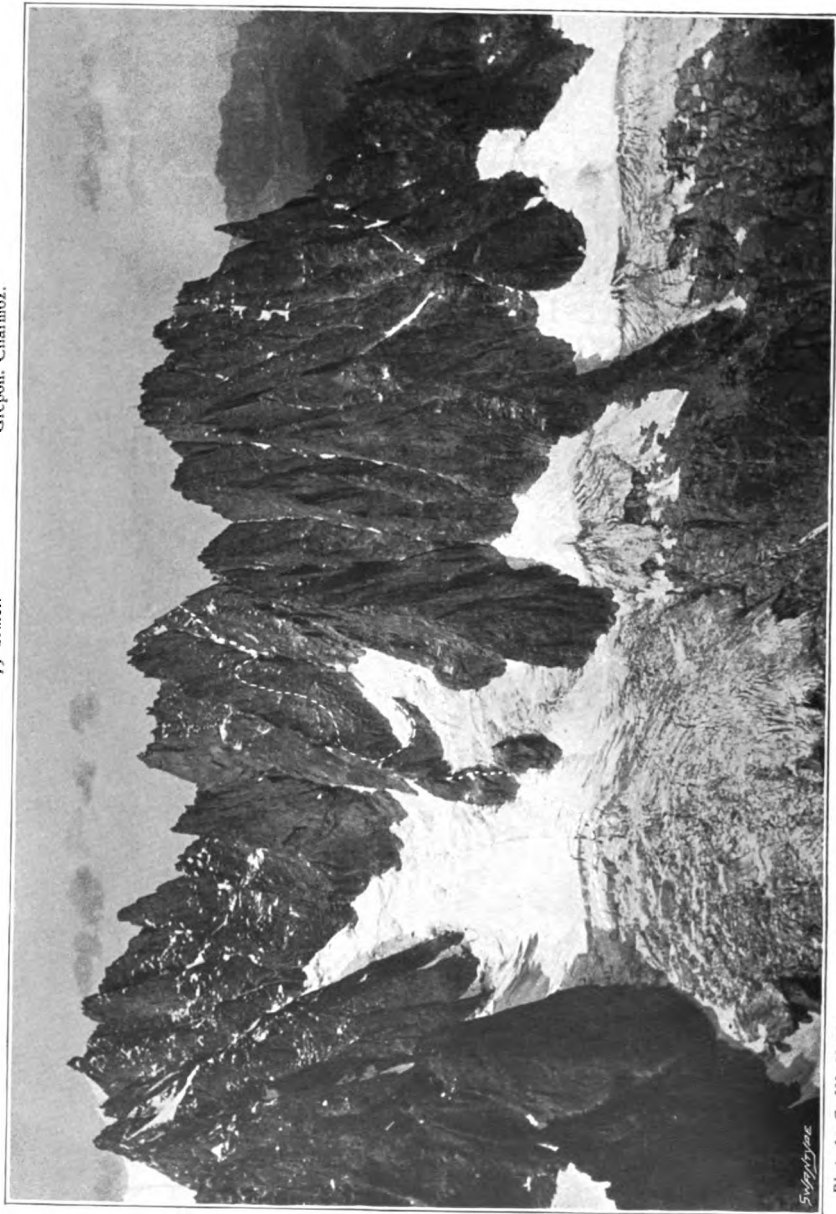
The best time of year would be about midsummer, before the monsoon has reached Kashmir. At that time at least four fine days a week might be expected. The river would then be crossed by snow-bridges, at narrow places above or below the Shafat. The party should consist of at least three climbers, and they would need about 20 porters. The expense for such a party for the journey from Kashmir would be about 20*l.*, and for every week on the mountain 5*l.* extra. In 1906 I might be able to render some personal assistance.

Blaitière.

1875 Couloir

Grépon. Charmoz.

Plan.



Swiss type

Photo by C. W. Nettleton

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AIGUILLES DU PLAN, BLAITIÈRE, GRÉPON & CHARMOZ.

(The dotted line shows the 1904 route.)

THE COL DES NANTILLONS.

By EDWARD A. BROOME.

WHAT is the proper name for the pass between the Aiguilles de Grépon and de Blaitière? Is it the Col des Nantillons or the Col de Blaitière?

Up to 1904, with but one exception, none of the numerous couloirs between the Aiguilles des Charmoz, de Blaitière, and du Plan or Dent du Requin had ever, so far as can be traced, been utilised as passes, all the rocks on the southern side being pretty nearly vertical. The one single exception was on September 13, 1875,* when Mr. H. Seymour Hoare, after climbing the Aiguille de Blaitière, descended an 'excessively steep couloir' at its foot (between it and the Grépon) which led down to the Géant glacier, and which was then called the Col de Blaitière. He later expressed the strong opinion † that an *ascent* would be impracticable, an opinion to which, after a lapse of thirty years and a careful examination from every point, I humbly subscribe.

In order to answer the query at the head of this note it is first necessary to allude once more to the extraordinary jumble of names in this group. As an eminent French climber truly said to me last summer 'Kurz's "Climber's Guide" makes a complete *salade* of them all,' and indeed hardly any two of the older maps or books agree. Now, however, the excellent Imfeld map (1896) appears to be recognised as the standard authority; and in this the Aiguilles de Grépon, des Charmoz, des Petits Charmoz, &c., were for the first time correctly named, while the lowest depression between the Grépon and Blaitière, first crossed as above by Mr. Hoare (a variation of which forms the subject of this note), is rightly called the 'Col des Nantillons,' being at the head of the glacier of that name; and the depression between the Blaitière and the Plan, at the head of the Blaitière glacier, though it has never been 'colled,' is correctly named the 'Col de Blaitière.'

Having crossed twenty-four of the principal passes in the Mont Blanc range, and, like Oliver Twist, 'wanting some more,' I had made up my mind to round off, if possible, with this particular one, choosing a season when the rocks were in specially good order. Last year (1904) being most unlikely ever in this respect to be excelled, I met Aloys Pollinger and his young brother at the Montanvert on August 1, and

* *Pioneers of the Alps*, p. 70. † *Alpine Journal*, vol. viii p. 56.

after one good training walk we tackled our climb on the 3rd, in perfect weather and condition. Leaving at 2.30 A.M., we found the newly made path across the stony waste of huge boulders under the Crête des Charmoz to be a great saving of temper ; and joining two other parties, one for the Grépon and one for the Charmoz, we all reached the usual breakfast place on the upper plateau of the Nantillons glacier at 5.45.

After half an hour's interval rapid progress was made to the conspicuous col between the Grépon and the Blaitière, and we reached the right-hand gap, which is at the foot of the latter peak and is the head of the 1875 couloir, at 7.15. This we inspected narrowly, but the longer we looked the less we longed ; the steepness of the rocks apparently necessitating the descent of the actual gully, which was all ice, and so narrow that one stone would be quite enough, and a tiny avalanche of them more than enough, to finish our expedition and existence together. The bergschrund below too, which had caused much difficulty to our predecessors, was wider than ever this exceptional year ; and looked impracticable, except at the one point far away to the right where we afterwards crossed. This decided us to seek a new route down the southern rocks by a new couloir considerably more to the west ; and to gain this we had still to ascend for nearly half an hour to beyond the third gendarme on the Blaitière ridge, reaching this, our col and highest point, at 7.45.

From this little gap we first went straight down very steep rocks on the left side of our new couloir for perhaps about 200 metres, down a ridge of very slabby rock for a further half hour, and then into the couloir itself for a quarter of an hour. We then crossed over a snow patch on to the other side just below a rock face (on the right bank of the gully) of probably 120 metres in height, which had to be *ascended*, and of which the lower part was so very steep and smooth that at one part of the wall my shoulders had to make one step for the leader while he stood on them and drove in a *piton* for the next. After this necessary ascent we traversed on to a little platform and called a halt, having taken just 2 hrs. from the pass.

From this point, left at 10.15, we always worked away right-handed, descending ultimately to somewhere near the end of the rock buttress coming down from the summit of the Blaitière, and finding some of the rock faces and chimneys by no means easy, necessitating a constant use of the extra rope, and indeed once or twice causing us to wonder if we had 'bitten off more than we could chew.' The crest of the ridge,

when reached, though still steep and narrow, was easier, and brought us down to a point immediately above where a tongue of the left-hand glacier runs into a little rock bay; and here it became necessary to descend a vertical face to the only point where it seemed possible to get off the rocks on to the glacier.

This face was about 60 or 70 metres in height, absolutely perpendicular, and took a lot of care and time. Fortunately Providence had divided it into three pitches, with two tiny intermediate platforms on which we could all three just huddle together and refix our doubled rope, even then barely long enough. At the foot the schrund was both wide and deep, but quite negotiable, though I doubt if we could have *ascended* it, or the rock face above. Luckily, on occasions like this (as I once also noticed at an execution) the laws of gravitation, duly checked by a good rope, generally bring a steep *descent* to a satisfactory conclusion.

The glacier was reached at 2.15 P.M., or 4 hrs. from our breakfast place; and, our chief difficulties being now over, we enjoyed with easy consciences our luncheon on the little spur of rocks running upwards in an easterly direction from the main rib.

Later on these rocks were mounted for 10 min. till they came to an end, and then the glacier had to be crossed right over to the foot of the 1875 couloir, in order to avoid the numerous open crevasses. We then worked down some little distance close to the rocks on the Grépon side, but below were once again forced to cross a bit of fairly level glacier to our old friend the buttress, off which we finally got down a very shaley couloir just above the lowest mass of rock.

We were now on the plateau of the Envers de Blaitière glacier, and could, as we afterwards saw, have descended better to the left and straight down to the Glacier du Tacul; but from above the icefall looked troublesome, so it was thought better to traverse to the right and descend close under the wall of the Dent du Requin, which probably took rather longer. In any case at 4.30 we joined a party of friends on the Mer de Glace, who had been picnicking on the glacier and ineffectually trying to 'spot' us. We were, however, much too insignificant to be seen amongst the mighty rocks, and, as the poet prophetically put it,

'Pygmies are pygmies still, though perched on Alps.'

Anyhow the pygmies thoroughly enjoyed their fine, and

indeed somewhat sensational, expedition; and their route from the col downwards is well shown in the accompanying illustration. The photograph also confirms their idea that the great rock wall and buttress of the Blaitière, as well as the climbing on it, resembled not a little the magnificent south face and promontory of the Meije.

THE ASCENT OF THE 'TOUR NOIR.'

By LOUIS J. STEELE.

IT is possible that even the *habitués* of the Chamonix valley, members of that large holiday pilgrimage who wander thither in recurring seasons in quest of those sovereign remedies a pure atmosphere and glorious surroundings, will know little of the 'Tour Noir' and its locality. This is probably due to the fact that Mont Blanc and its immediate neighbours have so monopolised their admiration as to distract their attention from other peaks, which although not so prominent are yet not unworthy of our admiration. It was possibly Javelle's fascinating description* of his first ascent of the 'Tour Noir,' joined with a keen desire to gain a peep behind those vast Alpine scenes existing behind the much frequented stage of the Chamonix valley, which led the author and a kindred mountaineering spirit to make the climb which is the subject of this paper.

On the fine afternoon of July 19 we drove from Chamonix to Argentière, and during the eight kilomètres which led us to the above destination we discussed with our guides the plans of our prospective attack on the 'Tour Noir.' Javelle's word paintings of his first ascent passed through our minds, and we gave full vent to our imagination in eloquent recitals of his spirited descriptions. We soon parted with our carriage and found ourselves slowly mounting the moraine slopes which lead to the small Chalet de Lognan, where we had arranged to spend the night. The toils of our ascent were tempered by the magic scenes of the great icefall of the Glacier d'Argentière, with which we were face to face; those fastnesses of the ice world which, with their fantastic shapes and wondrous combination of colours, recall the memories of some extravagant dream. We

* *Les Souvenirs d'un Alpiniste*, by Emile Javelle, 'Première Ascension du Tour Noir,' p. 364.





Photo by the late Alex. Brault.

Swan Electric Engraving Co.

LES DROITES.

reached the chalet unexpectedly soon and found ourselves listening to the host's warm welcome.

The chalet stands in what was on that evening a veritable sea of verdure and of wondrous colour, and the glory of the scene still abides with us. The horizon line of hills, ablaze with a brilliant sunset, casts its long shadows across the valley. The tall grass was enamelled with Alpine flowers, extending through an almost infinite range of tints; and a gentle breeze murmured through the fir trees with just sufficient force to sway their long slender stems into a gentle harmonic motion.

Our environment delighted and contented us. As we sat down around the primitive dining table, its snow white cloth was stained red by the last beams of the sun as it dropped behind the towers of the Brévent,

Standing like sentinels, but gaunt and grim,
Against the sunset sky.

At two o'clock next morning we shouldered our rucksacks and by the dim light of our lanterns started by stumbling over the loose moraine which leads to the glacier.

The stars faded one by one as the pale lights of dawn stained the eastern horizon, and before us stood the silhouette of the colossal mass of the Aiguille Verte, rising like a shrouded and portentous spectre from the darkness which surrounded us, as though defying our advance. Soon this grey phantom was brought to life by a warm glow which stole over its hoary face. The new day had hoisted its crimson signal, and with it our spirits rose and our lanterns were extinguished.

What a surprise the Glacier d'Argentière offers to those who see it for the first time, and especially to those whose conception of a glacier is a stream of ice, consisting of a maze of crevasses and séracs.

This glacier is almost flat, and in consequence unbroken, for a distance of nearly 2 kilomètes. After a gentle rise it again becomes level for another kilomète, until it finally abuts upon the steep precipices of the Mont Dolent and the Aiguille de Triolet.

After walking briskly for two hours we turned by the last ramparts of the Aiguille d'Argentière on our left and reached the foot of the fine snow slope which descends from the Col d'Argentière. Our attention was now centred on the graceful mass of the Mont Dolent, which rises at the end of the glacier, the summit of which forms the meeting point of the three

frontiers of Switzerland, France, and Italy. We left the ice for a short time and reached some rocks, probably the last vestiges of an ancient moraine which separated the Argentière glacier from the Tour Noir glacier; and in stepping into the genial warmth of the sun's rays we feasted our eyes on the majestic proportions of the 'Tour Noir,' which we can now see towering far above us.

The ice-slope leading to the Col d'Argentière is broken by enormous crevasses, which are the more dangerous as some are covered with treacherous bridges of snow. At 5 A.M. we were negotiating the last long snow-slope which leads to the summit of the pass, and our ascent was accompanied by the regular and strident clinking of the ice axe, that music so dear to the ears of a mountaineer. As we near the summit of the pass the strokes of the axe become less frequent, and a sudden cry of 'Look out' from the leading guide places us on the alert, and we then gaze more in astonishment than in fear at a gigantic block of rock which comes bounding down the slope, and which crosses the direction of our intended path. We wish it 'bon voyage,' and watch it on its mad career down the slope until the moment when it hurls itself in its pent up fury against the moraine rocks and is shattered into a thousand fragments.

The summit of the pass was duly reached, and the view, as we were privileged to see it, might well be called the *beau idéal* of alpine scenery.

After the numerous panoramas which we had collectively witnessed and admired we could scarcely believe that the mountain had reserved so grand a surprise for its admirers.

To the S. and at a stone's throw from us the pass is fringed with a cornice of colossal dimensions, whose long row of icicles glistened in the sunshine with all the colours of the prism, and stood out in bright contrast against the purple-blue depths of the sombre Val Ferret, 6,000 ft. below. Towering above it in the distance are the Combin and the Velan, beautiful apparitions flooded with gold and carmine by the sun's early rays. On the left rises the entire chain of the Jungfrau and Monte Rosa, the massif of the Italian Alps, and on the right we then see the great range of Mont Blanc towering over all.

Of all the peaks, however, in the near and far distance the one which attracts our attention most is the Mont Dolent, with its immense terraces of snow and ice glistening in the sun, and suspended as though by magic above its precipitous, avalanche-swept sides. It looks as though nature has

Col d' Argentiere.

Les Aiguilles Rouges de Dolent.

Mont Dolent.



Photo by the late Alex. Brault.

THE HEAD OF THE ARGENTIERE GLACIER.

Swan Electric Engraving Co.

provided this mountain with a girdle of batteries ready to cannonade those who would be audacious enough to attack it.

Although virtually rooted to the spot in sheer admiration at the marvels which so suddenly had sprung up around us we were called to order by the guides, who remarked that the toughest part of our ascent lay before us, and the truth of their statement was brought home to us when they pointed to the colossal and evil-looking tower of dark colour forming a prolongation of the rocky arête of the Col d'Argentière. This was the 'Tour Noir,' and it bore the aspect of a ruined battlement, the whole structure of which overhung the glacier and looked as though its whole mass would at some time or other fall on to it.

Not a weak point is apparent in its Titanic structure, and in vain do we scan its sombre and desolate precipices for a point of access.

We took good care to avoid the cornice, being unable to form an estimate of its actual dimensions, and followed the rock arête for a little distance to find ourselves face to face with a practically vertical buttress which barred our progress, and which constituted the precipitous face of the aiguille. To our right there is a breach in the arête which reminds one of the Fenêtre de Saleinaz when approached from the Glacier d'Orny. We made for this breach as much through curiosity as from necessity. What a mighty scene do we behold on emerging from it!

Below us are the precipitous couloirs of greenish grey ice leading down to the Glacier de la Neuvaz for a distance of nearly 3,000 ft. To our left the 'Tour Noir' rises with almost vertical faces on which the efforts of time seem to have had little effect. The only available foothold on this unbroken face consists of a small horizontal ledge of rock about 3 ft. below us, covered with a layer of snow which is already softened by the warmth of the sun.

We cautiously followed this ledge, which was barely wide enough to take the sole of one's boot, and which gradually degenerated into a mere crack, which we reluctantly followed for a distance of about 30 ft. We then found ourselves literally supported in space by the welts of our boots and by the tips of our fingers, which took advantage of the smallest projections in the rock. Whilst effecting this traverse, where a slip from any member of the party would have resulted in a disaster, not a word was spoken. We found that we still had to continue our horizontal progress for about 300 ft.

before being able to reach the arête which would lead us to the summit. Our progress was, however, barred by the overhanging of the rock-face. The only alternative was to reach a small ledge of rock which we had discovered a few yards above us. Our trusty leader proceeded to wriggle up the rock-face, to which he seemed attached by the mere friction of his coat and trousers, and to our relief reached a comparatively safe position after a few anxious moments. We followed in succession—or rather were partly hauled up—to discover that the new ledge was even narrower than the lower one. The handholds were few and far apart, and the supports for the feet at times became imaginary. After a long half-hour the nervous tension caused by a prolonged exposure to positions such as these was relieved on finding ourselves on the famous and steep arête which Javelle so aptly compares to the spire of Strasburg Cathedral. A feeling of exhilaration and excitement overcame us, for we knew now that the moment of victory was near at hand, and that we were in a comparatively safe position.

What a privilege to be able to feast one's eyes on the purple-blue depths of the great precipices on either side of us, and to feel one's self thus poised in space!

This final stage in our ascent is, however, not to be bought too easily. We are called to order on hearing the clinking of our leader's ice axe. He is cutting away at a huge cornice which forms the continuation of the arête, and as we gingerly crept along we took the opportunity of peeping over one of the finest but blackest of precipices over the Glacier de Saleinaz through breaks in the great ice fringe of the cornice.

About 90 ft. away to our left and 100 ft. above us rose the southern and true summit of the Tour Noir, the one which we had seen in the early morning from the Col d'Argentière.

Resembling the belfry of some old cathedral on which time has played its part, but which still bids defiance to its efforts, this rock tower is crowned with a white diadem fringed with huge icicles which glisten in the sun with all the colours of the rainbow. After a few moments, which, let it be acknowledged, seemed to us greatly exaggerated units of time, we were shaking hands on the summit of the Tour Noir with pleasurable excitement. However well tempered one may be to the surprises of this life, one's imagination is awakened by such scenes as these where nature has expended its efforts on so vast a scale.

Dear world, looking down from the highest of heights that my feet can attain,
I see not the smoke of your cities, the dirt of your highway and plain;
Over all your dull moors and morasses a veil of blue atmosphere folds,
And you might be made wholly of mountains for aught that my vision beholds.

On realising the nature of one's conquest the success of it almost brings superstition in its train, and we feel like the ancients who, after having invoked the fire of Heaven, trembled lest they should be selected as the victims of the anger and reprisals of their divinities.

The descent from our exalted position was marked by a certain amount of excitement, for instead of following the main arête, up which we had come, we found it possible to descend the great rock-face in an oblique direction, although, be it acknowledged, the handholds and footholds became at times almost imaginary, and in our aerial progress we might have given points to the birds.

Our descent from the Col d'Argentière was effected in fifteen minutes by a series of glissades down the snow slopes, the ascent of which had taken us 2 hrs. The crisp surface of the glacier as we had found it in the early morning had now been converted by the heat of the sun into a series of lagoons, through which we laboriously waded.

The sun was casting its last rays over the Aiguilles Rouges when we reached the Chalet de Lognan. The guides had gone on ahead and we had arranged to meet at the village of Argentière. But such a red letter day in our holiday calendar was not destined to end in an ordinary manner. We discovered when darkness had almost set in that we had strayed from the right path, or, to put it more frankly, we had missed our way, and we found ourselves wading through a labyrinth of streams in the endeavour to find the main road. At last we heard the distant voices of our guides, and perceived with joy the lights of a carriage which was awaiting our return. An hour after, we were discussing the luxuries of a *table d'hôte* dinner at Chamonix and extolling to our friends the merits of one of the most delightful expeditions to be found in the neighbourhood of Chamonix.

A great happiness, like a great sorrow, is at the time difficult of realisation; it is in the hereafter that we appreciate it to its utmost. The man who possesses happiness in the form of holiday memories stored away in his mind need never fear to sit alone in the twilight and brood.

NOTES ON THE SECTION OF THE DRAKENSBERG MOUNTAINS
FROM GIANT'S CASTLE TO CATHKIN PEAK.

By STEWART GORE BROWNE, R.F.A.

IN July 1903, and again in November of the same year, I was employed on military duty on part of the Natal-Basuto border. The following notes on that little-known part of S. Africa may prove of interest.

The frontier here is marked by the Drakensberg Mountains, which extend from the Orange River Colony down into Griqualand, and attain their highest level between the two peaks, known as the 'Cathkin Peak' (or 'Champagne Castle') and the 'Giant's Castle' (Kaffir 'Massanda'). It was on this section that we were working, and though bad weather and other circumstances prevented us completing anything more than a very small part of our task, we were able to climb the Giant's Castle and go over the Bushman's River Pass (Kaffir 'Langalibalele').

The country here is uninhabited and unsurveyed, though it cannot be called unexplored as several farmers have large tracks of summer grazing on the lower levels of the mountains, and the path over the Bushman's River Pass has been used at different times for driving stock to and from Basutoland. After the Langalibalele rebellion in the early seventies, during which a force of Natal Carbineers was sent through this country, the pass was blown up and blocked. Besides this a large game preserve is about to be started and fenced in at the foot of the Giant's Castle by order of the Natal Government, and there are several farmhouses within a dozen miles of the mountains themselves. Nevertheless, I had the greatest difficulty in obtaining any information about this part of the country, and though I was told that various people had ascended the Giant's Castle, I never met anybody who could tell me anything about them or the way by which they had attempted the climb.

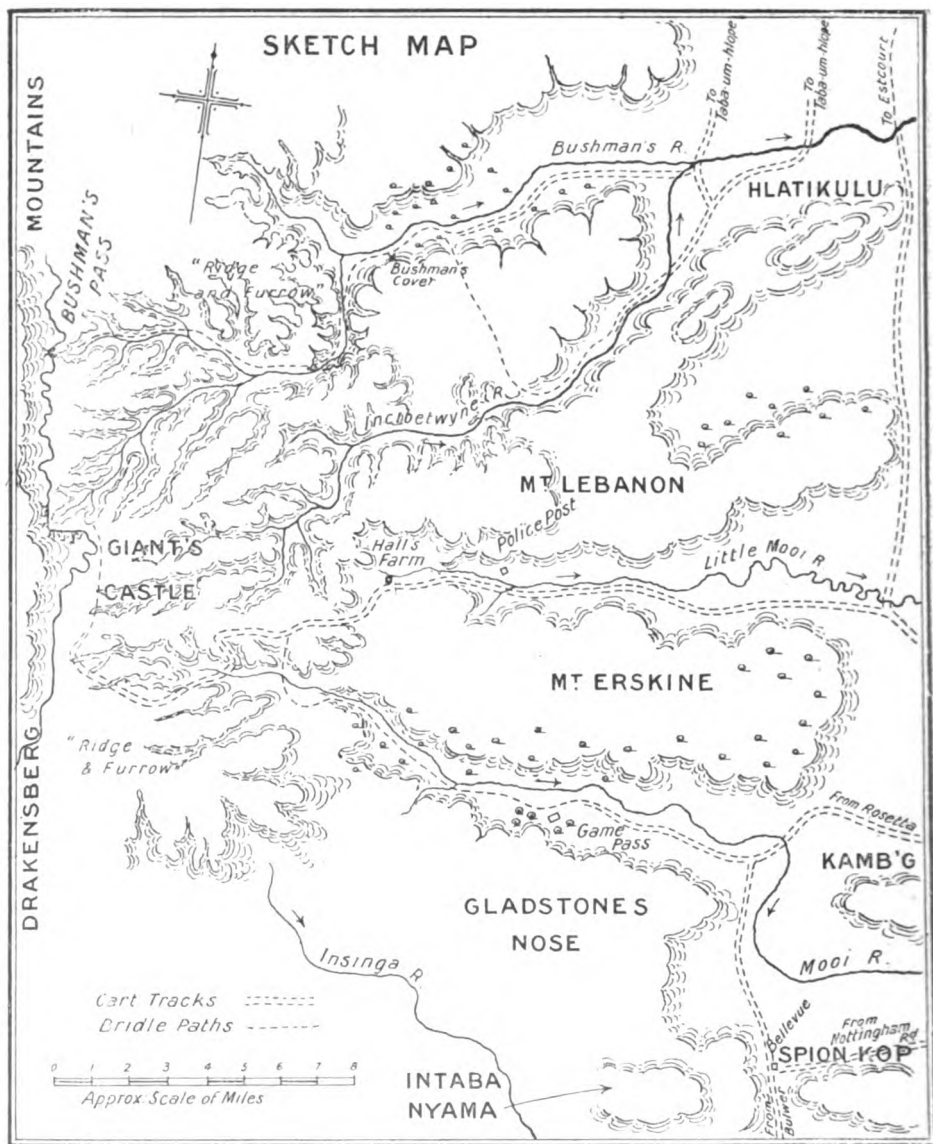
The formation of the mountains at this point is roughly as follows. The mountains proper form a wall of bare cliffs, from the foot of which run out long spurs covered with grass; between these spurs run streams which unite and form the River Incibitwyne, Bushman's River, Mooi River, etc. It is often possible to proceed for miles along the top of these spurs in a direction at right angles to the mountains, but any attempt to move parallel to the mountains and across the spurs is a matter of some difficulty, as the streams are

several hundreds of feet below the top of the spurs, and the descents are often very steep. After a time these spurs form the 'Five Fingers' of the Berg, named (from S. to N.) the 'Intaba Nyama,' 'Gladstone's Nose,' 'Mount Erskine,' 'Mount Lebanon,' and 'Hlatikulu.' They are then some 2,000 ft. above the surrounding country, and may be described as the first step of the Berg; their flat summits are covered with grass, which provides excellent grazing. The attached sketch will explain the above description; but as it is drawn from memory it is necessarily inaccurate in detail.

Our first expedition to the Drakensberg was of a preliminary character, and was only of use in so far as it enabled us to make the acquaintance of some of the farmers in those parts, and to obtain a general idea of the character of the country. As the season was winter the mountains were nearly always covered with snow, and the cold at night was pretty severe.

On the second occasion (November 1908), Mr. Devitt, of the 4th Battery R.F.A., and myself, started from Nottingham Road, a station on the Natal Government Railway, 110 miles from Durban. There is a good hotel there, and a small store where it is possible to buy any necessaries that may have been overlooked in making the preparations for the journey. The bulk of our provisions we bought at Maritzburg; they consisted mainly of groceries, for it is always possible to get eggs, chickens, bread, and mutton from the farms at the foot of the Berg, to say nothing of the large numbers of buck and several coveys of partridges which are to be found on the mountains themselves. Our transport consisted of a two-wheeled cart drawn by four good mules, by far the best animals for the purpose, with two Kaffirs as driver and leader respectively; our own two ponies, a pony ridden by my Kaffir boy, and a spare horse made up the party. By way of kit we took two 'Wolseley valises' with our bedding inside, several mackintosh sheets (which were to prove invaluable), saddle-bags, and of course kettle, frying-pan, and other cooking utensils. Looking back, I think we were wrong not to add a bell-tent; the additional weight is very slight, and the increased comfort to be obtained is enormous, particularly at that season of the year. Pack-saddles are also a most necessary item of equipment for this class of journey.

The road for the first 20 miles is uninteresting and uneventful. After following the railway to Rosetta, the next station N. of Nottingham Road, it turns W. and leads straight to the mountains (I believe that an hotel has now



SKETCH MAP TO ILLUSTRATE MR. STEWART GORE BROWNE'S PAPER ON THE GIANT CASTLE SECTION OF THE DRAKENSBERG MOUNTAINS.

been opened at Rosetta, in which case that place would be a more convenient starting-point than Nottingham Road). But for many miles there is nothing to be seen but rolling veldt, enlivened now and then by wattle trees and streams. After about 8 hrs. of this the track crosses a ridge apparently in no way different from half a dozen previous ascents, but from the summit of which you see stretched out in front of you the 'Five Fingers' of the Berg, and towering behind them the mountains themselves, often covered with clouds, but on other days standing out as though they were enamelled against the sky. On your left and immediately above you there is the Kamberg (the 'Coxcomb'), a detached wedge-shaped hill, round the far side of which the Mooi River flows; behind that again, 8 miles to the S. is the Spion Kop (not the scene of the battle), another detached hill nearly opposite the Intaba Nyama, the most southern of the Five Fingers. Opposite you, covered with sugar bush, is Mount Erskine; at your feet the plain of the Kamberg, through which the Little Mooi River flows; to your right Mount Lebanon; beyond that again Hlatikulu, and further N. still Taba-um-hlope, another detached hill with a flat top a mile long. In front of you, in the Berg itself, there is the Giant's Castle, the highest of many peaks; further N. the Bushman's Pass, and beyond that the Cathkin Peak, shaped like two church spires with a high flat roof between.

At this point the road branches in two. If you wish to form a standing camp at the foot of the Giant's Castle, or indeed anywhere on the first step of the Berg, you will have to follow the right-hand road up the valley of the Little Mooi River. This is the only way by which a cart can reach the level of the first step, and even so it is no light task getting a waggon up the rise of something like a thousand feet. The ascent begins at the head of the valley, just beyond the police-post. Coming from Rosetta, it would be advisable to spend the first night here and start early in the morning with the mules fresh for the climb. It takes about $1\frac{1}{2}$ hrs., but the surface of the road is pretty good. At the top there is plenty of good grazing, stretching indeed for miles and miles right up to the mountains; there is a stream running down out of the rocks, and plenty of sugar bush for firewood, making it an ideal place to outspan and have breakfast. Five miles further on you come to a rough stone building containing two rooms and a kitchen; this belongs to Mr. Robert Hall of Mooi River, and is the last habitation of any sort to be met with this side of the mountains.

The alternative way, if you propose depending entirely upon what you can carry on pack animals, is to go up the valley of the Mooi River, taking the left-hand track at the cross roads mentioned above and skirting the foot of the Kamberg. After crossing the Mooi River you go up the valley, with Mount Erskine on your right and Gladstone's Nose on your left, and the river between you and Mount Erskine. After 6 miles you reach a farm called the Game Pass, belonging to Mr. Frank Watson. This gentleman is hospitality itself, and probably has a better knowledge of the country than anyone else in those parts. He accompanied us in our climb up the Giant's Castle on the occasion I am describing. Beyond the farmhouse it is impossible to take any wheeled vehicle, and the tracks become so rough and narrow that it is necessary to have a steady and handy horse; for this purpose the Colonial pony is hard to beat. The path which follows the Mooi River and the cart track past Hall's farm, which I have already mentioned, join on a hill close to the source of the Mooi River. By this time you are in the heart of the 'ridge and furrow' country, and it is important to have a clear idea of the direction in which the track goes, or you may find yourself separated from the point you wish to reach by two or three valleys, several hundred feet deep, with impassable streams running at the bottom. At the Game Pass we got an old guide, about 80 years of age, Umhlana by name, who had the reputation of being the best hunter and tracker in the district. He had been one of Sir Theophilus Shepstone's shikarris. The distance at which he could distinguish buck and the accuracy with which he followed almost invisible paths were extraordinary, and of the greatest use to us during the whole time we were in the mountains.

Our second night we spent at the source of the Mooi River. We had left the police camp that morning, but had delayed some time taking observations from the high ground S.W. of Mr. Hall's house, which forms the watershed between the Mooi River, Little Mooi River, and the Incibitwyne, an excellent place from which to get a general view of the country. It was nearly dark when we reached the valley in which the Mooi River rises, and our cart selected that moment to upset. However, no damage was done, and after cooking some food we went to sleep under the cart. The night was then clear, but a few hours later the valley filled up with clouds and it rained incessantly for several days. We had been too tired to pack up our food, cartridges, etc., so they got wet and were not improved. The mist was so thick all around that we

could not see two yards ahead, and as there was a waterfall a few yards away we were unable to move far afield. As soon as the mist lifted we rode down the Mooi River valley to the Game Pass, where we stayed with Mr. Watson till the mountains were again visible. This time we pushed on with the cart to right under the southern tower of the Giant's Castle, the furthest point to which it is possible to take a wheeled vehicle. There we pitched a sort of camp with the help of rocks, a tarpaulin, and the cart. After a day devoted to exploring and climbing the spur running off southwards from the Castle, we packed some food and some blankets on the horses and set off to attempt the climb. As the Castle was obviously inaccessible from the S.E. side where our shelter was, it remained to try for some way up the northern face, or failing that to go over the Bushman's Pass and approach the mountain from the Basuto or western side. After about 3 hrs. riding in a N.W. direction, in the course of which we crossed the heads of many valleys, we turned westwards into the amphitheatre made by the northern wall of the Castle and the eastern face of the Berg. It is in here that one branch of the Bushman's River rises, coming right down from the Castle out of the gully we eventually ascended. There is a plentiful supply of firewood and unlimited water, and that night we slept under some rocks with the north wall of the Castle, a sheer cliff, 1,000 ft. above us. The next morning we started early and made for the corner out of which the river comes down. So far the going was perfectly straightforward, though the ground rises pretty steeply and is in places very stony and sprinkled with sharp rocks. At the corner we turned up the stream. Here the ascent becomes really steep, but presents no difficulties. After a rise of some hundred feet you are faced by two staircases, one on the left leading to the top of the Castle, the other apparently to the nek which joins the Castle to the Berg. We chose the left-hand one. This is the worst bit of the climb, but even this is perfectly easy going and is absolutely without any danger or real difficulty. The staircase is about 20 ft. wide, and is full of loose stones and rocks up which you step. The roof of the Castle is comparatively flat and must consist of many acres. From there it is possible to see an enormous extent of country, the mountains of Griqualand and the sea in the S., and the hills of Northern Natal, probably as far as Laing's Nek, in the N. We were, however, anxious to walk along the roof to the towers, which are some 30 or 40 ft. higher, and delayed taking any observations. Just as we reached the

nek which connects the northern tower to the roof, a cloud from Natal struck the mountain and we were obliged to stay where we were for fear of falling over the edge. As the mist gave no signs of lifting we at last made our way back to the staircase, the position of which, by good fortune, we were able to hit off after about half an hour's walking. We then descended without further mishap, but without having been able to explore the mountain thoroughly. An empty sardine tin at the top of the Castle effectively dispelled any hopes we might have entertained as to our being the first to reach that point.

Our efforts were next directed to the Bushman's River Pass. Here again we were delayed by rain and snow, though the season of the year was nearly midsummer. For 8 days we waited in the wet at the foot of the Pass—the limit for firewood—and finally had to take refuge in the Bushman's Caves further down the river. However, we succeeded at last in getting across on foot. At one time this pass was largely used, and it is the only way by which it is possible to reach the level of the top of this section of the Berg. There is a cairn erected there to the memory of the Natal Police troopers who were shot at that spot during the Langalibalele revolt. I believe it would be possible to proceed for many miles in a northerly direction from the Bushman's Pass, which would probably constitute the best means of exploring the peaks of this section of the Berg. But at the present moment the Pass is blocked so as to be impassable for horses or mules, and though there is abundant water, there appears to be no firewood at that altitude. The cold, too, is pretty severe even in summer, and the clouds and mists constitute a considerable danger.

At this stage our work was unavoidably interrupted, and we returned down the Bushman's River and Incibitwyne valleys, by tracks passable only for horses and mules, without having been able to investigate the Cathkin Peak, a mountain which probably presents incomparably greater difficulties than the Giant's Castle.

In conclusion I should like to point out that in my opinion—

(1) The best form of transport for an expedition to the Drakensberg consists in mules with pack-saddles.

(2) The best season of the year is early winter (April); the rains have then ceased and the cold is not yet too severe. The close season for game is also over.

(3) A native guide from one of the farms at the foot of the mountains is indispensable. Information obtained, whether

from maps of the district or the inhabitants, should be received with a good deal of caution.

(4) A light sporting rifle and a shot-gun are of great use. The eland and the ourebi are royal game, but there are large numbers of reh-buck and a fair number of partridges, quail, and pigeons to be shot on the lower slopes of the Berg. There are trout in the Mooi and Bushman's River.

THE POINTE DE LEPÉNA.

By C. F. MEADE.

IN July 1902 I was staying at the Félix Faure hut, on the Col de la Vanoise, for a fortnight's climbing in the surrounding mountains. My guides were Joseph Antoine Favre and his brother Jules, of Pralognan, in the Western Graians.

The Col de la Vanoise is a very important pass, and leads from Pralognan on the W. to the tiny cluster of chalets known as Entre Deux Eaux on the E. To the N. rise the Grande Casse, with a group of the Pralognan aiguilles, and to the S. the great Vanoise ice fields, with the Dent Parrachée behind them. A fine and easy ice pass, the Col de la Grande Casse, lies between the Grande Casse and the nearest of the Pralognan aiguilles. This nearest aiguille is called the Lepéna and is 11,264 ft. high. It had fascinated me ever since my arrival at the Félix Faure hut, for it was one of the last—perhaps the very last—of all Alpine peaks of its height to succumb to the climber. The first ascent was made in July 1900 by M. Henri Mettrier, who is a member of the C.A.F., and the guides Séraphin Gromier, Joseph Antoine Favre, and Grégoire Favre. The guides worked hard beforehand, drilling holes in the rock for iron pegs. Since that day there had been only two other ascents.

Now I am well aware that to climb a mountain by means of iron pegs—*i.e.* 'artificial aids'—is considered by many mountaineers to be a most immoral and unsportsmanlike proceeding. Let me only urge in my defence that I was not responsible as the originator of the 'artificial aid' scheme, and that since the aids had been employed in the first and in two subsequent ascents I could not be said to be desecrating the mountain in employing them once more. Moreover there was every reason to suppose that without them the ascent was utterly impossible. Lastly, I would not forego the pleasure of adding this splendid peak to my collection, at

the time well-nigh complete in that district. I thus frankly expose myself to the accusation of 'peak-bagging,' very generally considered to be an odious and shameful practice. But is it so really? No, I think not; and I take it that the collector's instinct is one of the many agreeable features that go to make up the noble and complex passion of the mountaineer, and I believe that the despised 'peak-bagging' motive is, in moderation, by no means undesirable.

But I am afraid that these ideas had not occurred to me before we started. It was on July 18. By 1.30 A.M. we assembled in the kitchen of the hut for a dreary meal of bread-and-butter and black coffee. I remember how I envied the dog as he slept peacefully in the snug corner by the stove. Two garrulous gentlemen who were bound for the Grande Casse, and who had kept us awake till eleven the preceding evening, were now strangely silent. Perhaps they shared my ideas about the dog. My party started first, at 2.10 A.M. It consisted of Favre and his brother Jules, their brother-in-law, and myself. As we emerged from the hut the Grande Casse loomed up through the mist and moonlight like some monstrous phantom iceberg. The way is easy and straightforward to the head of the Grande Casse glacier. Here we halted under the enormous precipices of the Lepéna (3.50 A.M.), and ate our breakfast shivering in the half-light, then waited for the sun to rise, as we were rather early.

A great couloir seams the whole of this S. face of our mountain, coming right down almost from the peak itself. It is above all things important to get up and down and out of this couloir before the sun can get to work on it. One has only to glance up in order to imagine the appalling velocity of stones falling from the upper part of it.

As soon as it was light enough we began the climb. First one crosses the couloir near its base in an upward direction, W. to E. Then one great zigzag across the face of the mountain, first E. then W., brings one back to the couloir considerably higher up. Hitherto the climbing had been by narrow ledges over smooth, rotten rock, with strata arranged like slates on a roof and by no means easy to negotiate. But now we had reached the point where all the early attempts had failed. We were perched on a little ledge of rock just outside the great rock couloir or funnel, up whose smooth and deadly bore lies the only way to the top of the Lepéna. Favre and his brother-in-law, who was to act as second engineer, now swarmed round the corner and disappeared into the couloir. They had to fix all the iron pegs for a

distance of 50 m., and to climb from peg to peg as they fixed them, the brother-in-law backing up Favre closely and carrying the reserve supply of ironmongery. So Jules and I settled down on our perch and resigned ourselves to a long wait. An hour passed. At last we heard faint shouts come echoing down from above, and my turn came. I cautiously entered the couloir. But it was comparatively very easy for those that came after the leaders, for the pegs were at intervals of 4 ft., and a spare rope had been fixed by Favre as well. But, if I remember rightly, throughout this 150-foot pitch apart from the pegs and spare rope there is absolutely nothing to hold on to. The steeply sloping walls are polished quite smooth, devoid of all asperities, and on this occasion veneered with *verglas*. This pitch is thus the chief feature of the climb, and once it is disposed of the work in the couloir becomes easier, and by snow and over rotten rocks the cairn on the peak is attained (7.30 A.M.).

The drawback to this expedition is that it has to be done against time, and Favre announced that it would not be safe to allow more than twenty minutes for consuming the bruised fragments of food which we had been able to bring with us to the top. Eating was an urgent necessity, and so, alas! there was little time to appreciate the view. The huge Grande Casse, seen at such close quarters, was magnificent, and we scanned it carefully in search of our garrulous friends of last night. They were nowhere to be seen.

The twenty minutes passed in a flash, and we began the descent, always in great haste and anxiously watching the rays of the sun as they crept gradually nearer our couloir. Again Jules and I had a long and rather anxious wait on the ledge, while Favre came down last with the brother-in-law. He took out all the iron pegs and brought them down with him, explaining that on one occasion he had left them in position and had afterwards found many of them smashed to pieces by falling stones. However that may be, it is certainly true, as he remarked with a smile, that he was locking up the mountain and taking away the keys.

I was glad when the last two had finished this process, and had emerged from the couloir on to our little shelf, no stones having yet fallen. But there still remained the final crossing of the couloir near the bottom. When we had reached this place the rope was lengthened out, and Favre adjured us to waste no time, in the meantime anchoring himself securely under shelter from the expected fire from above.

Then Jules and I went plunging down in reckless haste till

we reached a friendly rock in the middle of the couloir. Here we cowered under shelter awhile till the last two joined us. While waiting in this refuge I heard an occasional humming sound, caused by falling stones, but their speed rendered them invisible. Possibly the *verglas* in the couloir made it open fire even more promptly than usual. However one more dash brought us all safely across from our refuge to the other side, and by 10.15 A.M. we were having a third and more peaceful breakfast on the Glacier de la Grande Casse.

The trudge down the glacier was uneventful, and we were back at the hut soon after 11 A.M., none the worse for our climb except as to finger-tips and nether garments, the plight of the latter being especially dismal. We found that the garrulous party had just vanished in the direction of Brides les Bains. I consoled myself, however, by reading in the visitors' book their eloquent account of their conquest of the Grande Casse.

The ascent of the Pointe de Lepéna is certainly a fine expedition and one which I am very glad to have made. I admit that climbing by means of pegs and ropes is certainly poor fun, but this does not detract from the great credit due to the leading guide for his remarkable skill and daring. Moreover without such artificial aids I should never have had the privilege of an intimate acquaintance with what I will venture to term the most singular mountain in the Alps. For I believe that in all the Alps no other mountain as big as or bigger than the Lepéna has ever so successfully and so completely routed all attempts at conquest by fair means as she has. And I believe she will continue to do so. Let the members of the Alpine Club try for themselves. Time will show.

NOTE.—I am indebted to the editor of the 'Revue Alpine' and to Mr. Coolidge for kindly giving me information concerning the Pointe de Lepéna.

IN MEMORIAM.

J. A. LUTTMAN JOHNSON.

By the death of James Arthur Luttman Johnson the Club has suffered the loss of one of its most enthusiastic members.

Born in 1849, he was educated at Winchester, where he played in the eleven against Eton in 1867, and afterwards at Trinity College, Oxford, where during his four years' residence, in the last of which

he was captain, he did good service to his college in the cricket field.

After taking his degree with honours in law and history in 1872 he was articled to a firm of solicitors in London, and finally settled down to practice on his own account in Westminster.

Being fond of all country pursuits, and especially of cricket, his holidays were usually spent in England, and it was not till 1884, when he was 35 years of age, that he paid his first visit to Switzerland. He had no thought of climbing when he started, but as soon as he saw the mountains he made up his mind to become better acquainted with them, and putting himself into the hands of the best guides available he set himself to acquire all that there is to learn of the craft of mountaineering. Being strong and active and endowed with remarkable powers of endurance, he soon developed into a climber of no mean ability. He was elected a member of the Club in 1886 and served on the Committee in 1893-5, and did good work for the new edition of Ball's 'Guide' in the neighbourhood of the Rhône Glacier.

Year after year he returned to the mountains, and he knew the Oberland and the Pennine Range from end to end. Good on snow and ice, he was perhaps at his best on rocks, and when he was upwards of 50 years old he climbed many of the most difficult Dolomite peaks in the Cortina district. He was above all a safe and prudent climber, and consequently seldom got into serious difficulties. When he did his best qualities came to the front, as is particularly shown on one memorable occasion when, accompanied by local guides, he was caught high up on Mont Blanc by the worst possible weather, and he had not only to lead the party down to safety, but actually himself alone to carry for a long way one of the guides, who was so overcome by the intense cold and the anxieties of the situation as to be unable to move.

In 1901, on his return from Switzerland, where his friends noticed he was not quite himself, he was found to be suffering from an incurable malady. Without a word of complaint he set himself to face the inevitable, and lived the rest of his life in daily increasing pain with remarkable fortitude and equanimity.

To the very end he retained his love for the Alps, and was as glad to hear of a good climb being brought off as if he had himself been one of the party. He passed away on September 17, 1904, truly regretted by all who knew him.

A keen lover of nature, a first-rate ornithologist, with some knowledge of botany and an unerring sense of topography, he was, whether on a long country walk, or on a mountain excursion, or on an off day in the valley, an ideal companion, always thoughtful for others, always cheerful and ready to accommodate himself to their necessities, and never impatient at their failings and deficiencies. Indeed, to those of us who knew him best the delights of the mountains and of country rambles can never be quite the same again now that he is gone.

C. H. R. W.

THE WINTER PICTURE EXHIBITION.

FOR three years past an endeavour has been made to give a distinctive character to successive exhibitions by restricting the pictures shown within some prescribed limits. In 1901 half the exhibition was given up to a series of studies by Mr. McCormick, the other half to small groups of sketches by Turner, Müller, and a few other masters. In 1902 an opportunity was happily seized, and the hall was filled with drawings of the Himalaya; there appeared to be a similar opportunity in 1903 of forming a collection of the works of Costa and Segantini, but the attempt failed, and a collection was substituted of groups of drawings by artist members and a few other specially invited contributors. The new policy met with marked success, but last year the Exhibition Sub-Committee wisely decided that it was time to revert for once at least to an exhibition of the older and more comprehensive type, and more especially to open our doors to the amateurs, whose sincere homage to the Alps deserves a sympathetic welcome from the Club. The result was an attractive collection of varied interest, and of wide geographical range, though the views for the most part were Alpine in the strictest sense. The enduring popularity of Arolla was evidenced by the presence on the walls of no fewer than seven views of the Pigne.

A few old pictures were lent, amongst which may be mentioned the *Aiguille du Géant* by E. T. Coleman, Simmler's 'Englishman in the Alps,' an old-fashioned artistic joke, and two drawings of the *Mer de Glace* dating from about 1800, very interesting both as specimens of the water-colour art of that period and as showing with what different eyes from ours our great-grandfathers looked on mountain forms. The majority of the contributions, however, were the recent work of living artists.

Among the productions of practised hands the first place must be given to Monsieur Loppé. The veteran painter of the snows gives us more and more pleasure as the years go on. He has shown nothing more exquisite than a winter sunset on the *Wetterhorn* reflected in a frozen pool.

Mr. Mostyn Pritchard sent, in addition to three contributions of his own, a fine drawing of *Mont Blanc* by Mr. Albert Goodwin, R.W.S., an artist of whose mountain work we do not see enough. The valley of *Chamonix* in the foreground was perhaps too brown, but the glaciers were excellent, recalling one of *Ruskin's* sketches.

Mr. Colin Phillip, R.W.S., showed one of his masterly brown mountain slopes; Mr. Frank Dillon, R.L., a number of sketches, notably a *Dent Blanche* and a *Monte Rosa*, painted with tender appreciation of atmospheric effects; and Mr. McCormick depicted the veterans *François Dévouassoud* and *Melchior Anderegg* with vigour and grasp of character.

Sir Harry Johnston's views of *Ruwenzori* and the dome of *Kibo*

were convincing in their realism, and in topographical interest far surpassed all other pictures in the room.

Mr. Williams's work was attractive, but in his 'Jungfrau from the Schynige Platte' he was hardly so successful as usual in giving an impression of size and of vast spaces, and the mountain looked too near.

Professor Silvanus Thompson's excellent sketches, especially that of the Matterhorn, were marked by certainty of touch and brilliancy of execution; Mr. Cecil Hunt was very bold and successful in his 'First Gleam on the Dent Blanche,' and a small view in the Rhone valley also attracted us by its firm drawing and pleasant colour.

Some clever designs which looked as if they might be executed in stained glass came from Mr. Ruepp; and Mr. Montgomery Norton's 'Davos in Winter' was much admired.

It is worth recording that of the 118 pictures shown fifty-six were the work of twenty-four men, fifty-seven were contributed by eighteen ladies. Among the latter Mrs. Marrable's bright studies attracted much attention; Mrs. Jardine's Engadine views displayed an intimate knowledge of Alpine forms and colouring; and Miss Fox's bold masses of rock and snow transported the spectator into the very heart of the mountain world. Space forbids more detailed comment, but we cannot omit a reference to the wide field of activity of the Misses Longstaff, who ranged from Vancouver to Darjeeling.

THE ALPINE CLUB LIBRARY.

THE following additions have been made since October:—

New Books and New Editions. Presented by the Authors or Publishers.

(Foreign works may be obtained through Mr. David Nutt, 57 Long Acre, London, W.C.)

Almanach du Montagnard. Paris, Laveur, 1905. Fr. 1.20
8vo, pp. 62; ill.

This is of interest for the portraits of guides and others. The letter-press is an irregular compilation of mountaineering items, poorly edited.

Bayberger, Dr E., u. Andere. Sing' ma oans! Alpenliederbuch. 5. Aufl.
8vo, pp. viii, 144. Passau, Kleiter, 1901. M. 3

The first edition was published in 1891.

Cadier, Les cinq frères. Au pays des isards. Deuxième partie. Du Pic Long au Balaitous par les pics de 3,100 mètres. Avec une préface de Franz Schrader. Chez les auteurs à Osse, 1904. Fr. 3
8vo, pp. 136; map, plates.

Two editions of the first part appeared in 1903.

Conway, Sir W. M. The Alps from end to end. [3rd edition.]
8vo, pp. viii, 300; plates. London, Constable, 1904. 3/6 nett
1st edition, 1895; 2nd edition, 1900.

Davidson, George. The glaciers of Alaska that are shown on Russian charts or mentioned in older narratives. Reprinted from Trans. and Proc. Geogr. Soc. of the Pacific, vol. 3, series 2, June 1904.
8vo, pp. 98; maps. San Francisco, Cunningham, 1904

Dübi, Dr Hch. Der Alpinismus. Die Erforschung der Alpen. Der schweizer Alpenclub. Reprinted from 'Die Schweiz im 19. Jahrhundert,' vol. 3. 1901 4to, pp. 419-451; ill.

The French version of this was reviewed in the *Alpine Journal* for May, 1901.

Duhamel, Henry. Voyage d'inspection de la frontière des Alpes en 1752 par le Marquis de Paulmy. Grenoble, Falque & Perrin, 1902 8vo, pp. 236; map, ill.

— **Au Pays des Alpes.** Paris, Nilsson [c. 1902]. Fr. 3.50 8vo, pp. 231; ill.

A copiously and finely illustrated book. A 4to edition was also published at Fr. 15, in 1898.

Enzensperger, Josef. Ein Bergsteigerleben. Eine Sammlung von alpinen Schilderungen nebst einem Anhang Reisebriefe und Kerguelen-Tagebuch. Herausgegeben vom Akademischen Alpenverein München.

München, Verein. Kunstanst. A.-G., 1905. M. 20

4to, pp. xv, 276; map, plates.

Herr Enzensperger was a member of the German Antarctic Expedition of 1902, on which expedition he died, at the age of 29. He was also a keen climber, and read many papers before various sections of the German and Austrian Club, some of which were published in the 'Alpenfreund' and in the papers of the German Alpine Clubs. A number of those papers have been collected, and are now printed in this volume. The peaks and expeditions described are all in the Eastern Alps; Trettachspitze, Fünffingerspitze, Totenkirchl, Höfats, Wilder Kaiser, Zugspitze, etc. The numerous beautiful plates are very finely printed.

Fraccaro, P.; see Club alpino bassanese.

Frey, Karl. Aus den Bergen des Serntales. Alpine Erlebnisse und Erinnerungen (1896-1904). Zürich, Orell Füssli [1904]. M. 3 8vo, pp. xi, 142; ill.

Climbs of the Hausstock, Ofen, Sardona, Zwölfhörner, Tschingelhörner, Karpfstock, etc.

Frick-Lochmann, H. Alpenflora. Alpines Lustspiel in zwei Akten mit einem Zwischenspiel. Zürich, Orell Füssli [? 1904]. M. 1.50 8vo, pp. 48.

Written for a meeting of the Uto Section of the S. A. C. "Über ein frisches Bier und eine flotte Kletterei geht doch nichts in der Welt," says Herr Fex, the hero and 'alpinclubist,' and this expresses the spirit of this amusing little piece.

Grand-Carteret, John. La Montagne à travers les âges. Rôle joué par elle : façon dont elle a été vue. II. La Montagne d'aujourd'hui. 350 illustrations d'après les documents anciens et modernes.

Grenoble, Dumas; Ducloz, Moûtiers, 1904

4to, pp. 494; plates. 2 vols, Fr. 50.

This is a very remarkable work. The first volume, published in 1903, extended to 559 pages and this second volume contains nearly 500. Never before have mountains as viewed and used by man been so fully treated in any one work as they are in these two volumes. The first volume brought the story to the end of the 18th century and the second brings it up to the present day. It is not merely the quantity of matter that is remarkable, it is the excellent quality, the good arrangement, the many valuable enlightening and amusing extracts. Perhaps above all, the work is valuable for the reproductions—there are many hundreds—of engraved plates and pictures, with which almost every page is adorned. They are of extraordinary interest thus collected together in chronological order within a small compass, as showing the artistic appreciation of mountain scenery and how it has varied at different times. These plates include caricature and commercial advertisement. The text deals with so many men

and opinions, that it is impossible here to convey any idea of the contents otherwise than by giving the headings of the chapters of the volume. These are;—

La montagne dans la pensée littéraire du 19me siècle.	Le développement de l'alpinisme.
La montagne dans l'estampe et l'imagerie.	La montagne mise en exploitation.
Nouvelles routes alpestres.	La montagne et la caricature.
Le romantisme devant la montagne: Mont-Blanc et Pyrénées.	La montagne vingtième siècle.
	La montagne dans la publicité commerciale.
	La montagne militaire.

George Sand at Chamonix wrote: 'Ce que j'ai vu de plus beau à Chamounix, c'est ma fille.' The human interest was supreme; and so it should ever be. Only when the geological roughnesses of the earth's surface are re-created by man and humanised into the realm of art are they of infinite value. How this has been done by men is presented to us in a superb manner in these two volumes.

It may be noted that M. Ducloz is now the sole publisher.

Gruber, Hans. Die Goldberg (Sonnblick)-Gruppe in den Hohen Tauern. Touristischer Spezialführer. Innsbruck, Edlinger, 1904. M. 3 8vo, pp. 79; map.

Hedin, Sven. Adventures in Tibet. London, Hurst and Blackett, 1904. 10/6 8vo, pp. xvi, 487; plates.

This is a cheap and popular version of 'Central Asia and Tibet,' entirely re-written.

Hörtnagel, F.; see 'Club Publications,' Innsbruck.

Le Blond, Mrs Aubrey. Adventures on the roof of the world.

8vo, pp. xvi, 333; plates. London, Unwin, 1904

Lisciarelli, A. Vita Militare in Montagna. Bozzetti.

8vo, pp. 237; ill. Firenze, Le Monnier, 1902. L. 2

Paulcke, W. Der Skilauf. Seine Erlernung und Verwendung im Dienste des Verkehrs, sowie zu touristischen, alpinen und militärischen Zwecken. 3. neubearbeitete Auflage. Freiburg i. Br., Wagner, 1905. M. 2.50 8vo, pp. viii, 199; ill.

This is the best handbook on the Norwegian method as opposed to the Lillienfeld, of which Zdarsky is the exponent. The book may also be had in Italian or French.

Paulmy, Marquis de; see Duhamel, H.

Penck, A. Neue Karten und Reliefs der Alpen. Studien über Geländedarstellung. 8vo, pp. 112. Leipzig, Teubner, 1904. M. 3.50

Perreau, Joseph. L'Épopée des Alpes. Episodes de l'histoire militaire des Alpes, en particulier des Alpes françaises. Tome 1.

8vo, pp. 247; ill. Paris et Nancy, Berger-Levrault, 1903. Fr. 7.50

Peyraffitte, J. et J. Les Pyrénées. Chasse à l'Izard. Glaciers du Balaitous. Souvenirs et Impressions. Avec une Lettre-Préface du Comte Henry Russell. 4to, pp. 29; ill. Paris, Bayle (1902). Fr. 7

Prem, S. M. Über Berg und Thal. Schildereien aus Nordtirol. Neuauflage. 8vo, pp. 235. München, Lindauer, 1904. M. 3

Pyrénées. Stations Estivales et Hivernales des Pyrénées-Orientales. Syndicat d'initiative du Roussillon. 8vo, pp. 45; ill. Paris, Baudelot [1904]

Roger, Noëlle. Saas-Fee et la Vallée de la Viège de Saas. Texte par Noëlle Roger. Illustrations de Lacombe & Arlaud—Genève.

4to, pp. 196; plates. Bâle et Genève, Georg (1902) Fr. 20

Roux-Parassac, Émile. L'Alpinisme Populaire. Le Rôle social de l'Alpinisme. . . . 8vo, pp. 47. Grenoble, Gratier, 1904. Fr. 1

Sandberg, Graham. The Exploration of Tibet. Its History and Particulars from 1623 to 1904. Calcutta and London, Thacker, 1904. 8/- nett 8vo, pp. vi, 316; maps.

Saragat, G., e Rey, Guido. Famiglia alpinistica. Tipi e paesaggi. Torino, Lattes: Firenze, Bemporad, 1904. L. 3.50 8vo, pp. 396.

Contents:—

Revista de parata, le nostre alpiniste, i festaioli, i primi passi, guida nostra, mezze borse, maestro d'alpinismo, l'anima della montagna, per una punta, pellegrinaggio montanino, nelle Alpi Cozie, gli umili.

Schneider, Max. Schneeschuh und Schlitten für Sport, Jagd und Verkehr. Ein Handbuch für Jedermann. Berlin, Fontane, 1905. M. 2.50
8vo, pp. 143; ill.

A handbook on the practical use of skis and other forms of snow-shoe, with historical notes thereon; also on toboggans and other forms of sleighs, including ice-boats. Information on skis incomplete.

Schulz, Dr A. Die Wandlungen des Klimas, der Flora, der Fauna und der Bevölkerung der Alpen und ihrer Umgebung vom Beginne der Letzten Eiszeit bis zur jüngeren Steinzeit. Stuttgart, Schweizerbart, 1904
8vo, pp. 70. Reprinted from Zeits. f. Naturwiss. vol. 77.

Simon, Paul. Les principes de la guerre alpine. Conférences faites aux officiers de la garnison de Lyon. Paris et Nancy, Berger-Levrault, 1901
8vo, pp. viii, 161.

Spont, H. M. Cimes et glaciers des Pyrénées. Collection de cartes postales et panoramas en phototypie. 1904

There are the following 10 series of cards, each consisting of 10 cards:—

- | | |
|-----------------------|---------------------------|
| 1. Le Néthou. | 6. Le Pays d'Aran. |
| 2. Les Monts Maudits. | 7. Le Cirque de Gavarnie. |
| 3. Le Cirque de Lys. | 8. Le Mont Perdu. |
| 4. Le Port d'Oo. | 9. Le Balaitous. |
| 5. Le Pays d'Aran. | 10. Le Vignemale. |

Each series is accompanied by a short account of ascents, with map, of the mountains illustrated. The 100 cards cost Fr. 5.

There are 7 panoramas, 12 × 5½ inches. These and the cards are fine views, beautifully printed, and are well worth having by anyone wishing to have really good views, on a small scale, of the Pyrenees. Both cards and panoramas may be obtained from the author, 33 Quai de la Tournelle, Paris.

Steinach, H. Zillertal-Führer. 2. Aufl. München, Riedel, 1904. M. 2.50
8vo, pp. x, 109; map.

Steiner, Leonhard. Glärnisch-Fahrt. Gedicht in Zürcher Mundart. Zürich, Orell Füssli [? 1904]. M. 3
8vo, pp. 91.
Dedicated to the Uto section of the S.A.C.

A poem full of feeling for the mountains.

Auf, alle denn auf zum Wagniss kühn.
Weit schalle und halle der Ruf dahin
Wir fahren zu Berge, zu Berge.

The Swiss Advertiser. Fortnightly Review for the furtherance of English travellers' interests in Switzerland. Conducted by C. Lehr-Turnbull. vol. 1, nos 1-24. 4to, ill. Berne, January-December, 1904

This contains many items, including reprints and translations, of mountaineering news and interest, such as the following:—

- Major Grimm, Ascent of the Jungfrau.
- J. V. Widmann, How Mr Evertruth ascended the Matterhorn.
- B. Wynn, the Wetterhorn in winter.
- F. Joss, A tour in the Bernese Alps.
- S. Simon, Ascent of the Doldenhorn.
- E. C. Oppenheim, Gran Paradiso.

— The great snowfields of the Alps.

The paper is enlarged this year and appears as the 'English Herald,' which is in a form less interesting to climbers.

Switzerland. Dictionnaire géographique de la Suisse. Publié sous les auspices de la Soc. Neuchâteloise de Géographie, et sous la direction de Ch. Knapp, M. Borel et V. Attinger. . . . 7me fascicule, comprenant les livraisons 69 à 80. Grindelwald-Fiescherfirn—Huttwil.

4to, pp. 385–576; maps, numerous ill. Neuchâtel, Attinger, 1903

We have on several previous occasions called attention to this valuable gazetteer of Switzerland. The articles are carefully written and contain much exact information, though they are of course short and condensed. The first volume, Aa–Engadine, was completed in 1902, Fr. 33, and 2 parts appear monthly. The present 'fascicule' contains 12 parts. Among the places described occur;—Grisons, by Ed. Imhof, 34 pp., 2 maps and many ill. of scenery, houses, costume, etc.; Grosshorn; Grünhorn; Gspaltenhorn; Guppenfirn; Hangendgletscher; Hausstock; Hörnli; Höthurlli; Hobelhorn; Hüfi-gletscher. All those are illustrated.

Terschak, E. Illustrirter Führer durch die Rosengartengruppe.

8vo, pp. 70; map, ill. Berlin, Fischer (c. 1903). M. 2.50

— Illustrirter Führer durch die Grödner Dolomiten.

8vo, pp. 76; map, ill. Berlin, Fischer u. Bröckelmann [1904]. M. 6

Vallot, Henri. Instructions pratiques pour l'exécution des triangulations complémentaires en haute montagne.

8vo, pp. 132. Paris, Steinheil, 1904

— 24 plates, 4to.

The chapters in this are;—

Organisation: opérations sur le terrain: préparations des calculs: exécutions des calculs: calcul des coordonnées géographiques et du nivellement trigonométrique.

The plates give note-book examples of special calculations at the Aig. de Bérard.

— Manuel de Topographie Alpine.

Paris, Barrère, 1904. Fr. 3

8vo, pp. xiv, 171; ill.

'Le Manuel que nous publions aujourd'hui a été rédigé, à la demande de la Commission de topographie du C. A. F., en vue de servir de guide aux alpinistes désireux d'exécuter des levés topographiques.'

Vallot, J.; see Lacroix, Paul de, p. 390.

Wood, Capt. H., R.E. Report on the Identification and Nomenclature of the Himalayan Peaks as seen from Katmandu, Nepal. With preface by Col. St. G. Gore. Prepared under the direction of Lieut.-Col. F. B. Longe, R.E., Surveyor-General of India.

Calcutta, Government Printing Office, 1904. 3/-

Folio, pp. iii, 7, iv; maps, plates.

— For a review of this see S. G. Burrard under 'Pamphlets.'

Older Books.

Alpenlandschaften. Ansichten aus der deutschen, österreichischen, schweizer und französischen Gebirgswelt. 2. Band. (Text von Julius Meurer.)

Folio, pp. 16; 116 plates. Leipzig, Weber [c. 1894]

Amenità dei Viaggi; see Switzerland, 1836, 1837.

The Aurora Borealis, a literary annual. Edited by Members of the Society of Friends. Sm. 8vo. Newcastle upon Tyne, Simpson; London, Tilt, 1833

This, the only volume published, contains; Mont Blanc, a poem by T. C. Speer; A Day among the Alps, the Gemmi, by Dr T. G. Wright; Helvellyn, a poem by A. H. S.; and The Savoyard Boy, a poem by P. M. James.

Ballantyne, R. M. The Rover of the Andes. A tale of adventure in South America. 8vo, pp. viii, 431; ill. London, Nisbet, 1885

Batty, Captain [Robert]. Welsh scenery. From drawings by Captain Batty. 4to, 35 plates, with descriptions. London, Murray, 1823

Batty published several illustrated volumes on the scenery of various countries, and also exhibited at the Royal Academy. He died in 1848.

- Baumgartner, Joseph.** Die neuesten und vorzüglichsten Kunst-Strassen über die Alpen. Beschrieben auf einer Reise durch Osterreich, Steyermark, Kärnthen, Krain und Tyrol, . . . und die südlichen Schweiz. Wien, Ullrich, 1834 8vo, pp. x, 332; 13 lithographs.
- Bingley, Rev. W.** A Tour round north Wales, performed During the Summer of 1798: . . . Illustrated with views in aquatinta by Alkin. 2 vols, 8vo. London, Williams; Cambridge, Deighton, 1800
- North Wales, delineated in two excursions through all the interesting parts of that highly beautiful and romantic country, and intended as a guide to future tourists. Second edition. London, Longmans, 1814 8vo, pp. xxiv, 532; map, plates.
- Bingley was a miscellaneous writer, 1774-1823, and minister of Fitzroy Chapel, London. The edition above of 1800 was published when he was an undergraduate. A third edition was published in 1839 by his son.
- de la Blotière, Maréchal.** Mémoire concernant les frontières de Piémont, France et Savoie. Bibliothèque alpine militaire. Grenoble, Drevet [1902]. Fr. 3.50 8vo, pp. viii, 154.
- La Blotière lived 1673-1739. The above was written in 1721, and is edited by H. Duhamel.
- v. Bollmann, L.** Die Schweiz. Ein Handbuch zunächst für Reisende. Stuttgart u. Zürich, Hoffmann, 1837 8vo, pp. 895; map, 3 plates.
- [**Braunschweiger.**] Promenade durch die Schweiz. Hamburg, Hoffmann, 1793 8vo, pp. 270; vignette.
- Lucerne, Grindelwald, Lake of Geneva.
- Brentari, O.** Guida del Trentino. Trentino orientale, parte prima: Val d' Adige inferiore, e Valli del Brenta e dell' Astico. Seconda edizione. Bassano, Tipogr. S. Pozzato, 1891 8vo, pp. iv, 459; maps, ill.
- Guida del Cadore e della Valle di Zoldo. Stampato sotto gli auspici della sezione di Venezia del C. A. I. (Seconda edizione.) Torino, ecc., Paravia; Bassano, S. Pozzato (1896) 8vo, pp. 221; map, ill.
- Byron, Lord.** Letters and journals of Lord Byron: with notices of his life, by Thomas Moore. 2 vols, 4to. London, Murray, 1830 Vol. 2, pp. 1-48, Swiss letters and journal.
- Camau, Emile.** La guerre dans les Alpes. Souvenirs des manœuvres alpines. Paris et Nancy, Berger-Levrault, 1890 8vo, pp. 282.
- Carne, John.** Reise durch die Schweiz. Dresden u. Leipzig, Arnold, 1828 8vo, pp. 192.
- Chamonix, Grindelwald, Lucerne. A translation of 'A Swiss Tour' in Colburn's New Monthly Mag., 1828. Carne lived 1789-1844. He is best known by his book on travels in the east of Europe. He took deacon's orders, but devoted himself to literary work.
- Carpathians, Across the;** see [Mackenzie, G. M.]
- Chamonix.** Le touriste à Chamonix, en 1853. Genève, Gruaz, 1853 8vo, pp. 295.
- Chase, Rev. C. H.** Alpine Climbers. 8vo, pp. 63. London, S.P.C.K. [1888] A series of religious addresses, suggested by climbing incidents.
- Collet, Paul.** Chamonix et ses merveilles. Guide au Mont-Blanc. (Moutiers, Boquet) 1853 8vo, pp. 222; 8 lithographs.
- Conservateur suisse;** see Switzerland, 1807-1817.
- Conway, Sir W. M.** Die Penninischen Alpen. Ein Führer für Bergsteiger durch das Gebiet der Penninischen Alpen zwischen Simplon und Grossen St. Bernhard . . . bearbeitet und herausgegeben von August Lorria. Zürich, Orell Füssli, 1891 8vo, pp. vii, 204.
- A form of the 'Zermatt Pocket-Book.'
- Costello, Louisa S.** The falls, lakes, and mountains of North Wales. With illustrations . . . from original sketches by D. H. McKewan. London, Longmans, 1845 8vo, pp. xviii, 221; map, plates.
- Good plates, lithographed and engraved.
- Louisa Costello, artist, miniature painter, and author, lived 1799-1870.

- Delaire, Alexis.** Genève et le Mont-Blanc. Notes de science et de voyage. Extrait du Correspondant. 8vo, pp. 62. Paris, Douniol, 1876
- Denina, Ch.** Tableau historique, statistique et moral de la Haute-Italie, et des Alpes qui l'entourent . . . 8vo, pp. xxviii, 412. Paris, Fantin, 1805
Includes Dauphiné, Mont Blanc, etc. Of interest for general description. Denina was Napoleon's librarian. He lived 1731-1813. The 'Tableau' was first published in the 'Mémoires' of the Berlin Academy.
- Dennis, John.** Views in Savoy, Switzerland, and on the Rhine, from drawings made upon the spot; by John Dennis. Published by the author, and by J. and A. Arch and T. Clay, London (1821) Folio, 31 plates and letterpress.
The 18 plates relating to the Alps are;—The Savoy Alps from Dole, Scenes in the Jura (2), Village of Leclées, Road near Lausanne, Lake of Geneva (4), View from Mount Albis, Lake of Lucerne, Fortress of Aarburg, Geneva (2), Königsfelden, Vineyards near Thonon, Scenes near Meillerie (2).
- Ditson, George L.** Circassia; or, a tour to the Caucasus. 8vo. pp. xvi, 453. New York, Stringer & Townend; London, Newby, 1850
Travelled 1847-8.
- Dörler, A. F.** Führer durch das Zillertal und seine Alpenwelt. 8vo, pp. 69. Innsbruck, Wagner, 1897
- Durbin, Rev. John P.** Observations in Europe. New York, Harper, 1844
2 vols, 8vo.
Vol. 1, pp. 192-308; Geneva, Chamonix, Goldau, Zurich, Bale. Travelled in 1842, and lived 1800-1866.
- Eckerth, W.** Die Gebirgs-Gruppe des Monte Cristallo. Ein Beitrag zur Kenntnis der südtirolischen Dolomit-Alpen. 2. Auf. 8vo, pp. 161; maps, ill. Prag, Dominicus, 1891
- Ehrmann, T. F.** Neueste Kunde der Schweiz und Italiens. Neueste Länder- und Völkerkunde, 5. Band. Weimar, Land-Comptoir, 1808
8vo, pp. 578; maps, plates.
pp. 1-158, Switzerland, with 4 plates.
- Enault, Louis.** La Norvège. 8vo, pp. 447. Paris, Hachette, 1857
Enault, writer and traveller, lived 1822-1900.
- Farington, Joseph.** Views of the Lakes, &c. in Cumberland and Westmorland. Engraved from drawings made by Joseph Farington, R.A. London, Byrne, 1789
Imp. folio, 20 plates, with description in English and French.
The views in an inferior form occur again in T. H. Horne's 'Lakes,' q.v. Farington is best known by these 'Views.' 'In his landscape he has not shown much poetry or grandeur; his composition is poor. . . . His pencilling is firm and free': Redgrave. He lived 1747-1821.
- Fenoil, Abbé Ferdinand.** Le roi chasseur et les bouquets de la Vallée d'Aoste. 8vo, pp. 95. Aoste, Mensio, 1878
- Fielding, T. H., and J. Walton.** A picturesque tour of the English Lakes . . . illustrated with forty-eight coloured views, drawn by Messrs T. H. Fielding, and J. Walton, during a two years' residence among the lakes. 4to, pp. viii, 288: 46 col. plates. London, Ackermann, 1821
Fine plates. There was also a folio edition issued.
Fielding was a water-colour painter; and worked also in stipple and aquatint. He published several works similar to the above. He lived 1781-1851.
- Fischer, C. A., Hgg v.** Bergreisen. Leipzig, Hartknoch, 1804, 1805
2 vols, 8vo, maps.
Taken from Ramond's 'Pyrénées' and Saussure's 'Alpes.'
- Forbes, James D.** Norwegen und seine Gletscher. Nebst Reisen in den Hochalpen der Dauphiné von Bern und Savoyen. Aus dem Englischen von E. A. Zuchold. 8vo, pp. x, 313; ill. Leipzig, Abel, 1855
- Forester, T.** Rambles in Norway among the fjelds and fjords of the central

- and western districts. . . with extracts from the journals of Lieut. M. S. Biddulph. (2nd edition.) 8vo, pp. 296. London, Longmans, 1855
- Geddie, John.** Beyond the Himalayas. A story of travel and adventure in the wilds of Thibet. 8vo, pp. vi, 256; ill. London, Nelson, 1884
A story for boys.
- Goodman, E. J.** New ground in Norway. Ringerike—Telemarken—Saeterdalen. 8vo, pp. xiv, 224; map, plates. London, Newnes, 1896
- Gross, Chanoine Jules.** Au Grand Saint-Bernard. Drame et Poésies. Pour l'érection d'une statue à saint Bernard de Monthon. 8vo, pp. 246; 3 plates. Lille et Paris, Desclée et Cie, 1899
The second edition, 1903, of this was noted in the last number of the Journal. The poems in the second portion of the two editions are to a large extent different.
- v. Grosse, Carl Marchese.** Die Schweiz. Halle, Hendel, 1791
12mo, 4 parts in 2 vols; portrait.
General description of Switzerland, including Mont Blanc.
- Grütter, J. B.** Meine Matterhornbesteigung. St Gallen, Wirth, 1893
8vo, pp. 48; plates.
- Gwercher, Dr Franz.** Das Oetzthal in Tirol. Eine statistisch-topographische Studie. 8vo, pp. 136; map. Innsbruck, Wagner, 1886
- v. Haardt, V.** Die Entheilung der Alpen. Wien, Hölzel, 1882
4to, pp. 23; map.
- v. Halem, G. A.** Blicke auf einen Theil Deutschlands, der Schweiz und Frankreichs bey einer Reise vom Jahre 1790. Hamburg, Bohn, 1791
2 vols, 8vo.
Vol. 1, Zurich, Schwytz, Lucerne, Grindelwald, Geneva, Chamonix.
v. Halem lived 1752-1819.
- Headley, Rev. J. T.** Rambles and sketches. New York, Taylor; Montreal, Lay, 1852
8vo, pp. ix, 312.
pp. 11-25; My first and last chamois hunt.
- Holland, P.** Select Views of the Lakes in Cumberland, Westmorland & Lancashire, from Drawings made by P. Holland. Liverpool, Augt 1, 1792
Obl. 4to, 21 plates, with description.
- Horne, T. H.** The Lakes of Lancashire, Westmorland, and Cumberland; delineated in forty-three engravings, from drawings by Joseph Farington, R.A. With descriptions historical, topographical, and picturesque; the result of a tour made in the summer of the year 1816. London, Cadell and Davis, 1816
Folio, pp. 96; 43 plates.
Some of these plates occur in J. Farington's 'Views,' q.v.
Thos Hartwell Horne, bibliographer, lived 1780-1862.
- Hoyle, Rev. C.** Himalaya. A poem. London, Longmans, 1833
18mo, pp. 297-301.
- [Inglis, H. D.]** A personal narrative of a journey through Norway, part of Sweden. . . . By Derwent Conway. Constable's Miscellany, vol. 38. Edinburgh, Constable; London, Hurst, 1829
18mo, pp. xiv, 315.
- Joanne, A. et P.** Guides diamant. Pyrénées. 3me édition. Paris, Hachette, 1875
18mo, pp. xl, 411; maps.
- [de Laborde, J. A.]** Lettres sur la Suisse, adressées à Madame de M * * * par un voyageur françois, en 1781. On y joint une carte générale de la Suisse & des glaciers du Faucigny, . . . Genève, Jombert, 1783
2 vols, 8vo.
- Lever, Charles.** The Dodd family abroad. With illustrations by H. K Browne [Phiz]. London, Chapman and Hall, 1859
2 vols, 8vo.
vol. 2, Bregenz, the Splügen and Italian Lakes. This is the second edition. The first edition was published in one vol. in 1854.
- Lorria, A.;** see Conway, W. M., Die Penninischen Alpen.
- M., D. A. M.** Descrizione della Valtellina e delle grandiose strade di Stelvio e di Spluga. 8vo, pp. 96. Milano, Soc. Tipogr., 1823

- [Mackenzie, Miss G. Muir, and Miss A. P. Irby.] Across the Carpathians. 8vo, pp. viii, 299; map. Cambridge and London, Macmillan, 1862
- Mélanges helvétiques**; see Switzerland 1791.
- Mercey, Frédéric Bourgeois de.** Le Tyrol et le nord de l'Italie. Journal d'une excursion dans ces contrées en 1830. 2de édition revue. 2 vols, 8vo. Paris, Bertrand, 1845
The first edition was published in 1835, and an atlas of 15 steel-plates of scenery was published to accompany the work.
Bourgeois de Mercey was a painter and writer; born 1805, died 1860.
- (Meurer, J.); see Alpenlandschaften.
- Mont-Blanc.** St-Gervais-les-Bains et le Mont-Blanc. Aperçus topographiques, pittoresques et scientifiques. 12mo, pp. 90; map. Paris, Grand, 1839
- Moore, T.**; see Byron, Lord.
- [Nisard, Désiré.] Promenades d'un artiste. Tyrol—Suisse. Nord de l'Italie. Avec 26 gravures d'après Stanfield et Turner. Paris, Renouard [1835] 8vo, pp. 406.
- Notes of a ramble**; see Switzerland, 1836.
- Pezay, Marquis de.** Noms, situations et détails des Vallées de la France le long des Grandes Alpes dans le Dauphiné et la Provence et de celles qui descendent des Alpes en Italie depuis la Savoie jusqu'à la Vallée de Saint-Etienne au Comté de Nice. Bibliothèque alpine militaire. Grenoble, Drevet, 1894 8vo, pp. 104.
There were also two éditions de luxe published. A. F. J. Masson, Marquis de Pezay, lived 1741–1777.
This work was first separately printed in Turin in 1793. It had previously appeared in 1775 as a portion of 'Mém. d. Campagnes d'Italie de 1745 et 1746, . . . de M. le Maréchal de Maillebois. Avec une explication de tous les passages et cols du Dauphiné.'
- Picturesque, Lover of the**; see Switzerland, 1836.
- Plant, Fridolin.** Berg-, Burg- und Thalfahrten bei Meran und Bozen. 8vo, pp. 241; ill. Meran, Plant, 1885
General travel and description.
- Procter, Robert.** Narrative of a journey across the Cordillera of the Andes, and a residence in Lima, and other parts of Peru, in the years 1823 and 1824. 8vo, pp. xx, 374. Edinburgh, Constable; London, Hurst, 1825
- Promenade durch die Schweiz, 1793**; see [Braunschweiger].
- Promenades d'un artiste**; see [Nisard, D.]
- Querini, Angelo Maria.** Giornale del Viaggio nella Svizzera fatto da Angelo Querini senatore veneziano nel MDCCCLXXVII descritto dal dottore Girolamo Festari di Valdagno. Venezia, Picotti, 1835 4to, pp. xxx, 82; portrait.
- Reichard.** Guide du voyageur. Section iv. La République helvétique. 8vo, pp. 267–408. Paris (c. 1802)
- Richard** [i.e. J. V. M. Audin]. Guide du Voyageur en Suisse. Avec Figures. 12mo, pp. liv, 726; plates. Paris, Audin, 1824
- Rion, Canon Alphonse.** Guide du Botaniste en Valais. Publié sous les auspices de la Section "Monte-Rosa" du C.A.S. Sion, Galerini, 1872 8vo, pp. xxxii, 252.
Rion lived 1809–1856.
- Rogers, Samuel.** Poems. A new edition. 8vo, ill. London, Cadell, 1820 pp. 146–7; The Alps at day-break.
- Rose, T.** Westmorland, Cumberland, Durham, and Northumberland, Illustrated. From original drawings by Thomas Allom, George Pickering, &c. With descriptions by T. Rose. London and Paris, Fisher [1832–1835] 3 vols, 4to, 217 plates.
- (**Rowell, R. and F. E.**) Recollections of our midsummer ramble, in two parts. Part 1. By the Printer. Part 2. By his Wife.
Printed, for private circulation, by Robert Rowell at Rock Cottage. 8vo, pp. 39; 6 photographs. Ventnor, Isle of Wight (1873)

Part 1 describes Geneva to Chamonix, in company with a Yankee, who guessed that with a given allowance of guncotton, he "could remove that small excrescence (Mont Blanc) off the face of Natur slick away."

The Author of this book, as an amateur printer, seems to have been responsible for the setting up and printing.

Ruskin, John. The poems of John Ruskin: now first collected from original manuscript and printed sources; and edited . . . by W. G. Collingwood.

2 vols, 4to; plates. Orpington and London, Allen, 1891

Among other poems, this contains;—Ascent of Skiddaw; Tour on the Continent, Alps, Splügen, Chamonix, etc., in 1833; Journal of a tour, France to Chamonix in 1835; Alpine-glow; Mont Blanc (Keepsake 1846); Walk in Chamonix (Friendship's Offering 1844); Alps from Marengo (Keepsake 1845); Arve at Cluse (Keepsake 1845-6); Lines written among the Basses Alpes (Heath's Book of Beauty 1846); The Glacier (ditto).

There are also plates of the Jungfrau, Mont Velan, Hospenthal, Chamonix, Mont Blanc, Glacier des Bois, Valley of Cluse, Glacier des Bossons.

In 1850 nearly all Ruskin's poems previously published were privately reprinted in a small 8vo volume, now very rare, which was pirated in America.

Sazerac, Hilaire. Un mois en Suisse, ou souvenirs d'un voyageur. Recueillis par M. Hilaire Sazerac et ornés de croquis lithographiés d'après nature par M. Edouard Pingret. Paris, Sazerac & Duval, 1825

Folio, pp. 89; 40 plates. 4 parts.

Schmidt-Buhl, K. Von der Zugspitze in die Dolomiten. Eine Sommerfahrt. 8vo, pp. 200; plates. Stuttgart, Süddeutsches Verlags-Institut. (1899)

Schücking, L. Herausgegeben von. Helvetia. Natur, Geschichte, Sage im Spiegel deutscher Dichtung. Neue wohlfeile Ausg.

8vo, pp. viii, 509. Frankfurt a. M., Jügel, 1857

van Senden, G. H. Alpenrozen. Tweede druk.

8vo, pp. iv, 502; map, tinted lithographs. Amsterdam, Brinkmann [1857] First edition 1841. Travel in Switzerland and Chamonix.

Simony, Friedrich. Charakterbilder aus den österreichischen Alpen.

8vo, pp. 32. Gotha, Perthes, 1862

— Atlas zu. Physiognomischer Atlas der Österreichischen Alpen. Folio, 6 col. plates.

Simson, Alfred. Travels in the wilds of Ecuador.

8vo, pp. v, 261; map. London, Sampson Low, 1836

Skelton, Sir John. Essays in romance and studies from life.

8vo. Edinburgh and London, Blackwood, 1878

pp. 325-369; Among the High Alps.

Skelton was a Scots lawyer and a writer. He lived 1831-1897.

Smith, Albert. A boy's ascent of Mont Blanc. With a memoir of the author by Edmund Yates. London, Ward Lock [? 1870]

8vo, pp. xxxvi, 299; ill.

A reprint of 'Mont Blanc' [1860] with altered title page and new frontispiece.

de Solis y Ribadeneira, Antonio. Historia de la conquista de Mejico. . . . 3 vols, 32mo. Paris, Bossange, 1826

vol. 2, pp. 31-40, Ascent of Popocatepetl by Diego de Ortaz and two Spanish soldiers.

The first edition, folio, was published in Madrid in 1684.

Studer, G. Einige Gebirgsausflüge. Die Besteigung der Dent d'Oche. Der Kammerstock. Der Monterone. Die Besteigung der Dent de Morcle und der Übergang über den Pas de Cheville.

8vo, pp. 145-194; plate. In Berner Taschenbuch auf das Jahr 1863; vol. 12. Bern, Haller, 1863

- Switzerland. Dictionnaire géographique, historique et politique de la Suisse**
Nouvelle édition, Corrigée & augmentée.
8vo, 2 vols. Genève & Lausanne, Grasset, 1776
The first edition was published in 1775 by Jeanrenaud, Neuchâtel. The third edition, published by Borde, Geneva, in 1788, was a re-translation by Mallet from a German edition by König published at Bern, 1782-1784.
The work is a collection, made by J. S. Wytttenbach, of articles by V. B. Tschärner and G. E. Haller in the 'Encyclopédie, ou dictionnaire raisonné des Sciences,' commonly known as the 'Encyclopédie de Félice,' Yverdon, 1770-6, 58 vols.
- **Lettres**, 1783; see [Laborde, J. A. de]
- **Mélanges helvétiques des années 1787, 1788, 1789, 1790.**
12mo. Basle, Serini, 1791
pp. 229-284: L. B[ridel] Extraits de quelques lettres écrites du Pays Grison en 1779.
There were four vols of 'Mélanges' published, a reprint of the 'Etrennes helvétiques'; again reprinted in the 'Conservateur Suisse,' q.v. below. A second edition of this last was published in 1855-1858.
Presented by H. Montagnier, Esq.
- **Promenade**, 1793; see [Braunschweiger].
- **Einsame Wanderungen**, 1810; see [v. Uklansky, T.]
- **Conservateur Suisse, ou recueil complet des étrennes helvétiques.**
Vols. 1-8. 12mo. Lausanne, 1813-1820
— vols. 9-13.
12mo. Lausanne, au dépôt bibliographique de B. Corbaz, 1820-1831 vol. 9, pp. 241-259, Lettre de Henri Bullinger à Jean Pontesella, 1573.
— pp. 346-377, P. Bridel, Sur Martigny et la Vallée de Bagnes, lu le 27 juillet 1818, devant la Soc. helv. d. Sc. nat.
vol. 10, pp. 64-144; 233-276, Journal d'un pèlerinage à la Vallée de Bagnes, 1819.
— pp. 204-211, I. Venetz, Catastrophe de Randa.
vol. 11, pp. 65-88, Fragmens d'un voyage d'Albert de Haller dans les Alpes en Juillet 1731, reprinted from Tempe Helv. Zurich, 1, 4, pp. 553-575.
vol. 13, pp. 397-409, Liste chronologique des voyages botaniques de Haller.
Presented by H. Montagnier, Esq.
- **Neuestes Gemälde der Erde und ihrer Bewohner, oder Schilderung der vorzüglichsten Merkwürdigkeiten, der Sitten und Gebräuche, . . . Die Schweiz.**
4to, pp. 199. Schweidnitz, Stuckart, 1824
- **Promenades** [1835]; see [Nisard, D.]
- **Notes of a ramble through France, Italy, Switzerland, Germany, Holland, and Belgium; and of a visit to the scenes of "The Lady of the Lake," &c. &c.** By a lover of the picturesque.
8vo, pp. x, 464. London, Hamilton; Exeter, Roberts, 1836
Mont Cenis, Italy, Simplon, Chamonix, Grindelwald, Righi, Basel, etc.
- **Viaggio nella Svizzera.** Milano, Pirota, 1836
2 vols, 32mo, being vols 3 and 4 of the 3rd series of 'Amenità dei Viaggi.'
- **Le ghiacciaje della Svizzera ed i vulcani.**
32mo, pp. 288. Bologna, Tip. di s. Tommaso Aquino, 1837
A volume of the series 'Amenità d. Viaggi.'
Contents:—pp. 7-42, Meyer, La Jungfrau: pp. 45-133, Dumas, Il Monte Bianco ed il S. Bernardo: pp. 211-222, Il Vulcano di Popocatepeti; ascent by Lieut. Wm. Glennie on April 20th, 1827.
- **Die Wanderer um die Welt. . . Für die Jugend und ihre Freunde**
3. Folge. Die Schweiz. Stuttgart, Balz, 1844
8vo, pp. viii, 686.

- Switzerland. La topographie de la Suisse 1832-1864.** Histoire de la carte Dufour. Publié par le Bureau Topographique Fédéral. Berne, Stämpfli, 1898
8vo, pp. vii, 270; maps.
- Le Tertre, A.** Le tour du Mont-Blanc. Guide avec descriptions. Paris, Leclerc [1882]
8vo, pp. 118.
- Tombleson's Ansichten von Tyrol,** nach T. Allom's Zeichnungen, und Johanna v. Isser's Skizzen. London, Tombleson [1836]
8vo, pp. 127; map, 46 steel plates.
The plates were also published with a slightly different English text.
- Torlitz, J. H. A.** Reise in der Schweiz und einem Theile Italiens im Jahre 1803. 8vo, pp. 374. Kopenhagen und Leipzig, Schubotho, 1807
This was first published in Danish in 1805. The author visited Chamonix, Grindelwald, the St Gothard, etc.
- de Ujfalvy-Bourdon, Mme.** Voyage d'une Parisienne dans l'Himalaya occidental. 8vo, pp. 452; map, ill. Paris, Hachette, 1887
Travel in 1880. Her husband also wrote an account of their travels, 'Aus d. westl. Himalaya,' Leipzig, Brockhaus, 1884.
- [v. Uklansky, T.]** Einsame Wanderungen in der Schweiz im Jahre 1809. Berlin, Kunst-Comptoir, 1810
8vo, pp. 387.
Zurich, Lucerne, Berne, Grindelwald.
- Valéry** [i.e. Antoine Claude Pasquin]. Voyages historiques, littéraires et artistiques en Italie. Guide raisonné et complet du voyageur et de l'artiste. 2me édition entièrement revue, . . . Paris, Baudry, André, 1838
3 vols, 8vo; map.
vol. 1, pp. 1-46, Geneva, Chamonix, Simplon.
The first edition, 5 vols, 8vo, was published 1831-1833. There was an English translation of the second edition published by Baudry in 1852.
Valéry was librarian at Versailles and Trianon. He died in 1847.
- Voyage en Suisse . . ., pour servir d'introduction aux voyages en Italie par le même auteur. Bruxelles, Haumann, 1842
18mo, pp. 188; map of Chamonix.
- Vertua, Abate G. B.** Al gran S. Bernardo per la via del Sempione. Lodi, Orcesi, 1821
8vo, pp. 48.
- Walton, Elijah.** The coast of Norway, from Christiania to Hammerfest. The descriptive text by T. G. Bonney. London, Thompson, 1871
Obl. fol, pp. ix, 24; 12 col. plates.
- Die Wanderer um die Welt; see Switzerland, 1844.**
- Wanderungen durch Steiermark und Kärnthen.** Geschildert von P. K. Rosegger, F. Pichler und A. v. Rauschenfels. Illustriert von Püttner, Kirchner, Pausinger. Folio, pp. vii, 242. Stuttgart, Kröner [c. 1880]
- Wanderungen durch Tirol und Vorarlberg.** Geschildert von L. v. Hörmann, H. v. Schmid, L. Steub, K. v. Seyffertitz, J. Zingerle. Illustriert v. Deffregger, Gabl, Pausinger u. A. Stuttgart, Kröner [c. 1880]
Folio, pp. v, 284.
- Wanderungen im Bayerischen Gebirge und Salzkammergut.** Geschildert von H. v. Schmid und Karl Stieler. Illustr. v. G. Closs, W. Diez etc. 2. Aufl. (von) . . . "Aus deutschen Bergen." Stuttgart, Kröner [c. 1880]
Folio, pp. 215.
These form 3 vols of 'Unser Vaterland.' Each was published in parts at M. 1.50 each, and in vols at M. 30 each.
- Warnéry, H.** Sur l'alpe. Poésies. Lausanne, Payot, 1895
8vo, pp. 127; ill.
Prof. Henri Warnéry lived 1859-1902.
- Weber, B.** Handbuch für Reisende in Tirol. In einem Bande. Nach dem grösseren Werke: "Das Land Tirol," vielfach verbessert . . . 2. Aufl. Innsbruck, Wagner, 1853
8vo, pp. 436; map.
- Wild, Dr H.** Ueber Föhn und Eiszeit. Mit Nachtrag: Der Schweizer-Föhn. Entgegnung auf Dove's gleichnamige Schrift. Bern, Jent & Reinert, 1868
8vo, pp. 90.
- Wilkinson, Rev. Joseph.** Select views of Cumberland, Westmorland, and Lancashire. Folio, pp. 46; 48 plates. London, Wilkinson, 1817

Club Publications.

- Appalachian Mountain Club.** Appalachia, vol. 10.
8vo, plates. Boston, May 1902–November, 1904
Among the articles are the following ;—
C. E. Fay, The conquest of Mount Goodsir.
J. Outram, New ascents in the Canadian Rockies.
H. C. Parker, First ascents of Mounts Hungabee, Deltaform, and Biddle.
E. Tewes, In the southern Waputehks.
W. H. Workman, Pioneer ascents in Baltistan.
Bibliography of Rocky Mountain and Selkirk Ranges.
- Associacio d'excursions catalana.** Noticia. 8vo, pp. 8. 1879
- Berlin. Akadem. Alpen-Verein.** 1. Jahresbericht. 8vo, pp. 15. -1904
This Club was founded in November 1903.
- C.A.F., Bulletin mensuel.** 8 numbers. 1904
With December 1904 the 'Bulletin Mensuel' comes to an end. The 'Annuaire' ceased with the volume for 1903. The place of both is now taken by 'La Montagne.'
- **Règlement des Guides & porteurs brevetés par le C.A.F.**
8vo, pp. 4. Paris, 1 janvier, 1905
These are the new regulations under which guides and porters in various districts will be officially recognised as such by the sections of the C.A.F. The regulations apply to all parts of France, except Chamonix.
- **Section des Alpes Maritimes.** Bulletin, 24. 8vo, pp. 226, plates. 1904
Among the articles are ;—
W. A. B. Coolidge, Mon voyage en 1879 à travers les Alpes Maritimes.
V. de Cessole, Le Chaînon de la Madre di Dio.
— La neige dans les A. M. pendant l'hiver 1903–4.
— La protection de plantes alpines.
P. Moguez, Ascension du Caire de l'Agnel.
F. Mader, La Végétation des Alpes Maritimes.
- **Canigou.** Notice sur les excursions les plus intéressantes des Pyrénées Orientales. Perpignan, Imprim. de 'l'Indépendant,' 1904
8vo, pp. 24; sketch maps.
- **Section Lyonnaise.** Catalogue de la bibliothèque. 1904
8vo, pp. xvi, 183.
Arranged in two portions by authors and subjects. About 1700 works are catalogued. The source of reprints is stated, a useful detail which is frequently omitted from catalogues. The library is particularly rich in works in French and on the French Alps, as might be expected.
- **Section Vosgienne.** Bulletin, no. 5. 1904
Further quotations from Claray's poems on the Alps are given in this number. Also a poem on the Mer de Glace taken from 'Tableau des Alpes par F. S.', Paris, Le Normant, 1814; and a poem on the Cascade de la Tosa from 'Mémoires poétiques, par F. de Montherot'; Paris, Techener, 1833. It is Montherot who tells the following; 'Je vis, à Genève, Auguste Barbier, à son retour d'une promenade en Suisse. On lui demanda s'il était content de son voyage. Il répondit : "Que le diable emporte les Alpes."'
- C.A.I., Como.** Annuario. 8vo, pp. 85. 1902
— Annuario. 8vo, pp. 62; plate. 1903
— **Verbanò, sede in Intra.** Bollettino. 8vo, 6 parts. 1877–1886
— **Regolamento.** 8vo, pp. 27. 1888
— **Venice;** see Brentari, O. (1896).
- Cairngorm Club.** Journal. Vol. 4, nos 19–24. July, 1902–January, 1905
The articles in this volume deal entirely with the Scots hills.
- Centre Excursionista de Catalunya.** F. de S. Maspons y Labros. L'Excursionisme Catala. 8vo, pp. 24. Barcelona, 1894

- de Cessole, V.** M. de Cessole has most kindly presented a large number of reprints of articles contributed by him to the 'Bull. section Alpes Maritimes,' 'Ann. du C.A.F.,' etc., for some years past.
- Club Alpino Bassanese.** Guida alpina del Bassanese e delle montagne limitrofe compilata dal socio Plinio Fraccaro. Bassano, 1903
8vo, pp. 189; ill.
- Czech Alpine Club, Prag.** Alpsky Vestník. 10 numbers per annum. vol. 1 onwards. 8vo, ill. 1898-1904
These volumes have been most kindly presented by the President of the Czech Club.
- D. u. Oe. A.-V. Zeitschrift, 35.** 4to, pp. viii, 404; plates. Innsbruck, 1904
Among the articles are the following:—
J. Blaas, Struktur u. Relief in den Alpen.
E. Oberhammer, Alpenkarten im 19. Jahrhundert.
R. Hauthal, Gletscherbilder aus d. argentinischen Cordillere.
H. Pfannl, Tschogo-Ri in d. Mustaghkette.
W. R. Rickmers, Der Schtawler in Swanetien.
H. v. Ficker, etc., Uschbafahrten 1903.
A. v. Radio-Radiis, Erste führerlose Besteigung des Montblanc u. d. Aig. de Bionnassay.
A. Hacker, Ein neuer Weg v. Domgletscher auf d. Montblanc.
- **Berlin.** Mitteilungen, nr 29-46. 4. u. 5. Jahrgänge. 8vo. 1903-1904
9 parts per annum, of 8-14 pp. each. Monthly, except July, August, and September.
- **Coburg.** Festschrift der Sektion Coburg zur Feier ihres 25-jährigen Bestehens, 1879-1904. 8vo, pp. 56; ill. 1904
- **Dresden.** Bericht auf das Jahr 1880. 8vo, pp. 40. 1881
Contains, pp. 1-28;—Prof. Kellerbauer, Von der Furka zum Eggischhorn.
- **Frankfurt a. M.** Bericht 1894-1904. 8vo, pp. 47, 2 plates. 1904
- **Hannover.** 20. Jahresbericht. 8vo, pp. 20. 1904
- **Nürnberg.** Fest-Schrift zur Feier des dreissigjährigen Bestehens. 4to, pp. 76; plates. 1899
- **Würzburg.** Festschrift zum 25-jährigen Jubiläum. 8vo, pp. vi, 95; ill. 1902
- Dübi, Dr Hch,** has most kindly presented to the Alpine Club four vols of his contributions to the Jahrbuch d. S.A.C. and other publications.
- Fiume.** Club alpino fiamano (1885). I. Annuario, contenente la storia e e vicissitudini del Club. 8vo, pp. 205; 3 plates. 1889
— II. Annuario. 8vo, pp. 219; 2 plates. 1892
- Innsbruck, Akad. Alpenclub.** Das Sellrainer Gleierschthal, von F. Hörtnagl. 8vo, pp. 38. 1898
- München, Akad. Alpenverein.** xii. Jahresbericht. 8vo, pp. 71. 1904
— see Enzensperger, under 'New Books.'
- Royal Geographical Society.** The Geographical Journal, vol. 24.
July-December, 1904
This contains the following articles of mountaineering interest;—
September, pp. 249-267; Rev. A. B. Fisher, Western Uganda, with two views of the Mubuku Glacier on the Ruwenzori Range.
October, pp. 443-460; D. W. Freshfield, On Mountains and mankind. Address to British Association. This occurs also in the Alpine Journal, no. 166, Nov. 1904, and in Scot. Geogr. Mag. Oct. 1904, q.v. under 'Pamphlets.'
December, pp. 663-670; Grueber and Dorville's journey across Tibet, from R. Tronnier's article in Zeits. d. Ges. f. Erdk. Berlin, reviewed in the Alpine Journal for August last.
- The Rucksack Club, Manchester.** Second Annual Report. 1904
8vo, pp. 44; plates.
— Rules and list of Members. 8vo, pp. 4. 1904-5
'The objects of the Club are to facilitate walking tours, cave exploration, and mountaineering in the British Isles and elsewhere, and to bring into fellowship men who are interested in the foregoing pursuits.'

- S.A.C., Bern.** Dr H. Dübi. Vier Lebensläufe alpiner Veteranen. Vortrag gehalten in . . . der Sektion Bern den 6. Juli 1904. 8vo, pp. 13.
- **Monte Rosa.** Führer Taxen, Hausordnung der Schirnhütten, Instruktionen für die Bergführer. 8vo, pp. 50. 1877
- — — *see* Rion, A., *under* 'Older Books.'
- Soc. d. Peintres de Montagne** fondée sous le patronage du C.A.F. en 1898. Statuts, règlement et liste des membres. 8vo, pp. 99.
- Siège social, 117 Boulevard St-Germain, Paris, 1904
- Svenska turistföringens Årsskrift för år 1904.** Stockholm, 1904
8vo, pp. viii, 463; plates.
- Among the articles are;—
W. Petersen-Berger, En tur till Oldfjällen sommaren 1903.
A. Gerngross, En utflykt till Lappland och bestigning af Kebnekaise.

Pamphlets and Magazine Articles.

- Abraham, G. D.** Photographing British Mountains. In Cassell's Mag., London. 8vo, pp. 397-402; ill. September, 1904
- **Adventures in the high Alps.** In Badminton Magazine, no. 114. 8vo, pp. 28-41; ill. January, 1905
Well illustrated.
- Angerer, Dr Hans.** Beobachtungen am Pasterzengletscher in den Jahren 1900-2. pp. 26.
- — — im Jahre 1903. pp. 19.
- — — Gletscherbeobachtungen im Ankogel-Hochalpenspitzegebiete im Sommer 1903. pp. 16.
- — — im Sommer 1904. pp. 19.
- The above are reprints from 'Carinthia II,' nos 4-6, 1902; 6, 1903; 3, 1904; 4-5, 1904: Klagenfurt.
- Bullock, H. S.** Animals in the Alps. I, Of Apes and dragons. In The Fireside. 8vo, pp. 13-15. ill. January, 1905
- Burrard, S. G.** Mount Everest: the story of a long controversy. In Nature, London, vol. 71, no. 1828. 4to, pp. 42-46. ill. November 10, 1904
A review of Capt. Wood's 'Report,' q.v. *under* 'New Books.'
- Butler, A. J.** Alpine books. In The Bibliographical Society News-Sheet. 4to, pp. 1-3. November, 1904
- Cessole, V. de.** Nell' alta valle del Gesso. Ascensioni—appunti di nomenclatura. 8vo, pp. 29; map, plate. Torino, Cassone, 1904
A collection of various notes first printed in various numbers of the 'Rivista Mensile.'
- Coleridge, G.** Dedicated to the Alpine Club. In the Fortnightly Review, London. 8vo, pp. 124-128. January, 1905
A delightful story of a mouse's climbing on the walls of the author's study.
- Cook, Frederick A.** Round Mount McKinley. In Bull. Amer. Geogr. Soc., New York, vol. 36, no. 6. 8vo, pp. 231-327: map, plate. June, 1904
Dr Cook's earlier account of this expedition was reviewed in the Alpine Journal for last February.
- C[ramer], Aug.** Le Cervin et le Rothhorn de Zinal. Extrait du Journal de Genève du 21 août 1887. 8vo, pp. 16. Genève, Schuchardt, 1887
- Duhamel, H.** La topographie du Haut-Dauphiné. Notes historiques sur le massif du Pelvoux. Communications entre Oisans et Briançonnais. Bibliothèque alpine militaire. 8vo, pp. 28: map. Grenoble, Drevet, n.d.
- Note sur la construction de la première Carte topographique des Alpes occidentales par T. Borgonio. 8vo, pp. 8. Grenoble, Vallier, 1904
- Espitalier, Lt-Col. G.** Le tramway électrique du Mont-Blanc. Section du Fayet-Saint-Gervais à l'Aiguille du Goûter. In Le Génie Civil, vol. 45, no. 1160. Folio, pp. 289-296; plans, ill. 3 Septembre, 1904
The Conseil général de la Haute-Savoie in August of 1903 approved plans for an electric tramway from Fayet to the summit of Mont Blanc. The first section of this as far as the Aig. du Goûter is, it is said, about

- to be commenced. The author of this paper has no doubts as to the advantages of the railway both for tourists and for shareholders!
- Ferrand, Henri.** *L'Alpinisme et le Tourisme à Grenoble en 1904.* 4to, pp. 26; plates. Grenoble, Allier, 1904
- Freshfield, D. W.** On mountains and mankind. In *Scottish Geogr. Mag.* 8vo, pp. 505-524. October, 1904
- Mr Freshfield's address to the Geography Section of the British Association, Cambridge, 1904.
- — see also under 'Club Publications,' *Geographical Journal.*
- The address is also printed in the *Alpine Journal*, no. 166.
- Goodwin, Harry.** Water colour drawings of English towns and Swiss mountains. On view at 14 New Bond Street, W. [1904]
- Includes 40 Alpine pictures.
- Henderson, J.** Arapahoe Glacier in 1903. In *Journal of Geology*, vol. 12, no. 1, Chicago. 8vo, pp. 30-33; ill. January, February, 1904
- Hovey, E. O.** Southern Russia and the Caucasus Mountains. In *Bull. Amer. Geogr. Soc.*, New York, vol. 36, no. 6. 8vo, pp. 327-341. June, 1904
- Hughes, Reginald.** Mountaineering accidents. In the *Monthly Review*, Murray, London, no. 51, vol. 17. 800, pp. 137-145. December, 1904
- An attempt to give the statistics of climbing accidents proper since 1860.
- Jardin Correvon.** Liste des graines. 'Floraire,' Chêne-Bourg, Genève, 1904 8vo, pp. 35.
- This is a list of the seeds obtainable, of alpine plants from all parts of the world.
- Jardins alpins.** Premier Congrès des jardins alpins, tenu aux Rochers de Naye les 17-18 août 1904. 8vo, pp. 35; plates. (Genève, Kündig, 1904)
- The Congress was presided over by Prince Roland Bonaparte, and an address was given by Monsieur H. Correvon, giving details of the various gardens established for the study of alpine botany, which address occupies the greater part of this report. In connexion with this may be noted the previous entry.
- Lacroix, Paul de.** J. Vallot et son œuvre. 1904
- Folio, pp. 16; ill. Reprinted from the *Revue illustrée*, no. 14, July 1, 1904.
- This contains a bibliography of his writings.
- Laternbilder.** Verzeichnis der Laternbilder der Deutschen Alpenzeitung. Grösse 9 x 12 cm. 8vo, pp. 26. München u. Wien, Lammer, 1904
- A list of about 2000 slides of mountain views, almost entirely in the eastern Alps. These slides may be hired.
- Lantern Slides.** Newton & Co, 3 Fleet St, London, 1905
- This includes over 500 views of Austria and the Tyrol by Wuerthle & Sohn, beside others on the Alps.
- Lauterburg's illustr. schweiz. Abreisskalender.** Biel, Schreibbüchcrfabrik, 1905. Fr. 2
- A calendar showing one day at a time. Each leaf has a view of some place in Switzerland on it, and the leaves are fixed to a pretty card on which is a coloured mountain view with edelweiss.
- Mont Blanc.** School-girls on the mountain. In *The Girl's Realm*, vol. 7, no. 74. 8vo, pp. 130-132; ill. December, 1904
- An account of a 'caravane scolaire.'
- Ormiston-Smith, F.** Among the High Alps. In *C. B. Fry's Magazine*, London, Newnes, vol. 2, no. 8. 8vo, pp. 172-173; 2 ill. November, 1904
- Outram, James.** Climbing Canada's highest peak. In *Outing*, 45, no. 1. 8vo, pp. 35-42; ill. October, 1904
- Prina, B.** Una gita nella regione superiore della valle d' Aosta. Reprinted from *Le prime lettere*, no. 23, Milano. 24 dicembre, 1875
- 4to, pp. 10; ill.
- Skis & fixations.** Une revue des modes d'attaches les plus usités. 8vo, pp. 8; ill. Genève, Maison au Touriste, 1904

- Spont, Henri.** Les amateurs et la montagne. In La nouvelle revue, Paris, N.S. 29, no. 117. 8vo, pp. 453-462. 15 août, 1904. Fr. 1.50
With reference to the Pyrenees.
- Trachsel, P.** Guide des Hôtels et Pensions des stations d'hiver en Suisse. 8vo, pp. 16; ill. Genève, Pfeffer [1904]
- Uhlig, C.** Vom Kilimandscharo zum Meru. In Zeits. f. Ges. f. Erdk. Berlin, no. 10. 8vo, pp. 692-718; ill. 1904
Contains several illustrations of Meru.
- Wehrli, Dr Leo.** Vierzehn alpine Pracht-Stücke. Zürich, Scholl [1904] 8vo, pp. 11; ill.
This describes Gebrüder Scholl's Alpine Briefbeschwerer, one of which has been presented to the Alpine Club, and is described under 'Item' below.

Item.

- Alpine Letterweight.** Eiger, Mönch and Jungfrau. Weight 1½lbs; size 5½ × 2¾ inches; scale 1/100,000. In bronze, Fr. 20; silvered, Fr. 25.
This careful relief is one of a variety of letterweights designed from the models of the Alps prepared by Herr X. Imfeld, and issued by Gebrüder Scholl, Zurich. It is very suitable for the writing table of a climber. Models of the Matterhorn, Jungfrau, Wetterhorn, Titlis, Rigi, Pilatus, Ortler, and other mountains may also be had, and others are in preparation. The prices vary from Fr. 17 to Fr. 85, according to size, subject, and finish. The models may be obtained in London from the makers, the Würtemberg Electro-Plate Co., 91 Fore Street.

NEW EXPEDITIONS IN 1904—*continued.*

Valpelline District.

BEC DE LUSENEY FROM THE LIVOURNEA GLEN. (E. W. C. Saunders, J. H. Clapham, and Joseph Simond of Lavancher.) Aug. 13.—The climb was the result of an attempt to find a direct route to the Bec de Luseney from Prarayé. The party started as for the Col de Livournea. From the Chaz pastures turned W. up a gully between the Mont Gela and the steep rocks that form the N. buttresses of the Cima de Livournea. Climbed these rocks from the little col at the head of the gully. They were steep, and in places difficult, so that this part of the climb took 1½ hr. On the W. side this rock ridge overlooks the Luseney glacier. From the point where they struck the crest of the ridge they reached the Col de Luseney in about 35 min., and climbed the summit cone mainly by the rocks on its E. side. Seven hours, excluding halts, from Prarayé.

BEC D'ÉPICOUN BY N.E. RIDGE FROM THE SASSA GLEN. (Same party, with addition of C. A. Werner.) Aug. 17.—Slept at Chamin and went straight up the Sassa glen to the foot of the rocks beneath the peak. Climbed the rocks, bearing a little to the E., to the summit of the frontier ridge between the Bec d'Epicoun and the Grand Epicoun (1 hr. 25 min.). Followed the ridge to the summit of the mountain (40 min.). The climb took under 5 hrs., excluding halts.

Zermatt District.

BALFRINHORN BY N.E. ARÊTE. (12,474 ft.) *September 4.*—Mr. Montague F. Tilleard, with Alexander Burgener (senior), left the Huteck at 2.40 A.M. and reached the snout of the Balfringletscher at 5.45. Keeping to the W. bank they proceeded along the moraine till they reached the arête. Here they climbed straight up, until at 8.0 the top was gained. Keeping to the ridge for the most part, but occasionally being forced on to the E. face by overhanging *gendarmes*, they proceeded for 1½ hrs. Then a traverse of the E. face for 1 hr. brought them to slabs which were impossible under the prevailing conditions. At this point, seeing that their original line of attack along the E. face of the arête could not be adhered to, they crossed to the W. face, where the snow was in slightly better condition, and descended a short distance. After a traverse of 2 hrs. along the W. face they reached a rock-rib which led up to a small *gabel* on the ridge after rather under an hour's climbing. Thence the top of the ridge was followed to a spot where the ordinary St. Niklaus route strikes the arête. The summit was reached at 2.40 P.M., the ordinary route along the snow arête being followed. The descent to St. Niklaus by the ordinary route was accomplished in 4½ hrs. The times given include halts. The conditions were extremely unfavourable.

NORWAY.

The Horungtinder.

SKAGASTÖLSTIND BY THE S.W. ARÊTE.—This route had been previously attempted by * J. Heftye with Jens Klingenberg and Peder Melheim; by † Carl Hall with Mathias Soggemoen and Thorgeir Sulheim; and by Fröken Therese Bertheau and A. Saxegaard with Ole Berge. It was followed to the summit on July 24 by Mrs. O. Rostrup, Messrs. E. Rostrup, H. Tönsberg, and Erik Ullén. From the hut the party took the ordinary way till it strikes the S.W. arête. The leader then climbed straight up a perpendicular and exposed corner to a comfortable ledge, the others preferring an easier way to the right. With the aid of a shoulder a higher ledge was reached, and an easy crack led to another resting-place. From here the leader first tried an overhanging corner, but finding the place very difficult, and seeing a way to the left, he descended and traversed steep slabs to a narrow and almost vertical crack. The upper portion of this crack proved impossible, and it was only after a prolonged examination of the holds that he was able to return. The others, who could not see him and who found the waiting tedious, kindly asked, 'Are you sleeping well, Ullén?' Having descended, he continued the traverse, and ran out 65 ft. of rope before he reached an anchorage at the foot of a

* Heftye, *Horungtinderne i Sogn*, p. 43.

† N. T. F. *Aarbog*, 1891-2, p. 45.

wide, vertical chimney. This was sufficiently well provided with small ledges, first in the middle, and, when the right wall became overhanging, on the left-hand side. A short gully and easy scrambling led to the gap below the summit, and from here the lady of the party led to the cairn. The weather was splendid, and the rocks free from snow and very firm. The climbing resembles that of S. Dyrhougstind from Bandet, but is generally more sporting.

On July 29 Messrs. Th. Tjersland and Erik Ullén made the second ascent for photographic purposes, and discovered several interesting variations.

SKAGASTÖLSTIND BY THE FACE BETWEEN HEFTYE'S AND VIGDAL'S CHIMNEYS.—On August 8 Fröken Bertheau, Dr. Stenhouse Williams and Erik Ullén made the above ascent. The wall is somewhat overhanging and was streaming with water. The first portion is difficult, the holds being poor and sloping the wrong way; higher up they improve. The difficulties having been overcome by the leader, the others followed with the help of the rope and of a shoulder from below, but Mrs. Williams, who had accompanied the party up to this point, preferred the route by Heftye's chimney to the prospect of being cut in two by the rope.

There are now four ways from the traverse to the summit :—

(a) Heftye's chimney, usually easy, but when filled with ice almost impossible.

(b) Vigdal's chimney (so called from its discoverer, Hans Olsen Vigdal *), to the left of the traverse. This is generally practicable, and much more interesting. The slabs below are difficult to traverse, but the chimney itself is fairly easy, though some of the jammed stones are loose.

(c) Tandberg's way, made by Miss Bertheau and Messrs. K. Tandberg and Erik Ullén.† This follows a buttress to the right. It is much exposed and has one very awkward step.

(d) The way described above, more severe than the other three.

SKAGASTÖLSTIND FROM THE SKAGASTÖLSBRÆ.—On August 19, by Erik Ullén with Knut Fortun. Leaving Fortunsdal in the night they reached the schrund below Mohn's Skar at 10 A.M. The rocks were covered with *verglas* and fresh snow, while snow and hail fell during the whole ascent. Crossing the schrund they ascended steep and ice-worn rocks until the way was blocked by a huge accumulation of old snow. This they passed by crawling through the tunnel formed by water, and climbed broken and very rotten rocks till they reached the snow-slope lying in the shallow depression. Their plan had been to ascend the snow-slope with the couloir above it, and to try to find an exit on the left; but finding ice beneath the new snow they cut across the slope to a slabby buttress on the right. Under ordinary circumstances this buttress would be easy, but the greatest care was necessary, as the slabs were completely covered with snow which was very apt to peel off. Twice the leader slipped, but was held by the second

* N. T. F. Aarboeg, 1891-2, p. 41 and 1903, p. 121.

† *Ibid.* 1904, p. 151.

man, who was firmly anchored. Having reached the level of the couloir they tried to traverse back into it, but found the slabs so dangerous that they abandoned the attempt, and instead ascended the buttress to the foot of the wall immediately below Mohn's Skar. They followed the base of this wall to the right until the slabs merged in the face of the final peak, and here they succeeded in forcing their way up the partly overhanging rocks, and were on the Skar at 2.30 P.M. The summit was reached by Slingsby's way at 3. The above route is not without danger from falling stones.

THE MARADALS RIDGE FROM THE IRON GAP GULLY TO THE NORTHERN MARADALSTINDER.—Although the E. Maradalstinder ('Manden' and 'Kjaerringen') have been ascended several times, only three parties have been on the Maradals Ridge. In 1887* Carl Hall with Soggemoen and Sulheim ascended the first peak of the Northern Maradalstinder from the Slingsbybrae and tried to gain the second peak by the ridge, but found a tower which they considered inaccessible,† and descended to the snow-slope on the S.W. face of the ridge, from which they were able to climb the second and also the third (and highest) peak. Herr Hall also considered it impossible to cross the great gap which separates the Maradals Ridge from the S. arête of Centralind.‡ In 1889 the same climber with Soggemoen made a pass from the Maradalsbrae to the Slingsbybrae across this gap.§ In 1903 Fröken Bertheau and Messrs. H. Ræburn, W. N. Ling, and Erik Ullén ascended the Maradals Ridge from the Midtmaradal by the Iron Gap Gully, and turning to the right climbed Kjaerringen.

On July 30 Erik Ullén with Knut Fortun went to the Skaga-stölshut, but the weather being bad they did not start until 12.30 P.M. on the next day. They descended Midtmaradalsbrae, climbed the Maradals Ridge by the Iron Gap Gully, and turning to the left began to traverse the ridge. The first tower, which they ascended a few feet to the left of the actual ridge, was exceedingly difficult. 'Having climbed a vertical wall with finger-tip holds, one had to grasp some downward-sloping points of rock between the finger and thumb, and haul oneself up without any footholds at all.' The slabs which followed were also very severe, the holds sloping downwards in a very disagreeable manner. The greatest caution was necessary, as the leader was unable to find any safe standing place or belaying pin within the length of a 100 ft. rope. Having overcome these difficulties the party came in for a sudden storm, with rain, sleet, and biting wind, which forced them to push forward. They climbed a difficult corner, gained easy rocks, and hastened along the ridge until they reached a peak which they imagined to be the third of the N. Maradalstinder. In reality it was the first. Hence they descended the S.W. face by an easy gully and snow-slopes to the Slingsbybrae, and reached the hut at 7 P.M.

* *N. T. F. Aarboeg*, 1888, p. 22.

† *Ibid.* 1891-2, p. 45.

‡ *Ibid.* p. 23.

§ *Ibid.* 1890, p. 86.

NORTHERN MARADALSTINDER, CENTRALTIND AND THE SKAGASTÖLSTINDER RIDGE.—On August 9 the same party left Turtegrö at 5.30 A.M. in very fine weather, and after a rest on Bandet (7.30–8.10) they crossed the Slingsbybrae, and ascended the first peak of the N. Maradalstinder (10.50 A.M.), where the weather had compelled them to give up the traverse on July 31. They now traversed all the peaks of the Maradalstinder, crossed the great gap, and ascended the Centraltind by the S.W. arête, following the actual skyline all the way. The tower which had stopped Hall's party consists of a vertical rockwall rising from very steep and smooth slabs. Removing some moss at the top of the slabs the second man revealed two handholds. He was thus able to offer a shoulder to the leader, who then jammed an ice-axe in a crack and eventually pulled himself up. The S. wall of the great gap between the Maradals Ridge and Centraltind is partly overhanging, but having 200 ft. of rope they were able to double it and thus slide down. The arête of Centraltind is generally easy, but three towers are steep and difficult, the third being the most severe. The summit was reached at 2.50 P.M. Starting again at 3 they traversed Vesle Skagastölstind (3.15), Melleste Skagastölstind (4.10–4.25), made the first descent into the V gap (5 P.M.), and reached Turtegrö at 8 via the Skagastölsnaebb and N. Skagastölstind. Both climbers consider this by far the biggest rock-climb which they have hitherto enjoyed in the Horunger.

MANDEN BY THE MIDTMARADAL FACE.—Climbers of Manden have always attacked its N.E. angle, and appear to have considered this its only vulnerable spot.* Dr. Claude Wilson, however, in a paper read before the Alpine Club, suggested that possibly the ascent might be made by the S.E. angle.† When Fröken Bertheau, Kristian Tandberg, and Erik Ullén, with Ole Berge descended, in 1903, into the great gap between Manden and Kjaerringen, they thought it impossible to descend directly from the gap to the Midtmaradal, and therefore made a long traverse across the W. face of Manden, and ascended it again by the S.E. angle.

On July 20, 1904, Fröken Bertheau, Messrs. J. C. Procter and Erik Ullén, with Knut Fortun, left Turtegrö at midnight, and after a rest in the Skagastölshut (2.30–5 A.M.) descended into Midtmaradal with the intention of climbing to the great gap from below, and completing the traverse between Manden and Kjaerringen. The first part of this programme they carried out successfully. They ascended the wall of Kjaerringen for a short distance, turned to the right, crossed the great slabs below the gap, and climbed straight up the wall of Manden till they reached the level of the gap, into which they were finally brought by a traverse to the left. Ullén and Fortun climbed about 90 ft. of the N. wall of the gap, but returned, as they considered the rocks still too wet to justify a resolute attack. The whole party now traversed back to the Midtmaradal face of Manden, and resumed the ascent. After an interesting and partly difficult climb they gained the summit at 3 P.M.

* *N. T. F. Aarboeg*, 1893, p. 82.

† *A. J.* vol. xiii. p. 153.

Leaving it again at 4 they descended by the ordinary way to the broad ridge, and by a partly new way to the Midtmaradal, reached the hut at midnight, and Turtegrö at 8 A.M. on the following morning.

THE SOUTHERN DYRHOUGSTIND FROM BANDET.*—On July 22 Fröken Bertheau with Messrs. H. Tönsberg and Erik Ullén making the third ascent from this side discovered a most interesting variation. At the head of the second chimney they turned to the right instead of to the left, and followed a level ledge running for some 150 ft. along the side facing the Skagastölsbræe. When the ledge came to an end they climbed diagonally up a very steep and exceedingly rotten face. The route was difficult and very much exposed, and the leader ran out 100 ft. of rope before he reached an anchorage. Higher up another chimney, and a traverse to the left led back to the route followed on the first and second ascents.

On Aug. 2 Fröken Bertheau, with Messrs. J. A. Green and Erik Ullén, repeated the expedition and found that a fall of rock had made a portion of the variation very difficult. A diminutive hold for only two finger-tips had to be used on the most exposed place in the whole ascent. The variation ought now on no account to be attempted under unfavourable conditions. A slip by the leader would undoubtedly be fatal to the whole party.

ERIK ULLÉN,

The University, Upsala, Sweden.

These notes briefly record some of the most brilliant mountain achievements ever yet accomplished amongst the Horungtinder.—
WM. CECIL SLINGSBY.

TYSFJORD, ARCTIC NORWAY.

In August Messrs. Howard Priestman, Wilson Carr, and T. G. Ouston spent 13 days camping in this outlandish fjord and its branches. Some years ago the ubiquitous Karl Hall visited its mountains, and was, until the advent of the above party, the only foreigner to invade its recesses, although the Norwegian mountaineer Eckroll of Skraaven had also 'looked at' Stedtind. A large fjord in itself, Tysfjord proper runs roughly S., then E. for 40 miles; its mouth opens into the Vestfjord, S. of and close to that of the larger and better known Ofotenfjord.

Rowing E. up the branch Stedfjord, which soon discloses itself, the terrific monster Stedtind was seen rearing his square-cut top over 5,000 ft. in Satanic majesty, nearly plumb from the head of the fjord. In view of this mountain those who deem the horn of the Mont Cervin ugly would by comparison change their adjective to pretty, nor would the term precipitous be much in evidence were a description of the famous Swiss peak to be written in Stedfjord: not that the general angles of Stedtind much exceed those of the Matterhorn in steepness, but that the former is almost completely

* *N. T. F. Aarboq*, 1896, p. 67; *A. J.* vol. xviii. p. 51.

armour-plated with smooth, polished slabs for the upper 4,000 ft., some of which measure at least half that figure in a vertical direction. The few little spots where a family may eke out an existence among the soilless rocks of this fjord are owned respectively by Lapps, Norwegians, and Finns (or Kvæns?). Even the hardy Norseman has left the Mongolian to the almost dayless winter of the northern shore of Stedfjord.

CENTRAL TOMMERAASTIND (about 3,350 ft.).—The party ascended this mountain to reconnoitre on August 6. The hands were seldom and the ice axes never brought into use. The summit appeared virgin. The view easterly towards Sweden was wild, weird, fantastic, grotesque—in parts almost ugly. The bare rocky mountain ridges, rising up from small glaciers and snow-circled, icy tarns, made every conceivable line and angle, but a graceful curve was hardly to be seen. K. Hall records an ascent of a Central Tommeraastind also, probably the same mountain which the party spoke of as the *Northern Tommeraastind*, and which was seen to bear a 'varde.'

Stedtind, side on, looked like a colossal sphinx, with, however, more of the features than the nose missing. The easier angles and more hopeful-looking strata of the S. ridge, corresponding to the back, shoulders, and neck, gave an appearance of accessibility to an otherwise inaccessible mountain.

The fine rock tower of Præstetind stands up S. at the sphinx's back. Thirty miles E. stretched the large Frostisen snow field, with the adjacent white domes of Rentinderne, and nearer (? S.E.) a smaller but still considerable snow field, of which more later. On the N.N.E. horizon a snow peak topped its neighbours, and was supposed to be Jæggevarre, although 150 miles distant. Comparatively near, to the N.W., Mösadlen was a prominent feature, whilst nearer still the red-coloured rocks of Hammerötinderne showed pretty forms of spiky architecture; but the artistic sense was not satisfied until the eye caught sight of the (from here) most shapely pyramid of Vaage Kallen, softened by the exquisite 'bloom' effect only to be seen around Lofoten.

Weary of waiting for a fine day, Stedtind was visited in bad weather. The torrential Storelv was followed to its source in a snow-circled lake at 2,350 ft., containing small icebergs. At 1,500 ft. snow fell heavily, and continued to do so with little intermission until the same level was reached in the descent.

After skirting the N. margin of the lake by means of its somewhat unstable snow-girdle cornice steps were kicked up a steep snow-slope of 700 ft. (which afforded a fine glissade on the return journey) to the 'skar' between Stedtind and Præstetind, 3,100 ft. A short rock scramble then led to a long promenade on the back of the mountain, and with heads bent into the storm a varde was reached, on what was evidently the shoulder, at 4,500 ft. An abyss full of boiling clouds suggested interesting possibilities ahead for the future, but enforced a retreat for the present.

PRÆSTETIND (4,500 ft. aneroid).—Driven from their camp in

Stedfjord by persistent rain, the following day found the party at Kjobvik, the tiny metropolis of Tysfjord. From this neighbourhood Præstetind challenges the supremacy of Stedtind very successfully, as foreshortening and distance place the latter under a disadvantage, and Præstetind looks what it is, a fine rock mountain with a character of its own. Although informed that Olaf Holm, a former Kjobvik schoolmaster, had once reached the summit it was considered fitting that a Priest-man should ascend the Priest mountain! Allured by the brilliant morning, Kjobvik was left with the fjord surface like a mirror, except where the water was alive with shoals of jumping herring; but two hours later, when within $\frac{1}{2}$ mile of a spot called Rusvik, a squall struck the overladen boat, and a desperate 25 min. of rowing and baling followed before the panting party were trying to congratulate each other on making the only little piece of beach for miles.

The perils of the fjord are greater than the perils of the fjeld! This squall was the advance guard of 60 hrs.' consecutive rain, which only an ideal camping-ground rendered bearable.

On August 5, following their camp stream, the Rusvikely, the party skirted two lakes in its course, between which the torrent thundered down in fine cascades.

The second lake, the source of the torrent, was reached at 1,700 ft., which in turn was fed from small glaciers and névé, occupying a gloomy cirque higher up. Resisting the allurements of a sporting but doubtfully possible 500-ft. chimney, a détour S.E. to N.W. enabled the party to turn the end of the long vertical cliff which forms the S.W. side of the mountain, and reach the summit ridge which this cliff supports. Peeps over this precipice afforded a zest to the easy going up the ridge. A snow storm soon threatened the summit, so the last 500 ft. of easy hand and foot work were raced up. A dead heat with the storm resulted, as also misty photographic negatives.

By the time 800 ft. had been raced down again the summit was grinning in the sunshine at the excess of caution exhibited, and remained in that attitude for three days.

The following day Stedtind was again visited—a laborious expedition from Rusvik, involving as it did 8,500 ft. of ascent and descent to and from the shoulder of the peak.

A 'skar' (2,400 ft.) between central Tommeraastind and Præstetind had to be traversed before the previous route from Stedfjord could be struck at nearly sea-level. In 7 hrs. of practically continuous moving the cairn on the shoulder was again reached. Across a gap of 300 yds. rose the final 700 ft. of the peak. After a vertical descent of 12 ft. the ridge suddenly narrowed to 18 ins., and ran forward quite horizontally for 60 ft., bearing at the end a tiny cairn. A walk upright along this ridge proved quite safe, but distinctly sensational. Sitting astride the ridge by the little cairn was equivalent to straddling the top stone of a steeple 4,000 ft. high, and all sorts of weird sensations down the spine and in the epigastrium could be conjured up without the least trouble.

A stone jerked to right or left from this point may perhaps touch something once in its descent to the valleys 3,000 to 4,000 ft. below. In front the ridge, here narrow as the edge of the hand, plunges down 80 ft. to the bottom of the gap, which is a comfortable 2 or 3 yds. in width. A sort of bannister slide down this is unnecessary, as a traverse can be effected on the W. side of the ridge, a huge undercut boulder, nearly detached, offering abundant, if somewhat precarious, foothold and anchorage. Beyond the gap two blocks, each forming a vertical step about 25 ft. high, guard the bottom of a ridge face. The upper one, end on, resembles the top block of the Gable needle magnified, but is minus a mantelshelf.

Some one suggested that 7 hrs. of rough scrambling was hardly an advisable preliminary to the attack of what was probably an impossible rock problem. At any rate, the gold fish who are alleged to occupy a bowl on the summit of Stedtind had no cause for serious alarm, as the solution of the problem was not attempted.

STROMTIND (4,900 ft. aneroid). August 18.—This peak was ascended from a spot called Forhawghen, on the N. back of the Tysfjord. After surmounting the tree zone, which on southern aspects in this region is at about 1,900 ft., the choice of route lay between dodging boiler plates in terrace formation or traversing into a large snow couloir, which looked like a possible place for falling stones.

The first alternative was chosen, and countless turns and twists round endless slabs, interspersed with a few straight-forward pitches, eventually brought the party on to the summit ridge at 4,000 ft., where a 'varde'—probably a surveyor's—was found. This ridge was in shocking repair, and large gendarmes in most unstable equilibrium were abundant; in fact the whole upper part of the mountain had not weathered into firm rock, like the corresponding parts of its neighbours, Stedtind and Præstetind. A few cautious steps on the narrow, rotten, icy ridge placed them at the foot of the final tower, up the easy rocks of which they scrambled on to the apparently hitherto untrodden summit.

A snow field to the S. (previously mentioned), was comparatively near, and observed to be at least some square miles in area. This snow field appeared to be ignored in the maps of the district, and such inquiries as the party were able to make were unsuccessful in eliciting that it had a name.

The 'strom' from which the 'tind' takes its name was recognised far below to the E.

ALPINE NOTES.

'THE ALPINE GUIDE.'—Copies of Vol. I. of the new edition of this work, price 12s. net, and of 'Hints and Notes, Practical and Scientific, for Travellers in the Alps' (being a new edition of the General Introduction), price 3s., can be obtained from all booksellers, or from Messrs. Stanford, Charing Cross.

THE LIBRARY CATALOGUE is now printed, and may be obtained, bound in cloth, on application to the Assistant Secretary, 23 Savile Row. Price 3s.; postage, 4d.

THE ALPINE CLUB OBITUARY IN 1904.—J. A. Luttmann Johnson (1886), R. K. Parr (1902), G. F. Watts, Honorary Member.

RESIGNATIONS IN 1904.—B. J. M. Donne (1889), T. Barrett-Lennard (1888), Rt. Rev. C. J. Ellicott (1871), C. M. Spurling (1902), S. M. Vines (1892).

THE FRENCH ALPINE CLUB. REGISTRATION OF GUIDES AND PORTERS, AND FORMATION OF AN ACCIDENT FUND.—The French Alpine Club have just taken in hand the formation of a Roll of Guides and Porters licensed by the Authorities of the Club, after a proper examination into their fitness for the work. They are also establishing a fund for furnishing assistance in case of death or total disablement. In this good work the French Club desires to associate with itself all lovers of the mountains. Subscriptions to the fund are invited, and may be sent to M. Henri Cuenot, 80 Rue de Bac, Paris.

THE DAUPHINY 'CLIMBERS' GUIDE.'—Mr. Coolidge has nearly completed a new edition of this well-known book, and would be glad to receive from mountaineers any corrections or unpublished notes. These should be sent as soon as possible to Rev. W. A. B. Coolidge, Grindelwald, Switzerland.

LIST OF MEMBERS OF THE ALPINE CLUB FOR 1860.—Will any member who has a copy of the printed list of members for 1860 kindly communicate with the Assistant Secretary, 23 Savile Row, London. A copy of the list for this year is not in the Club Library.

REVIEWS AND NOTICES.

The Yorkshire Ramblers' Club Journal. No. 5. London: T. Fisher Unwin. 2s.

WE are glad to receive another excellent number of the 'Yorkshire Ramblers' Club Journal.' It maintains the high standard set by its predecessors. We cannot mention all the articles that it contains, but one or two call for special notice. The place of honour is given to an article by the President of our own Club, 'The Morteratsch Sattel: Extracts from a Diary written in 1876.' It is delightful to be taken back to those happy days.

We find the words of a wise experience even then in our Presi-

dent's mouth. 'Cutting up a slope of black ice is bad enough, but cutting down is far worse.' For sheer excitement what rock-work can compare with this glacial excavation on a sharp descent? In those days too there were moving accidents doubtless by flood and field, but certainly by road. 'The only other adventure we had before reaching Pontresina was the coming off of a wheel, which happened twice, and we were all thrown out in a heap by the roadside.' The paper is most exhilarating. Let us add that an excellent illustration of the east side of the Morteratsch Sattel from the Diavolezza Pass serves as frontispiece to the number.

New climbs on Scafell Crags, Slanting Gully, Lliwedd and Savage Gully, Pillar Rock give details of work on what we may perhaps call the home preserves. Then 'Mountaineering Reversed' makes a good show with 'A Night in a Pot-hole (Lost John's): Alum Pot,' the 'mouth'—whereof an excellent illustration suggests Avernus (with the Sibyl in modern attire encouraging the bold descenders)—'Gaping Ghyll,' and finally 'Early Explorations in Ingleborough Cave, Clapham.' This last mentioned paper is extremely interesting. It contains letters from the Rev. G. Style, late head master of Giggleswick School, Professor T. McKenny Hughes, of Cambridge, and Mr. J. A. Farrer, which clear up the history of early explorations in Clapham Cave. All who are interested in such work will feel much indebted to Mr. J. A. Green, the author of the paper under notice, for the task which he has so successfully accomplished.

We heartily congratulate the editor, Mr. Thomas Gray, on a most successful number, and will conclude our notice by calling attention to a remark on the 'Disaster on Scafell Crags' (p. 78). 'Anything in the nature of competitive climbing such as this increase (in British crag-climbing) may bring into existence cannot be too strongly condemned, and a man who becomes imbued with the mere desire to surpass the rock-climbing feats of others will deserve the fate he is not unlikely to meet with.' This is sound doctrine and cannot be too strongly emphasised.

Adventures on the Roof of the World. By Mrs. Aubrey Le Blond (Mrs. Main). Illustrated. (London: Fisher Unwin. 1904.)

'This book is not intended for the climber. To him most of the tales will be familiar in the volumes on the shelves of his library or on the lips of his companions during restful hours in the Alps.' This statement in the preface is fully borne out by the book itself. After reading the volume it seems to us that 'Alpine Accidents and Narrow Escapes' would best describe it.

Considering that climbers write 'for each other in esoteric periodicals like the "Alpine Journal"' (as we lately read in a monthly publication), whereas the compiler of the volume under notice 'makes the perils and delights of the sport intelligible to the common man' (how salutary it is to learn how others look upon us), it seems strange that so large a proportion of the matter should be taken from the pages of this 'Journal.' Very interesting stories they are too that are thus excerpted. Adventures on ice-slopes, adventures

in thunder storms, escapes from avalanches, escapes from crevasses are given in much variety. It is hardly needful to specify the peaks and glaciers on which they occurred, or to give the names of the well-known mountaineers whom they befell, for we have heard them already intently and not by parcels. They are part of the climber's heritage of story.

One omission we notice. On pp. 127-132 is given Mr. G. E. Foster's graphic account of his descent of the Aiguille du Midi (this expedition, by the way, was made on July 16, 1869, and not in 1871, as stated on p. 126*) with Mr. Horace Walker, Jakob Anderegg, and Hans Baumann, but the last paragraph of Mr. Foster's account is omitted. This, we think, is a pity, as it contains a very weighty recommendation. 'One word more and I have done. To those about to follow in our steps—don't.'

Caucasian story is represented by Mr. C. T. Dent's account of the ascent of Gestola, and of the Search Expedition in 1888.

One of the most interesting portions of the book is entitled 'A Stirring Day on the Rosetta,' from the mountaineering diary of a young English girl. It is transparently truthful and natural, and is charming to read. Mrs. Le Blond's personal contribution is an account of adventures on the Zinal Rothhorn and of an ascent of the Hohberghorn, on which she and her favourite guide, Joseph Imboden, had a very narrow escape, owing to the conduct of the third member of the party.

There are many illustrations, varying in merit. Some are excellent, many of these being by Mrs. Le Blond herself; most of them are arranged four on a page. 'From the Rosetta,' by S. V. Sella, which faces p. 182, pleases us most. Many phases of mountaineering are illustrated in them.

The book will probably find many readers, for there seems to be a considerable public who like exciting accounts, and, as a well-known mountaineer, famous for his skill alike as a climber and a writer, once remarked, 'Of course to people who like highly spiced narratives the casualties can hardly be too frequent.'

Zeitschrift des Deutschen u. Oesterreichischen Alpen-Vereins, vol. xxxiv. 1903.

IN this volume, which is, as usual, freely furnished with illustrations and maps, Herr Fritz Frech opens the scientific and historical section with a geological paper on 'The Configuration of the Central Alps of Tirol,' in which he reviews the various causes which have determined or modified the surface of the district round the Brenner Pass. Herr Eugen Oberhummer continues his story of 'The Development of Alpine Maps in the Nineteenth Century' in an instructive article on Austrian maps, a series of specimen reproductions showing the progressive stages in map-making from 1817 onwards, and indicating the greater precision employed in Alpine nomenclature since mountaineering became popular.

* *A. J.* iv. 383.

Herr Adolf Schiber concludes his treatise on 'The Teutonic Races in the S. of the Alps,' in which he discusses the place names of N. Italy and of the S. Alpine valleys, and the oft-debated migrations of Lombards, Burgundians, Goths, &c. Herr v. Zwiedineck-Südenhorst transcribes 'Archduke Johann's Journey through the Oetzthal in 1846' from the traveller's journal; and Herr E. Waltenberger gives an interesting description of the methods used in the revision of the boundary between Bavaria and Tirol in the Karwendel and Wetterstein mountains, in which work the author was engaged in 1900, 1901, and 1902. Finally Professor Rudolf Hauthal in a paper on 'Nieves Penitentes,' which is illustrated by some striking photographs, states his belief that the heat of the sun alone, without the aid of wind, is responsible for their formation.

Turning to the lighter literature of mountaineering and exploration, with its numerous attractive full-page illustrations, we find first Mr. W. R. Rickmers's entertaining account of his journey to Karchkhal and Suanetia in 1900, when he was accompanied by Mrs. Rickmers. After strongly recommending those who pass through Batum to devote a few days to the splendid woods and other beauties of the Karch-khal mountains the author narrates his journey to Suanetia by the Kheledula valley and Laila Pass, the scenery on the S. side of the pass being described as marvellously beautiful. The paper contains an account of the first ascent of Zalmag and some interesting information about the Dadishkilian families.

Dr. Felix v. Cube describes his second visit to Corsica in October 1902, when Herren Scheck, Schlagintweit, and Vollnhals joined him in a climbing expedition to the steep, rugged granite peaks of the Monte Cinto group. In spite of the lateness of the season, of snow storms, and torrents of rain, numerous ascents were made. One of the finest peaks—Capo Tafonato (2,843 m.)—still remains unclimbed.

In a joint contribution Herren Hacker and Pichl tell the story of their guideless *tours de force* in the Alps of Dauphiné in September 1902. The traverse of the three Aiguilles d'Arves from N. to S. was interrupted by a severe thunderstorm, and during the Meije traverse from W. to E., which occupied 34 hrs., the Pic Central was crossed by moonlight. On at least two occasions the authors extricated themselves from situations of considerable danger only by exercising all their skill and ingenuity.

Dr. Karl Blodig commences a pleasantly written article—beautifully illustrated with excellent reproductions of Mr. E. T. Compton's sketches—in which he describes ascents of several peaks of the Saasgrat. The author, however, avoids the use of the name 'Saasgrat' except, in one instance, to designate the Fletschhorn-Weissmies range.

The rest of the volume is devoted to the Eastern Alps, the first two papers treating of districts easily accessible from Innsbruck. Doctors v. Unterrichter, Ampferer, and Beyrer conclude their article on the Miemingerkette with detailed accounts of several new expeditions made in 1897 and 1898, the illustrations in the text

being reproduced from charming sketches by W. Hammer, while Herr Karl Berger writes of various ascents in the Kalkkögel during the years 1898-1902, giving graphic descriptions of the scenery and of amusing experiences with the 'Senner' of the district. Herr O. Melzer's photographs of these two groups merit special mention, the view of the Kalkkögel from the W. being particularly good.

Passing to the Berchtesgaden district we have from the pen of Herr W. v. Frerichs an enumeration of the many routes by which the Watzmann has been climbed from all points of the compass. Details of several recent ascents made by the author are given, and the paper closes with a short sketch of the guides Preiss and Kederbacher, who have been closely associated with the history of the mountain. With similar minuteness and thoroughness Herr C. de Beaulieu deals with the history and general features of the Fuscherkamm and the neighbouring ridges in the N. of the Glockner mountain-group.

The final paper of the volume takes us to the S. Martino Dolomites; Herr A. v. Radio-Radiis, who has made a special study of the topography of the district, describes the peaks and passes of the N. section of the Pala group from the Rosetta Pass to the Val di Valles. A considerable portion of this group is undeservedly neglected by climbers, owing, no doubt, to the absence of inns within a convenient distance. The author earnestly recommends the building of a Club hut on the Passo di Mulaz.

As previously mentioned the book is lavishly illustrated. Besides the views already noticed there are excellent photographs by Sig. V. Sella, Herr F. Scheck, and many others. The additional maps given with this volume are a useful general map of the W. Dolomites and a large scale map of the Adamello and Presanella groups.

Life and Letters of Mandell Creighton, some time Bishop of London. By his Wife. 2 vols. (London: Longmans. 1904.)

There is only one small portion of these two volumes that is of special interest to readers of this Journal; this is found on pp. 69-70 of the first volume. Dr. Creighton was 24 at the time.

' " *To R. T. Raikes.*

' " Pontresina: July 22, 1867.

' " I took my first expedition among the ice in the shape of the ascent of Monte Rosa. About Alpine mountaineering the most enormous twaddle is talked: it is really very easy with a good guide, but without a guide of course it is impossible, or at least extremely dangerous. The real truth is that the guide pulls you through all inevitable difficulties, and avoids all that can possibly be avoided. It also sounds very awful to be told that we were 13½ hrs. in the ascent of Monte Rosa; but this includes halts every 3 hrs. for food; and also the pace is very slow, never more than 3¼ an hour over level, and in the steepest ascents is very slow indeed, as the guide has to cut steps for you in the ice; consequently the real fatigue is not so very enormous. . . . Switzerland is very stu-

pendous, but I own that a week of mountains at a time is enough for me . . . the uniform white colour of the mountains palls upon one. Shape alone without colour will not make a landscape that can satisfy one for ever, I find. . . .”

‘He used to tell an amusing incident in connection with this journey. One of his companions was Mr. W. Sidgwick, a member of the Alpine Club. One morning they went out for a stroll together on a glacier with their ice axes, but without a guide. They came to a difficult place, where it was necessary to cut every step in the ice, and deep crevasses opened on every side. Sidgwick led the way, and Creighton had to follow ; it seemed to him extremely perilous, and, as he put it, “I had to screw my head on tight and grind my teeth, but I was not going to give in.” They got over the dangerous part, and walked back to their hotel without a word on the subject. Some time afterwards in an Oxford Common Room men were talking over Alpine experiences, when Sidgwick said, “I never was in real danger but once, and that was when I was with you, Creighton, on that glacier.” Creighton exclaimed in surprise that he had thought from Sidgwick’s behaviour that he considered it quite an easy place, and so had not liked to show his own alarm. “By no means,” was the answer; “but when you, a mere novice, said nothing, and took it as something quite simple, I was not going to show that I was in a funk.”

‘This was the only time Creighton attempted high Alpine climbing. He had found that he could do it, but it did not appeal to him. He always said that above the line where the chestnuts grew the mountains began to lose their charm for him.’

It was a remarkable beginning, not wanting in rashness. What a pity that he did not continue to climb, for so enterprising a novice, having by good fortune survived his first attempts, might have come to great things. He might have found mountaineering ‘really very easy’ even without a ‘guide who pulls you through all inevitable difficulties.’

Tibet and Nepal, Painted and Described. By A. H. Savage Landor.
London : A. and C. Black. 1905.

Mr. Landor’s last book is one of a series of volumes with the coloured plates which have become a fashion of the day. In the present case, as the title implies, the *raison d’être* of the work is furnished by the illustrations, and no apology can be required for dealing with them first. They are all reproductions from original sketches made by the author. The numerous studies of heads or single figures of natives of the Himalaya are clever and characteristic. Here unfortunately our praise must stop. The views of mountain scenery reproduce vague ‘impressions’ of abnormal, if not impossible, glaciers. The representations of incidents in mountain travel and climbing are for the most part wildly sensational, such as we look for rather in books of adventure for boys than in a serious work of travel.

But after turning the pages we must recognise that these startling

pictures form no inappropriate accompaniment to the text they illustrate, for Mr. Landor, as the reader of his earlier volume on Tibet* may remember, belongs to no mountaineering school or club save that which once held its meetings at Tarascon. In his view of climbing he is in all essentials at one with the famous president of the Club des Alpes. He agrees with him in holding that the dangers of the snow world are mostly imaginary; that what is known throughout Europe as Alpine craft is a fraud imposed upon giddy and inexperienced tourists. By discarding rope and ice-axe he goes even further than his great original. He trots up peaks of over 23,000 feet clad in 'the thinnest tropical material,' with 'no underwear,' 'shoes of medium weight with no nails in the soles,' and a bamboo cane in his hand. It is a pity he does not give the address of the bootmaker who can make shoes of this character that will survive their first encounter with a Himalayan moraine. Closely united in his climbing prowess to the immortal Tartarin, our author resembles him also in the miraculous escape from death that crowns his recorded career. With a fine contempt for old-world principles which he himself admits was foolish, Mr. Landor on the top of his peak sat down and kicked his heels upon an overhanging cornice. The snow naturally gave way, and in one of the most astounding of his drawings we see the artist dangling over the face of the precipice, held up by his wrists by a sturdy native follower.

Mr. Landor is a miser with dates, but we gather that the feats he describes were performed in the course of 1899 and on the western border of Nepal. Mr. Landor crossed the Kali River, which here forms the boundary, at a place called Garbyang. Having, as he reports, defeated by force the attempt of a Nepalese frontier guard to stop him, he made several excursions on the glaciers of a side-glen, some twelve to fourteen miles long, which lies within the limits of the native State. He furnishes a 'sketch map of glaciers and peaks explored and surveyed by A. H. Savage Landor.' This appears to be in the main a reduction, with a few added heights, of a portion of sheet 37 of the Survey map of Kumaon and British Garhwal.

We are not told whether these additional heights were confirmed by the Survey officials or rest on the author's own observations. One of them is important, since it is that of the 23,490-foot peak by the ascent of which Mr. Landor claims to have established a mountaineering 'record.' This, he tells us, was 'measured by me with the hypsometrical apparatus, with three boiling-point thermometers checked at the Kew Observatory before my departure and after my return. Two excellent aneroids which I also carried gave a similar figure within a few feet.' On another ground—for pace attained at a high elevation—Mr. Landor might, we think, claim this expedition as a 'record.' We deduce from his narrative that he climbed up something between 8,500 and 9,000 feet in eight and a half hours, though his party were in a state of 'indescribable exhaustion,' and halting at every few steps for breath.

* See *Alpine Journal*, vol. xix. pp. 277, 364.

There is no inherent impossibility in great heights being reached with relative ease in the Himalaya even without mountaineering appliances, but Mr. Landor has only himself to thank if mountaineers decline to discuss seriously claims which he does not give them sufficient data to verify. He has even suppressed the names of his native companions. The reason he alleges for this singular course is the risk of exposing them to 'further persecution' from the Indian Government. With regard to his own treatment by our authorities he entertains the strangest impressions. He is under the belief that they opened his letters and that the Government of the North-West Provinces sent a message to the Tibetans to this effect:—

'Mr. Landor is coming to Tibet . . . he will enter alone and be at your mercy.'

He further alleges that two *chuprassis* were despatched to his camp to hinder his expedition. These men, he tells us, 'received a sound thrashing. I took them prisoners and brought them along with me.'

A traveller prone to take the law into his own hands is not likely to be made welcome on the Indian frontier, and may expect to be hindered rather than helped by the Government. But we trust that Mr. Landor's allegations are hallucinations, and we are inclined to this belief by the fact that he exhibits in other matters an uninformed or prejudiced mind. For instance, he speaks of the well-known Russian agent lately at Lhasa in these terms: 'The mythical and much feared Dorjeff is possibly—at least as far as power is concerned—nothing more than the creation of hysterical Anglo-Indian officials.' There is clearly hysteria somewhere: is it so certain that it is on the side of the officials?

First Aid to the Injured, with special reference to Accidents occurring in the Mountains: a Handbook for Guides, Climbers, and Travellers. By Dr. Oscar Bernhard, Head Physician and Surgeon to the Engadine Hospital, Samaden, formerly Resident Physician at Maloya, Engadine. Translated from the German by Michael G. Foster, M.A. M.D. (Cantab.). Samaden: Simon Tanner, 1896. London: T. Fisher Uwin. Price 2s.

This is distinctly a good book, and what it more contains several points both new and true. Of ordinary ambulance manuals the name is legion and they are mostly copied from one another. The author of this has hit on the happy idea of writing one for the use of guides and mountaineers, in which the illustrations of improvised appliances are drawn from materials commonly used during ascents or obtainable on the mountains themselves or at chalets and Alpine cow sheds. He has added articles on such subjects as snow-blindness, sunburn, frost-bite, and apparent death from exposure, cases of which are more likely to occur at high altitudes. Most of the directions given are simple and good, and we have not detected any absolutely bad, as, for instance, the well known suggestion for treating bleeding from a cut throat by putting on a tourniquet. The book might well serve as a text book for a course of ambulance lectures to guides, and would very appropriately lie about in a Club hut or the smoking-room of a mountain hotel.

CORRESPONDENCE.

MOUNT FAY.

To the Editor of the ALPINE JOURNAL.

Dallas, Texas : January 23, 1905.

Dear Sir,—Referring to my article in the 'Alpine Journal' for August 1904, entitled 'The First Ascent of Mt. Fay,' I understand that in May of last year the Dominion Topographical Survey transferred the name from Mt. Fay, as mentioned in my article, to a mountain heretofore known as Mt. Heejee, a somewhat higher peak in the same range. The name of Mt. Little will probably be transferred to another peak in the same range known heretofore as Mt. Non. The peak heretofore known as Mt. Fay will be known as Mt. Bident, and the peak mentioned as Mt. Little will be known as Mt. Quattuor.

My authority for the name of Mt. Fay was an official map issued over the name of Jno. J. McGee, Clerk, Privy Council, Dominion Government Map, No. 2181, issued in 1901, and furnished me by Mr. A. W. Wheeler, of the Dominion Topographical Survey, shortly after I climbed the peak.

Will you kindly publish this correction in your correspondence, and very much oblige,

Yours truly,

C. S. THOMPSON.

VORDER THIERBERG.

To the Editor of the ALPINE JOURNAL.

Glockenthal, Thoune : December 1904.

Dear Sir,—

VORDER THIERBERG (3,107 m.) (GRIMSEL GROUP).—In the last number of the 'Alpine Journal,' pp. 325 and 326, Mr. Winthrop Young describes what is the second ascent of the above peak, proposing for it the name of *Tyndallhorn*. The said gentleman, with Joseph Lochmatter, on August 5, 1904, mounted to the summit mainly by the N. arête. 'Leaving the newly erected cairn,' they went down by the W. arête, following the same as far as the Hinter Zinkenstock. The said cairn was built on June 29, 1904, by Dr. R. von Wyss, Mr. Albert Weber, and myself, and our ascent (without guides) was put down in the book at the Pavillon Dollfus. We made the climb from the Oberaar Glacier in a direction the reverse of that taken by Mr. Winthrop Young, but followed, on the descent, the N. arête throughout to the S. foot of the point 2,806 m., climbing down thence to the glacier on the W. and reaching ultimately the Unteraar Glacier by way of the Grünbergli. Mr. Winthrop Young, making a variation of this route, reached the N. arête from the glacier to the E., climbing over point 2,806 m. As will be found in the next 'Jahrbuch S. A.-C.' we chose for the peak 3,107 m. the name of *Vorder Thierberg*, proposing to change the name of 'Thierberg' 3,202 m. of the Siegfried map into

'*Hinter Thierberg*,' in the same 'ordre d'idées' as the names *Vorder* or *Hinter Zinkenstock*, which the map gives to two summits of the same chain. We ask permission of Mr. Winthrop Young to keep to our name in preference to the one proposed by him. Tyndall's great name is already attached to one of the mightiest and most famous arêtes in the Alps, and in our opinion it would be offering him a very slight additional homage to name a summit of minor importance also after him.

The same above-named party made, on July 1, 1904, the first ascent of the *Nord Lauteraarhorn*, 3,478 m., and the following day that of the highest *Klein Lauteraarhorn*, 3,742 m. (traversed from the W. to the N.W.), which is a very fine climb. This latter peak was probably the last high summit of the Bernese Alps yet unclimbed.

Yours faithfully,
PAUL MONTANDON.

To the Editor of the ALPINE JOURNAL

February 11, 1905.

Dear Sir,—I am obliged to you for the opportunity of expressing my regret to M. Montandon for having suggested in your last number the name *Tyndallhorn* for a point which he had already made his own as the *Vorder Thierberg*. I need not say that I was entirely unaware, in recording my ascent with Joseph Lochmatter on August 5, of the prior ascent by M. Montandon's party on June 29.

I may, however, perhaps correct a misapprehension in his letter. He quotes my account ('A. J.' vol. xxii. p. 326), 'leaving the newly erected cairn,' &c., and continues, 'the said cairn was built by Dr. von Wyss,' &c. The cairn referred to was, of course, 'newly erected' by Lochmatter and myself. I should not otherwise have included the climb among my notes to you. On reaching the summit from the north side the sight of the easy southern slopes of this ridge made it seem improbable that the point was still unconquered, and we instituted a search for the usual signs. It was only after failing to find any record or trace whatever of a previous ascent that Lochmatter built a cairn, and that I assumed, after some further inquiry among the local guides, that the point was still as unvisited and nameless as I had supposed it to be for some years past.

As a matter of purely private interest I should be glad to know from M. Montandon where his cairn was erected, and how his party dealt with the great step in the N. arête, which proved such a difficulty to Lochmatter and myself.

I agree with M. Montandon that the peak is of trifling importance, and I regret the mistake the less that it has enabled him to call attention to the admirable climb of his party on the *Kleine Lauteraarhörner*.

I am yours obediently,
G. WINTHROP YOUNG.

THE RIFFELHAUS.

To the Editor of the ALPINE JOURNAL.

February 10, 1905.

Sir,—Kindly allow me to correct an inaccuracy in the obituary notice of Madame Clausen, printed in the last number of the 'Alpine Journal' (p. 309). As the sentence stands (lines 18-19) it implies that the original Riffelhaus was opened in 1859. The hotel was opened in 1855. Madame Clausen began her career of management there in 1859.

Yours faithfully,

C. T. DENT.

PROCEEDINGS OF THE ALPINE CLUB.

THE ANNUAL GENERAL MEETING of the Club was held in the hall on Monday evening, December 12, at 8.30, Sir Martin Conway, *President*, in the chair.

The following candidates were balloted for and elected members of the Club: The Rev. H. J. L. Arnold, Messrs. E. Backhouse, A. Basset, M. G. Bradley, L. M. Earle, W. P. R. Ellis, J. B. Farmer, W. B. Fryer, R. E. Osborne, and E. T. Roberts.

The following officers and elective members of committee for 1905, proposed by the committee, were declared duly elected:—*President*, The Right Reverend George Forrest Browne, Bishop of Bristol, in place of Sir Martin Conway, whose term of office expired; *Vice-Presidents*, Mr. J. H. Wicks, being eligible for re-election, and Mr. Walter Leaf,* in place of Mr. Hermann Woolley, whose term of office expired; *Honorary Secretary*, Mr. A. L. Mumm; *Elective Members of Committee*, Messrs. R. N. Arkle, G. W. Prothero, L. W. Rolleston, J. J. Withers, and E. H. F. Bradby, being eligible for re-election, and Capt. J. P. Farrar, Messrs. Howard Priestman and H. V. Reade, in place of Messrs. S. Spencer and A. V. Valentine-Richards, whose term of office expired, and of Mr. C. Hopkinson, who did not offer himself for re-election.

On the motion of Mr. A. B. W. KENNEDY, seconded by Mr. J. NORMAN COLLIE, Messrs. J. H. W. Rolland and C. H. R. Wollaston were elected *Auditors*.

The *PRESIDENT* announced that the committee had elected Mr. W. A. B. Coolidge an honorary member, and referred to the deaths that had occurred among members during the year. Due mention had already been made of Sir Leslie Stephen. In Mr. G. F. Watts the Club had lost one of its oldest honorary members, who had been, as his pictures proved, a true lover of mountains. One of the last pictures he painted was of Scotch mountains, one of

* It will be remembered that Mr. Leaf retired in December 1903, having completed only two years of office, in order to start a rotation by which a new *Vice-President* should commence his term of office in each of the years in which there is no change in the office of *President*.

the best pictures of lower ranges of mountains that he had ever seen; imaginatively treated, as by one looking on mountains with a poet's eye. The Club had also lost a member of a singularly attractive and sweet disposition, and gifted with a rare and precious capacity for friendship, Mr. Luttman Johnson. The Alpine Club had been one of his chief interests in life. Two members had been lost in the accident on the Grand Paradis, one of whom, Mr. Meryon, had been elected only during the course of the year; the other, Mr. Clay, was a climber of great promise, and a man highly esteemed by a large circle of friends.

The PRESIDENT then delivered the usual valedictory address.

Mr. C. E. Matthews proposed a hearty vote of thanks to the retiring President. He said that it ought to be known that Sir Martin had only returned from America two days before that meeting was held, and had unfortunately been ill all the way home. The Club had in no way suffered from the fact that the President's 'Swan Song' had been spoken and not written. He had rarely listened to a speech (referring, as it did, to so many fields of mountaineering research) more interesting, more manly, or more sincere, and he congratulated the Club on having enjoyed the services of a President who had proved so successful an explorer in so many countries, and who was so many-sided and so accomplished a gentleman.

The resolution was carried unanimously and with great enthusiasm.

THE WINTER DINNER of the Club took place at the Whitehall Rooms, Hôtel Métropole, on Tuesday evening, December 13, at 7 P.M., Sir Martin Conway, *President*, in the chair. Two hundred and ninety members and guests sat down, among the latter being:—The Earl of Ranfurly, Colonel Sir Thomas Holdich, K.C.M.G., Sir Oliver Lodge, F.R.S., Major Moore, Major Walter Campbell, D.S.O., Lieutenant Reginald Skelton, R.N., and Dr. Wilson, of H.M.S. 'Discovery'; Professor James Ewing, F.R.S., Director of Naval Education; Archdeacon Scobell, and Messrs. Cecil Chapman, J. W. Cross, Lionel Cust, Ernest George, C. Hanbury Williams, W. T. Lister, F.R.C.S., A. H. Oakes, C.B., Henry Sutton, and S. Turner.

In the course of proposing the toast of 'The Alpine Club,' the PRESIDENT read the following letter from the President of the United States of America:—

White House, Washington :
November 17, 1904.

'MY DEAR SIR MARTIN,—

'Through you I would like to extend my hearty good wishes to the members of the Alpine Club. I have always particularly prized my honorary membership of the organisation. I only wish I could be at the annual dinner with you.

'With best greetings to all,

'Believe me, sincerely yours,

'THEODORE ROOSEVELT.'

A telegram in reply was thereupon despatched in the following

terms :—‘ The Alpine Club assembled at their annual dinner thank the President of the United States for his cordial greeting, and send him their heartiest good wishes.’

AN EXHIBITION of Alpine paintings was held in the hall of the Club from December 2 to 24. Refreshments were provided on the afternoon of December 13. About fifteen hundred persons attended during the course of the exhibition.

THE SIMPLON TUNNEL.

WE are indebted for the following interesting information to the ‘ Morning Post ’ of February 25, 1905 :

Gondo, February 24.

‘ The piercing of the Simplon Tunnel was completed at twenty minutes past seven this morning.

‘ This does not imply the actual establishment of regular communication between the north and south sides. The north gallery is still inaccessible on account of the accumulation of water, and the south gallery is on a lower level. What appears to have been done this morning was to pierce a hole in order to permit of the water being drawn off. This operation was not without danger, and only the engineers and skilled workmen were allowed access to the tunnel.

‘ The actual ceremony of the inauguration of the tunnel will take place on the 20th of March or thereabouts.

‘ The final connection was made by the explosion of charges placed in holes driven into the roof of the south gallery, which left a gaping hole on a level with the floor of the north gallery. The water in the latter, the pressure of which had been diminished by pumping from the northern side, flowed rapidly away down the southern side, without doing any damage. An hour later, the water had subsided to its normal level. The direction and length of the works show no apparent deviation from the plans. The heat in the galleries is suffocating.’

THE
ALPINE JOURNAL.

MAY 1905.

(No. 168.)

CLASSICAL CLIMBS.

BY DOUGLAS W. FRESHFIELD.

IN the springs of 1893-4 I visited several mountain-tops familiar by name to every schoolboy—at least to every schoolboy on the classical side, but comparatively seldom trodden by the tourists who pass under them in train or steamer. In April 1893 I strolled up through the wind-beaten ilex grove that hangs on the highest slope of Soracte. A few days later I sought shelter from the keenest of Tramontanas on the lee side of the stone pyramid that crowns the brow of Monte Gennaro (4,165 feet), the loftiest curve of the hills that rise behind Monticelli, on the verge of the Campagna. From the last railway station before Tivoli a pleasant road leads past fields and farm houses to a point where a steep gully breaks the mountain wall on the right. At the top of this long and toilsome ravine the stony track reaches the Pratone, a broad upland situated behind the sky line seen from Rome. Open glades, smooth lawns of flowery turf, lie sheltered between slopes clothed in hollies and beech copses and brightened by starry narcissi. In this pastoral, homely region the herdsmen have their summer folds and shelters. Here they abide, changing little themselves, and hardly caring for the changes of the outer world, while just beyond, from the bounding ridge to which they climb for freshness in the August heats, a wide prospect opens over the green and red plain, along the shining reaches of the stream that divides it, and past the little blot and the grey bubble in its centre to the sea spaces and the sunset: they look over Latium, along the Tiber, past Rome and St. Peter's. But they are concerned not so much with the signs of the times as with those of the weather. The march of armies, the processions of pilgrims, are beneath their range of

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vision, or seem no more than a passing dust cloud; they notice only that the Campagna no longer stretches as an unbroken green carpet to the walls of Rome, that great stripes and patches of bare red soil show that it is coming again under cultivation, and that the rising sun strikes on the raw white blocks of a new city on the Tiber side. A day in their haunts is a refreshing interlude in a visit to Rome, and a welcome return to nature to the jaded sightseer.

The view from Monte Gennaro is not a panorama. Eastwards towards Subiaco, spreads a maze of brown buttresses and snowy ridges. The rare visitor turns his back on the Apennines to look north, south, and west on the lowlands and coast lines, to identify the Alban Mount, Soracte, Monte Catria, and Monte Amiata, with its brown girdle of chestnut woods and its cap of snow, to trace the limits of the early Roman State and the sites of its Etruscan foes.

My third 'tramp' was from Terracina, as picturesque and out-of-the-world a town as can be found even in Italy, across the Pontine Marshes to the observatory on one of the summits of the Circæan Mount, the 'all-but-island,' which is so conspicuous on the southern horizon from the Alban Hills. Its slopes are in April a garden of spring flowers; cistus bushes, cyclamen, violets, asphodel. From this point of vantage the traveller may survey all that lies between Vesuvius and the Ciminian Mount. His eyes range round the curving flat sands and lagoons to Nettuno and Porto d' Anzio; opposite stands the white crag of Anxur and beyond it the rugged coast, headland behind headland, stretches south towards Gaeta and Ischia.

In the following spring I planned and carried out a further flight. In mid-May (the right time; most travellers go too soon) I hurried to Athens. On the Greek May-day (May 14) I took a training walk with a companion up Pentelicus. The weather was singularly inappropriate both to the season and the country. Wild mists were rushing over the ridge of the mountain. The Greeks who were picnicking under the plane trees beside the monastery at the foot of the ascent warned us that we should soon find ourselves *ἐν σκότῳ*. We were never befogged for long. But the glimpses of sea and land and mountain, of the Saronic Gulf and Marathon and Eubœa, seen through the flying vapours, suggested an obvious mistranslation. We could fancy ourselves on a Scotch Ben more easily than in Attica. The top was a garden of tiny wild flowers—northern flowers rather than Alpine—blooming and shining radiantly, like jewels, under the grey sky in the

crannies of the highest crag. We turned our backs on the storm and ran down quickly among the innumerable quarries, new and old, which have given the little mountain its characteristic colour and its world-wide fame. We had seen the last of winter and rough weather. When we got back to Athens the sky was serene, and we found the house doors hung with wreaths to celebrate the incoming of summer.

In his 'Sketches in Italy and Greece' Symonds alleges that every country has a landscape of its own. In a sense this is true—almost a truism. But what is a country? Modern States are apt to overleap natural boundaries. There are, no doubt, certain broad distinctions between the three southern peninsulas—Spain, Italy, Greece. But Modern Greece contains many regions and varieties of scenery. The tourist who lands only in Attica is apt to carry away, as I did thirty years ago, a very false idea of Greece as a whole. He imagines it a sun-baked, waterless, shadeless land, where the streams hardly trickle and the only trees are dusty olives. The truth is that the diversities of landscape in Greece correspond to its ancient divisions. They were the cause of those divisions. The trend and height of its mountain ridges, the complexity of its coasts, severed the communities from one another, inclined them to remain separate States, forced the inhabitants to become sailors and traders. A study of the natural surroundings of the Greeks is a clue to their history.

To get any comprehensive idea of Greek landscapes the traveller should at least make the tour of the Peloponnesus, sail to Delphi, and ride through the forests of Eubœa. In this small space of the earth's surface he will find as many shifts of scenery as in a modern play. The luxuriant and romantic is succeeded by the severe and classical, cornland and olive garden by pastoral meadows and alpine forests, broad valleys by pinnacled ravines. If Greece fails at all it is not in various beauty, but in the attempt at the sublime. The man of many mountains may sometimes smile at the adjectives lavished by the scholar on the cliffs of Parnassus or Chelmos.

Let me sketch a few of the passing incidents of a brief tour. From the Argive plains,—a smooth, in spring perfectly green, carpet, laid between a blue bay and a horse shoe of golden hills—an almost profane train, after halting at stations where the porters call out 'Mycenæ!' 'Argos!' lifts you by long curves round the hills into Arcadia. Its southern frontier, near Tripolitza, is a wide treeless upland, where flat cornlands,

divided by hedges of dog roses, are ringed about by low grey hills. The scanty streams come to a premature end in underground burrows or muddy pools. It is the sort of country that serves for a background to the figures in Burne-Jones's picture of 'The Mirror of Venus.' The real, or rather the poet's, Arcadia lies a few miles further north, a maze of hill and dale, of forests and vineyards and olive gardens, sprinkled with villages and monasteries, which, like those of the Italian Alps, often hide among the river sources in the inmost recesses of the range. In the little mountain towns, where wheels are perhaps still unknown and the post takes four days from Athens, the bazaar preserves a touch of Turkish times, and a tall plane tree may serve in place of a tower to carry the church bell. On the north the broad screen of Chelmos shelters this happy land from the blasts of Boreas and pours forth living waters in the sudden fountains which are one of the glories of the Greek highlands and of classical legend. A typical scene is the Vale of Kleitor, viewed from the little pass that leads into it from the Monastery of St. Theodore, at the source of the Erymanthus; on a fine June morning as fair a pastoral as any painter could desire for a subject.

From Tripolitza a long road runs south to Lacedæmon. The fame of Sparta may lead the fancy astray. One looks for a rock-girt citadel, a frugal land. Nothing can be less 'Spartan' than the Spartan landscape, when it first bursts on the traveller's eyes. For many miles his road has circled among the bare undulations of Southern Arcadia, past shrinking meres that will be mud by midsummer, through a landscape that has little variety of feature or charm of foreground. At last a great snow-peak flashes over one of the near hills; deep hollows, like combs in the Downs, open in front. The road plunges into one of them, climbs the spur beyond, and, fastening on it, reaches a brow and a wayside inn whence the broad valley of the Eurotas is seen, spread like a map some 2,000 feet below. It is a land of planes and poplars, of orange gardens and vineyards and fig trees, of mulberries and maize, of hedgerows and copses, of all the offspring of sunshine and running waters. It is walled in on the further side, the west, by the range of Taygetus. From the plain the mountain rises abruptly in a succession of red rocky knees, thrust out into the greenery and separated by precipice-overhung chasms. On their top they support a broad shelf of fields and forests, above which rises a long, tent-like roof of pure winter snow, which seen end on turns

into a sharp peak. The highest point is 7,874 feet, or 7,000 feet above its base.

Meran is perhaps the Alpine town that in situation most resembles Sparta, but the comparison must not be pressed too far.

The town itself is a modern affair, a straggling 'garden city,' with many detached houses, unpaved lanes, an untidy street of stores, a conspicuous church, and a minute museum.

Taygetus divides Lacedæmon from Messenia; the direct track between them crosses the Langada Pass, which takes its name, like the Dariel, from a defile. It is a fine defile and a difficult one for animals till the new road is finished. Its feature is the belt of plane trees between bare beetling crags; its fault the want of living waters; the stream ceases to run in early summer. Trypi, at its lower end, is one of the most fortunate villages in Greece, abounding in fountains which nourish orchards and gardens, green as those of the North, and rich in all the fruits of the South.

I must hurry on with my reminiscences. Among those that will not be left out is Ithome, with its view over the unbroken plain of currant vines and mulberries to the south, and to the west towards Pylos across hills where the lights and shadows flying over the fast ripening corn clothed the earth in a cloak of shot green and gold. A wider panorama over almost all the Peloponnesus is gained from the broom-clad heights behind the Temple of Bassæ.

From Olympia it is well to go as far as Lala on the way to the Erymanthus. The road climbs among the wooded banks which buttress a high plateau. At every turn some new ravine yields a fresh vista, framed in picturesque oaks and firs, of the broad valley of the Alpheus and its girdle of mountains. There can be few more beautiful drives in Greece, and the scenery is typically Greek. For there is, I admit, at least one common element in Greek landscapes, the hill shapes. Greek mountains almost invariably have individual form; they do not lie crowded in undistinguished and indistinguishable masses, after the manner of Grampians or Apennines.

I did not return from Lala to Olympia, but proceeded through the highlands to Lake Pheneus and the Monastery of Megaspeleon. For two days we rode up the valley of the Erymanthus, and then over the high spurs of Chelmos. Beyond Lala the road for many miles traverses a high deserted tableland, divided between commons and oak forests. After a long ascent it enters, at a great height on its western

slope, the deep cleft in the hills out of which the Erymanthus flows. The scenery is mountainous but monotonous until the little Monastery of St. Theodore is reached. It hides itself high among the woods in a secluded basin at the very source of the stream. Its garden hangs on a steep wooded hill-side, and its broad terrace is shaded by noble planes and watered by flashing fountains. But it is tenanted by sickly, unclean acolytes and harmless lunatics, whom the monks lodge but scarcely clothe. On the third day from Olympia I passed through that delightful bit of Arcady the Vale of Kleitor (which I have already mentioned), and reached by a rugged pass the Monastery of St. George, overlooking Lake Pheneus, a still upland tarn, which depends for its charm mostly on atmospheric effect. The last day's ride was the finest. No forest track can be more varied and romantic than that which leads to the valley of the Crathis and the Styx. Cyllene and Chelmos are fine objects in the foreground during the ascent, and from the top the Gulf of Corinth and its girdling mountains form a picture of singular beauty.

The majority of modern Greek travellers have known little more of Alpine scenery than the ancient Greeks. Consequently the terrors of the horseshoe of cliffs down which the barely perceptible Fall of the Styx trickles have been somewhat exaggerated. 'An immense cliff, absolutely perpendicular.' 'A sheer and in places even absolutely overhanging precipice.' These expressions need the explanation given in the next line by their author, 'by far the most awful line of precipices I have ever seen.*' The cirque of the Styx is the most severe piece of mountain scenery I came across in the Peloponnesus; it might be among the Lesser Alps of Tyrol. But there nobody, I think, would pay much attention to it. The Styx would never have made any impression on a Swiss or Tyrolese peasant, though Homer was quite right in picking it out as the most strictly Alpine scene in the Peloponnesus. It is 'alpine,' but of a mild variety.

From the Styx I took an unfrequented route—not even a track in parts—to Megaspeleon. We climbed to a jagged ridge just under Chelmos; then leaving the path to Kalavryta, strolled first over high tulip-painted pastures where snow still lay in shady nooks, and then down a very steep hill-side into

* Mr. Frazer's little volume, *Pausanias, and other Greek Sketches*, conceals under its title one of the most useful companions to a tour in Greece. The criticism made above is the only one I have to make on the author's appreciations of scenery.

a long, narrow, secluded glen dotted here and there by pastoral huts. Where the ground broke away steeply our stream was caught and carried off in a conduit. The path followed the water and soon gained a narrow ridge commanding on the right a superb view of the Gulf of Corinth, while on its western side we looked down on the valley of Kalavryta, with the snowy top of Olonus and many other shapely heights beyond. One of the noblest natural sights in Greece is the long gorge that leads from the foot of the monastery hill to the shore at Diakovto. It remains in my memory as a procession of incredible flame-like rocks; of bastions, pinnacles, towers, soaring four thousand feet overhead out of the richest vegetation—pines and firs on the heights, in the clefts wild figs, oaks, cistus, bays, olives, dripping wells fringed with luxuriant ferns—and near the Gulf of clusters, then fields of rose-red oleanders. The oleander grows and blossoms round Diakovto like gorse on an English common.

This vision, alas! can only be gained from the cars of the toy train that runs once a day at about four miles an hour up and down the otherwise pathless defile. Permits, I believe, can be obtained to walk along the line, often a mere shelf above the bright torrent, and closed in one place by an iron door.

No lover of forest scenery can afford to neglect Eubœa. The environs of Mr. Noel's house at Achmet Aga are a natural park, hidden from the world by a ring of stately hills. The Vale of Tempe calls for a visit, inasmuch as it was to the Roman tourist what the Vale of Lauterbrunnen was to the British before the discovery of Zermatt, the accepted specimen of mountain scenery. It is a fine ravine, rendered more striking by its position between the broad Thessalian plain and the sea. And it is pleasant to know by sight Pelion, Ossa, and Olympus. Pelion, a massive green mountain, with villages on its lower slopes, rises straight out of the waves; Ossa, a shapely, naked pyramid, stands up alone; Olympus shows as a huge broad-shouldered mass, on the upper slopes of which the bright mists continually gather, parting for a few minutes to show a white snow ladder, which Hermes may have found suitable for a glissade to the lower world.

In a country so mountainous as Greece most travel is more or less mountain travel. I have attempted to note a few of the first impressions of a mountaineer; but even in such a condensed form they must, I fear, be unpalatable food for the robust appetites of Alpine Clubmen. I shall allow myself a little more license in recounting the ascents of Taygetus and

Parnassus, peaks which between them can almost make up 16,000 feet above sea level (Taygetus, 7,874; Parnassus, 8,064).

The highest top of Taygetus lies some 12 miles S.S.W. of Sparta. The peasants who make a pilgrimage annually to the chapel on the summit in the month of August follow a path which first mounts to the village of Anavryti, on the middle shelf of the mountain, and then slants upwards first to a gap in one of its spurs and then across the upper slopes to the saddle north of the culminating crest. This line of ascent has been excellently described by Mr. Tuckett in the pages of the 'Alpine Journal' (vol. viii. p. 316).

The muleteer procured for me by my dragoman at Mistra preferred another route. When I was called at 1.30 A.M. the Vale of Sparta and the hills opposite were brilliantly lit by a sinking moon. A gigantic cypress planted on the terrace of the desolate convent garden threw its long shadow far out into the plain. From the fig and orange groves below rose warm waves of fragrance and a full chorus of nightingales. I scrambled sleepily in the deep shadow down the broken staircase that leads from the deserted city of the Crusaders to the modern village. Then we mounted for our long ride. The track led through walled orange groves, between unfenced cornfields, over the barren bed of a torrent, past gushing fountains shaded by tall poplars, elms, and oleanders. The shadowy cliffs and gorges of Taygetus were always close on our right. Slowly their shadows grew faint; they reflected the first light in the eastern sky. I watched at leisure the slow approaches of the dawn.

It was 6 A.M. when, in the first full flood of sunshine, we rode into the village of Xerocampi. The women were on their way to work in the vineyards for which the place is famous; a group of men had begun the day's gossip round the village café. Others were busy on a new church; for there is enterprise and money in Xerocampi, and some of its inhabitants have even sought their fortune in America and returned. I found several who spoke a few words of English, and by their aid I secured a guide acquainted with the mountain tracks.

A copious stream issuing from a cleft in the foot-hills flows through Xerocampi and nourishes the perpetual verdure of its environs. Our path crossed it near some ancient water-mills and then climbed steeply on its right bank on to the crest of a spur covered with short turf and broom like an English common. A monastery was plastered into a hollow

in the face of the great cliff opposite. Following the narrow spine of the hill as it rose buttresswise against the mountain, we passed between fields scarlet and gold with poppies and fast ripening corn, and near a group of brown huts in a clearing on the lower skirts of the forest belt. Then we plunged into woods of oak and beech and fir, carpeted with a small red cyclamen, bright daisy-shaped flowers, and a variety of ferns. The flora was much richer than that on Parnassus, owing, no doubt, to the greater humidity of the climate. Taygetus seems to catch all the moisture the south wind brings from the sea. Our path skirted the slopes of a deep basin, where little mountain farms or fields lay islanded in the great wood. In front rose the broad snowy slope of Taygetus. Some three hours above Xerocampi we made a second breakfast beside a most idyllic fountain. Here we took a narrow track, which leaves the main path on the right and ascends steeply into a glen under the S.E. ridge of Taygetus. At its head is a green saddle, on which lies a sloping meadow shaded by the highest groups of weather-beaten firs. This proved one of the most enchanting spots it has ever been my good fortune to discover. We had gained the rim of the basin by which we had so far ascended, and a new prospect burst on my eyes. It was of the kind Edward Lear, the 'E. L.' of Tennyson's poem, loved to attempt. Ridge beyond ridge, dividing folds of forest, fell one behind the other towards the shining waters of the Gulf of Laconia, 6,000 ft. below. In the distance stretched out the long coast-line of the promontory of Maina. Cythera was a shadow on the horizon. In the absence of a bevy of Laconian virgins a goatherd and his flock served as a classical foreground. I almost envied the horseman who was to wait here for my return. But duty and habit pointed up a steep, warm, stony slope. From its top the S.E. ridge of Taygetus suggested a fine direct climb to the summit. My guide, however, persisted in bearing away to the right across a shelf of sheep pasturage lying on the E. face of the mountain. The ground, sodden with the lately melted snow which still lay thick in the hollows, was ablaze with crocuses. What remained to be climbed was a broken, rocky face of perhaps 1,000 feet, in places precipitous, but offering several practicable lines of ascent. When near the top I came suddenly on one of the last zigzags of the pilgrims' path, which was almost buried in snow. It may be roughly described as making the base of the triangle of which, by descending the valley to Xerocampi, we had traversed the two sides. But my 'times' to the top from Mistra were the same as those of Mr.

Tuckett from the equidistant Sparta. Arrived on the gap between the two loftiest crests I saw an easy ridge of rock and snow before me. The last fifty yards, where the snow was hard and fairly steep, tried my guide's nerve, and he would have turned back had I not trampled steps for him. The top of Taygetus has been curiously treated. When I reached what had from a distance looked like a dilapidated stoneman it proved to be the ridge of the roof of a buried chapel. The rest was buried in snow drifts, which choked up a little stone enclosure and several cells built round it. When was the first altar erected on this the highest peak in Peloponnesus? I envied the pilgrims who watch sunsets and moonrises here in August.

It was just midday when I arrived, and local mists were playing round the mountain, which promised, and before long produced, a brief thunder shower. The distant panorama was imperfect; but I saw a great deal under beautiful shifting lights. To the N. I overlooked all Peloponnesus to the vapours that rested on its northern heights. To the W. the green hills of Messenia glowed in sunshine; its great bay swept round in a wonderful curve, and beyond lay Pylos and the distant islands. At our very feet a little town hung over its haven, a tiny bay of the Gulf of Kalamata. To the S. the long promontory of Cape Matapan stretched out, peak beyond peak, all far below me. A transparent opalescent mist hid Crete, but only veiled Cythera.

My descent to the sheep pasture was a very rapid act of snowmanship. From the gap I enjoyed a long glissade down a broad snow gully. This proceeding gave a shock to my Greek guide. The story he told on our return to Mistra was a proof that winter mountaineering has not yet become a Spartan game. 'The Englishman,' he said, 'stepped out on to the snow, flew off suddenly like a tram car, and disappeared from sight. Half an hour later I found him sitting at the foot of the mountain, apparently none the worse.' A snow couloir in Greece, like a glacier in the Dolomites, is not a sufficiently familiar object to be treated lightly by the natives. During the repose thus gained I enjoyed one of the most striking views I have ever had from a mountain. The thunder cloud had dispersed. Beyond the broad valley of the Eurotas the slopes of Mount Parnon opposite glowed in the richest hues of red and gold—gold where the crops were ripening, red where the Indian corn was not yet high enough to cover the tilled ground. The blue vault of the sky overhead, the blue expanse of the distant sea looked solid in comparison.

There was something unsubstantial in the bright vividness of the southern landscape.

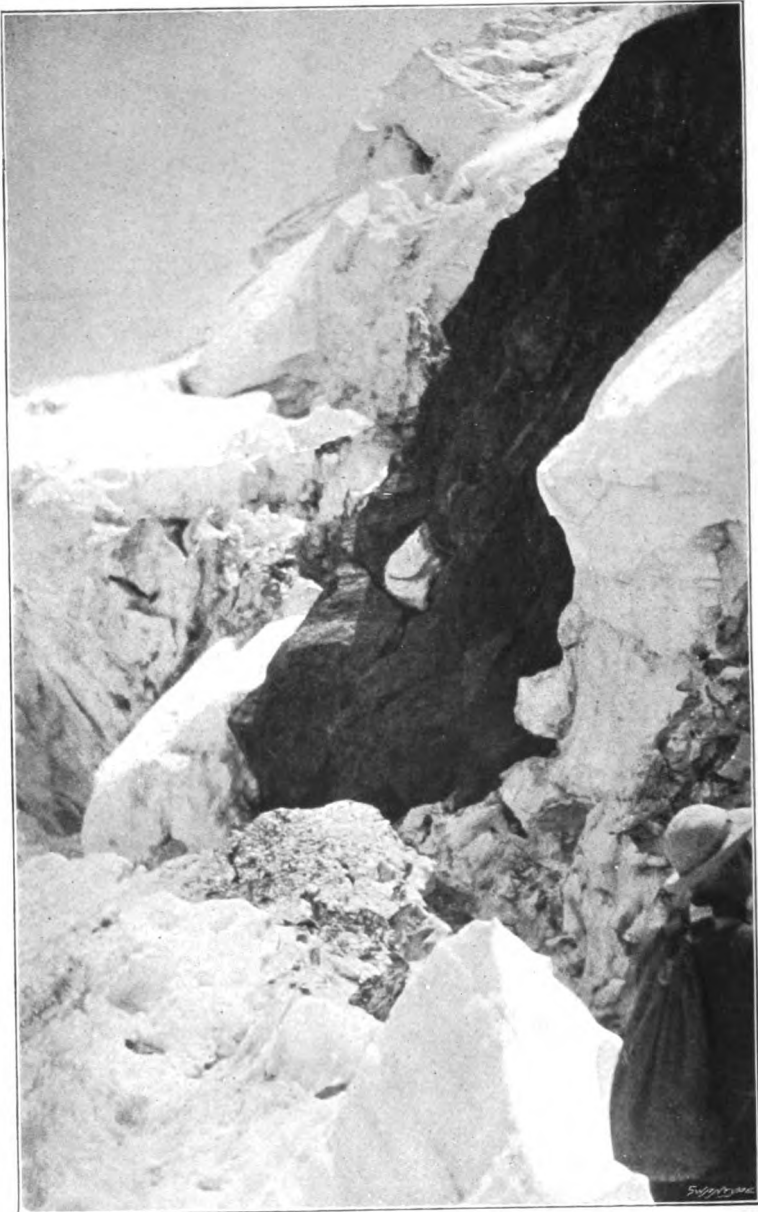
Pale shadows passed over it as the last vapours drifted or melted away. The far-off sea horizon was a shimmer of silver mist. The effects were as novel as they were beautiful. I could not resist another halt at the meadow on the mountain neck. The whole descent was charming, from the variety of foreground and the exquisite views in front. We rode back up the valley from Xerocampi in the afternoon shadow of Taygetus, and returned to Mistra just before dusk, after a day of eighteen hours, which had not seemed an hour too long. My worthy dragoman had spread my table in the loggia overlooking the Vale of Sparta, and I dined by the light of the rising moon to the strains of a quire of nightingales.

Itea, the port of Delphi, is placed at the opening of a broad valley leading up towards the heights of Kiria, the loftier but obscure neighbour of Parnassus. The famous shrine lies at a much higher level within the mouth of a side-valley, and is approached by the many zigzags of a new and well-engineered road. The temple and its adjuncts stood just behind the spur that closes the entrance to their valley, and missed the view. But from the modern village the eyes range from the blue sea of the gulf over the level plain of grey olives to the bright belt of vines, the darker belt of forests, and the white summer snows of Kiria. Parnassus is completely out of sight. Antiquarians, it is true, have a trick of calling the cliffs behind the shrine Parnassus. One might as well call the slope opposite Interlaken the Faulhorn. From the top of these cliffs it is a two-hours' ride to the base of Parnassus. The Castalian Spring, however, is close at hand. Its waters were in great request at the time of my visit for the thirsty flocks that were moving in thousands to the summer pasturages of northern Greece.

This is not the place to linger over the extraordinary interest of the recent discoveries and restorations at Delphi, which now contests with Olympia the distinction of being next to Athens the most interesting classical site in Greece. Our business is with Parnassus. The stony zigzag that scales the cliffs immediately behind the sanctuary is warm in June. On the top the traveller finds himself in an undulating upland covered with trees, and only wanting water in the form of streams to be idyllic. In classical times it was resorted to for festivals in honour of Pan; it still serves for picnic parties. Beyond it one comes to a large cultivated plain and a village of summer huts, suitable for minor poets.

Beyond this rise the lower slopes of the real Parnassus. They are, to tell the truth, disappointing. Parnassus forms no feature in the landscape on this side; it is seen to more advantage from the Gulf of Corinth, or better still from the northern part of Eubœa, whence it asserts its dignity as the predominant height of central Greece. The track climbs a steep gully through a somewhat scanty and arid forest. Then it winds about among hillocks and hollows until, having rounded the north-western corner of the mountain, it rises above the timber line, and again breasts the hill. So far I had seen rugged crests above me, foreshortened and unimposing, but nothing like a mountain-top. Snowdrifts were now found in every hollow, and I began to wonder how much higher the shepherd's shelter where I proposed to spend the night might prove to be. We found it under a big rock in a sloping pasture open to the N.W. There were walls, but no roof, except in the hole beneath the boulder, where the shepherd lay. He had with him two children, who had made themselves niches in the wall. After a slight shower came a fine sunset. The evening shades added beauty and mystery to a wide landscape in which Kiria was conspicuous in the foreground and a fine rock peak in the chain of Pindus on the horizon. I cannot say I slept, but I lay in a rug beside the fire and watched the stars until the moment came to continue the climb. In the faint light of a waning moon my guide and I mounted a succession of screes and snowslopes till we reached a broad ridge, on the further side of which lay a white bowl, looking very large in the moonlight. Its meltings drained to the east towards Bœotia. The summits of Parnassus stretched round in a semicircle on our right. 'Double-crested' is the classical epithet of the mountain. From many points of view it is descriptive, but on close approach the lower and western crest resolves itself into a long comb with many crags and jags, while the eastern and loftier peak stands apart, a solitary steep-sided cone. In the faint twilight it looked miles away; yet half an hour's walk over snowfields brought us to its base, and as much of steep trudge to the stone-man on the top. I searched it in vain for some token of our friend C. E. Mathews, who was reported to have climbed the mountain a month before. I had expected to find a bottle and at least a sandwich paper, if not a sonnet. I admired, and imitated, my predecessor's discretion.

When I got to the top a faint gleam was already visible in the eastern sky. It quickly deepened and broadened until,



Frank Gare, photo.

Swan Electric Engraving Co.

FOOT OF THE MAASPLANKJOCH.

without warning, a spot of light shone on the darksea horizon, grew to an arch, and in a few moments the sun's orb was floating in the sky. To the sailors on the *Ægean* it had not yet risen, and it was some minutes before a path of light flashed across the waters to Eubœa. Then the long backbone of the great island stood out with all its heights and hollows blue against the golden east, throwing its clear-cut shadow on the strait that divides it from the mainland. The plains of Bœotia next took the day; the mists rose from its lakes, and the rivers flashed out as silver threads across its broad fields. On the northern horizon, beyond the Gulf of Volo, Pelion, Olympus, and even distant Athos took shape as grey phantoms. Still the shores of the Gulf of Corinth were slow to awaken. Night hung reluctantly over the Adriatic long after Attica was in broad day. But at last the veil of twilight was lifted everywhere; hills and valleys, cities and harbours stood out clear and distinct in local detail and colour. I shall not attempt a catalogue of the famous sites in view. I had had that rare enjoyment a most successful sunrise, worth a night in the open, and worthy of the Poets' Mountain.

SOME PASSES FROM THE GÖSCHENER ALP AND FROM THE
WINDEGG HUT.

By LEGH S. POWELL.

IN this article I propose to give some of my experiences, first, in crossing the Winterberg range to the N. of the Triftlimmi; secondly, in traversing by the direct route of the Untere Gletschjoch from the Göschenener Alp to the upper part of the Furka road; lastly, in making the passage of the Gwächtenlimmi from the Windegg Club hut to Handegg.

For many years past I have been attracted by the fascinating mountain ranges which bound the Göschenenthal on the W. and S., and little by little, as opportunity offered, I have increased my familiarity with them. My interest has gradually deepened into a wish to ascertain experimentally which of the somewhat formidable mountain routes from the Göschenener Alp to the Triftthal (and to Meiringen) was, on the whole, the quickest, safest, and generally most serviceable. The reply to this query is not a little difficult to state in brief, precise terms. Much depends on the condition of the mountains, on the weather, and on the party making the expedition. Besides a safe and easy way is not always the quickest. Without doubt the safest and easiest mountain

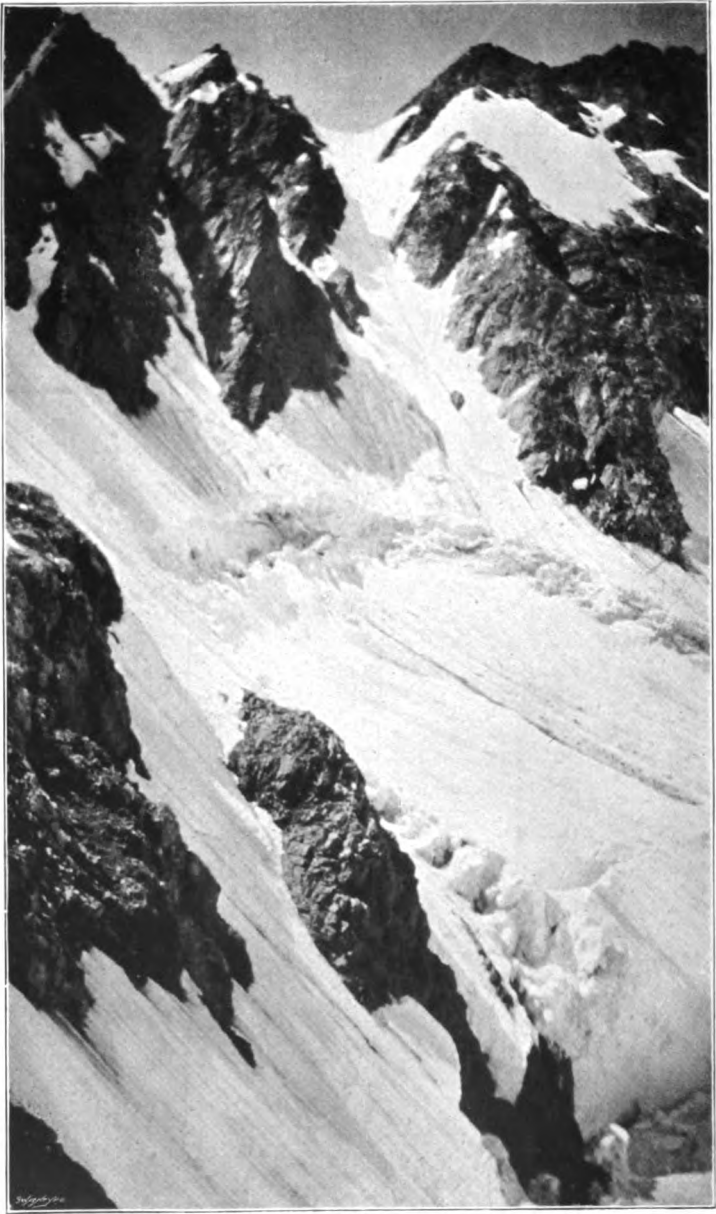
route out of the valley to Meiringen is by the indirect way of the Sustenlimmi to Stein, and thence down the Gadmenthal, but it is a question if at all times it would be the quickest.

Of direct passes to the Triftthal the Federal map indicates but one, the Maasplankjoch, and this, according to Herr Seelig's experience* and my own, is marked in the wrong position. The pass, which is seen in the illustration opposite p. 425, lies much nearer to the Maasplankstock than is gathered from an inspection of the map. It was my intention to cross this pass last summer, and accordingly on July 20 I set out from the Göschener Alp with Messrs. Frank Gare and R. Todhunter to prospect the way, with a view to making the passage at a later date. On approaching the couloir which Herr Seelig clearly specifies in his account in the 'Jahrbuch' we were faced by a cliff, some 15 or 20 ft. in height, which it was not in our power to scale.† Above the cliff the rocks of the couloir appeared practicable enough. It seemed to us probable that what has occurred in so many other parts has taken place, viz. a considerable fall in the level of the glacier of late years, leaving bare fresh surfaces of rock, which are often difficult or impossible to climb. We were dissuaded from attempting to scale the cliff not only by its forbidding aspect but by a shower of stones from the couloir immediately above our heads, which necessitated our speedily shifting our position, whilst we were still discussing what steps it was possible to take in order to reach the col. On the S. side of the couloir (Herr Seelig climbed it on the N. side) was a bergschrund which, no doubt, might have been surmounted with a good deal of step-cutting, whilst above the steep snow the rocks appeared comparatively easy. Had it been necessary a way might doubtless have been forced at this point. Clearly, however, the pass did not, under the conditions in which we found it, afford a convenient passage to the Trift glacier, especially for those weighted with rucksacks, and the intention to reach the Triftthal by this route was therefore abandoned.

To the S. of the Maasplankjoch the range does not show signs of affording an easy passage. The climb up the rocks as far as the nameless point 3,357 m., would, at any spot chosen, be longer and steeper than that which we attempted, whilst an excursion made still further to the S. on another

* *S.A.-C. Jahrbuch*, vol. xxiii. 1887-8.

† For the photographs used to illustrate this article I am indebted to Mr. Frank Gare.



Frank Gare, photo.

Swan Electric Engraving Co.

THE NORTH MAASPLANKJOCH
FROM THE MAASPLANK FIRN.

occasion did not result in the disclosure of a practicable route to the ridge.

To the N. of the Maasplankstock (3,403 m.), however, is a well-defined depression, access to which is gained by a steep snow couloir, clearly seen in the annexed illustration. This pass, which I crossed in 1901 from the Trift hut to the Göschener Alp, with Heinrich Zurfluh, has been appropriately named the North Maasplankjoch.* The inclination of the slope here is without question considerable, and the couloir is long. The pass should certainly not be attempted except in fine weather and with the snow in good order. But, given favourable conditions, it has some unique points in its favour compared with other passages to the Triftthal. It is a very direct route from the Göschener Alp to the Trift hut, and, as the approach to the couloir on either side is exceptionally easy, it follows that the time required to cross the pass is short. In this respect the route is not likely to be beaten by any other. On the occasion when I crossed it the time occupied from the hut to the Hotel Dammagletscher, on the Göschener Alp, was just under 6 hrs., inclusive of a few short halts. Moreover the couloir, being broad, is especially free from falling stones, and the usual crevasse difficulty at the foot is not likely to be serious, as the supply of snow above is ample. The pass is one that may be safely crossed by the steady, reliable mountaineer, but it is certainly not to be recommended to the inexperienced tourist.

North of the pass just noticed comes the Thierberggrat, leading to the two highest summits of the Hinter Thierberge. I have climbed to the crest of this ridge, with Zurfluh, from the Triftthal, and followed it almost the whole way from near the North Maasplankjoch to the foot of point 3,440 m. of the Hinter Thierberge, the object being to see, by a close inspection, if there is a convenient way down the rocks on the side of the Göschenenthal. It happens that at this part of the range the rocks are less high than at almost any other. They are, however, no less steep on the E. side, and although a descent to the Kehlen glacier might doubtless have been effected at more points than one, had it been necessary, still no obviously satisfactory route, such as I was seeking, could we discover.

Between the points 3,440 m. and 3,446 m. of the Hinter Thierberge descents have been forced down the rocks to the Göschenenthal at two places to my knowledge. One of the

* *Alpine Journal*, vol. xx. p. 539.

passages has been recorded by Messrs. Hope and Kirkpatrick.* Their route lay for the most part by the couloir between these two summits. The other passage is unrecorded. It was effected in the summer of 1892 by a party of English climbers, who, starting from the Trift hut, made their way to point 8,446 m., intending to follow the ridge towards the N. to point 8,419 m., and thence down to the Kehlenjoch, and thus to reach the Göschener Alp. The ridge connecting these points, however, proved too rough, and a somewhat adventurous descent was accordingly made straight down the rocks to the Kehlen glacier. The first of these passages is doubtless the easier, but neither, I presume, comes within the definition of a recommendable pass.

It is to the Thierberglimmi, locally known as the Kehlenjoch, that we must direct our steps in order to most easily reach the crest of the range separating the Göschenenthal from the Triftthal. There is no need to say more than a word or two about the way to the pass from the former valley, since it is a not unfrequently traversed 'Baedeker passage' to Stein, and has been described elsewhere. It is as well to point out, however, that the steep head of the Kehlen glacier may at times present considerable ice difficulty, which, late in the season, may easily render the passage impracticable. On the occasion of my crossing it from the Windegg hut on August 22, 1902, with Mr. Walter Larden there was no way of getting across a crevasse, which cut the glacier from side to side, but by a flying leap to the further snowy edge, which lay several feet below. Last summer (July 25), when I again crossed the pass to the Windegg hut with Messrs. Gare and Todhunter, the glacier had a completely altered appearance at apparently the same spot. There was now a huge chasm which stretched right across the glacier. Fortunately for us at the narrower end (W.), where the distance was about 15 ft., there was a connecting strip of ice, which was so sharp that some of us, for prudence sake, took it saddlewise.

Arrived at the summit of the Kehlenjoch, two practicable courses are open for reaching the Triftthal. One is by a rather circuitous route over the Stein glacier to the pass of the Zwischen Thierbergen and thence down the N. section of the Thierberg glacier.

This route has been followed three times to my knowledge, the first time by Herr A. Hoffman Burkhardt in 1864,† the

* *Alpine Journal*, vol. xx. p. 47.

† *S.A.-C. Jahrbuch*, vol. ii. pp. 81 and 59-60.

second by Dr. Otto Lindt in 1865 * (who took 3 hrs. from the Kehlenjoch to the Windegg), the third by Dr. Oskar Schar, of Basel, who with others made the transit from the Göschener Alp to the Windegg hut on August 5, 1903. Dr. Schar has kindly sent me some interesting particulars of his expedition, from which I append the following: It had been the intention of the party to climb point 3,419 m. of the Hinter Thierberge, and thence to proceed along the ridge to point 3,446 m., and thus to reach the Trift hut. The former summit was duly reached, but the passage along the ridge not promising to be practicable the party returned by the way they had come and followed the ridge to point 3,343 m. From this position it was hoped that a descent might be effected directly to the N.E. to the Zwischen Thierbergen, but after a descent of 50 to 100 m. in this direction the way proved impracticable by reason of the steepness of the ice and it became necessary to make a very considerable circuit over the Stein glacier to join the ordinary route from the Stein Alp to the Zwischen Thierbergen. Thence to the summit of this pass was an ascent estimated at 150 to 200 m.

When taken the best way, *i.e.* by descending the Stein glacier directly from the Kehlenjoch to join the way from Stein to the Zwischen Thierbergen, this route to the Windegg is probably rather shorter and easier than that about to be noticed, but it entails a considerable descent with subsequent ascent.

The other route,† which I have twice followed, involves an easy ascent over snow of about half an hour from the Kehlenjoch to the upper end of the arête, which, starting a little to the N. of the Hinter Thierberg summit, 3,419 m., descends to the W. and divides the Thierberg glacier into its N. and S. sections. This arête, the upper part of which is snow, succeeded by a ridge of rocks, affords safe but rather tedious means of reaching the N. section of the glacier near its junction with the southern section. In ascending the arête in 1902 Larden and I followed the snowy portion, which was in good condition, the whole way along the edge; but in descending that part last summer with Gare and Todhunter we preferred, as the snow was inclined to be icy, to take the safer way by the irregular line of rocks lying a little way below the snow ridge on the S. side. This finally led us back to the upper end of the rocky portion of the arête. From

* *S.A.-C. Jahrbuch*, vol. iii. pp. 143, 145.

† *Alpine Journal*, vol. xxi. p. 273.

the spot where the Thierberg glacier is reached to the Trift glacier the way is plain and free from difficulty. Time, however, may be saved, and much discomfort from loose stones avoided, by keeping out of the bed of the valley and following the grass on the N. slope, the final descent of the cliffs overlooking the Trift glacier by grass terraces being quite a simple matter.

There is no question that this route affords, under normal conditions, a safe and serviceable mountain way for the average tourist (with a guide) who wishes to cross from the Göschener Alp to the Haslithal. The most difficult feature of the expedition would usually be the higher part of the Kehlen glacier, but the upper portion of the arête giving access to the Trift glacier must also be taken with care. In point of time the transit between the Göschener Alp and Imhof might be made in a long day by a smart walker, but, as the ascent to the arête cannot be conveniently made in less than 5½ hrs., and the descent to the Windegg hut takes not less than 4 hrs., exclusive of time for halts, mistakes, and delays, it is recommended that advantage be taken of the tolerably comfortable Club hut, where an ample supply of wood is always to be found, in which to spend the night.

The Untere Gletschjoch * (height about 3,150 m. = 10,330 ft.).—Most of the passages to the Urserenthal from the Göschenenthal are simple expeditions in comparison with those we have been considering. The Alpligenlücke and the Winterlücke are both frequently crossed every summer by tourists. Neither of these passes, however, leads directly to the upper part of the Urserenthal, but they descend naturally, by the Lochbergthal, to Realp; and when it is desired to go to the Furka by either of them a circuitous course is necessary, either along the Ochsen Alp to the Tiefengletscher hotel or by ascending the tributary stony glen of the Lochbergthal, which gives access to one of the tongues of the Tiefengletscher, and thence to the Furka road. Both routes involve considerable incidental ascents and descents, and there is thus room for a good and more direct mountain passage W. of the Winterstock to the Furka. Such a route is afforded by the so far unfrequented pass of the Untere Gletschjoch, which lies between the Winterstock and the Gletschhorn, and it has the advantage of being at once safe, easy, and interesting.

Before proceeding to relate my experiences in crossing the range at this part it should be mentioned that passages to the

* *Alpine Journal*, vol. xv. p. 458.



VIEW OF THE WINTERBERG RANGE
FROM THE KEHLEN GLACIER.



Frank Garc. photo.

Swan Electric Engraving Co.

SUMMIT OF THE UNTERE GLETSCHJOCH
LOOKING WEST.

Tiefengletscher have been made by parties at several places to the W. of the Gletschhorn.* These, which may collectively be termed variations of the Obere Gletschjoch, lead to the upper part of the Tiefengletscher, and must not be confounded with the pass about to be described.

The first to record † an ascent of the ridge connecting the Winterstock with the Gletschhorn was Herr Carl Seelig, who in an exciting expedition with Herren A. Näf and E. Huber on June 2, 1888, reached it from the Göschenenthal apparently by ascending the N.E. arête of the Winterstock and traversing the very steep snow slope immediately below the pass. Their attempt to descend to the Tiefengletscher was foiled by their coming upon an impassable precipice, which necessitated their return to the Göschenenthal by the way they had come.

In the summer of 1891 Mr. Frank Gare and I started from the Tiefengletscher Inn, on the Furka road, to see if we could not circumvent the precipice which had stopped the Swiss party, and discover a practicable route to the pass on the S. side. We succeeded in reaching the ridge, at the lowest part, without any difficulty to speak of, in 4 hrs. Our route, after reaching the Tiefengletscher, lay along the slopes of the Winterstock, above the glacier, to a bay of steep snow, which lies at the foot of the precipitous rocks below the summits of the Winterstock. The bay of snow was then crossed to its N.W. angle, where are situated some smooth granite slabs, a few hundred feet below the pass. By a rather tortuous way over these slabs, which occupied but a few minutes, we landed on the easy sloping shelf beyond. This shelf, the lower part of which is stony, the upper snow-covered, leads up to a spot on a rocky edge overlooking a long and somewhat steep gully, which starts from the pass and descends in a slanting direction to the Tiefen glacier. The climb over this edge into the gully and the subsequent ascent of some 300 ft. of rock couloir, which brought us to the crest of the ridge, though the most difficult part of the route, were operations free from anything like real difficulty or danger.

It was not our plan on this occasion to cross the pass, but on a subsequent date we made our way to the Göschener Alp, *via* the Alpligenlücke, and on August 20, 1891, we started, after a fall of snow, to traverse it in the reverse direction.

* *Alpine Journal*, vol. i. p. 435, vol. ii. p. 92, vol. xvii. p. 442.

† *S.A.-C. Jahrbuch*, vol. xxiv. 1898-9, and *Alpine Journal*, vol. xv. p. 89.

We followed what seemed to us the best route, which I believe to be substantially the same as that taken by Herr Seelig's party above referred to. We, however, avoided the steep snow slope below the pass, which caused them so much anxiety, and followed the N.E. arête of the Winterstock to a point above the lowest part of the ridge, finally traversing less steep snow to the ridge and descending the latter to the pass. The route throughout was safe enough, but the latter part of the ascent was certainly very steep and laborious. What with the exhausting character of the rocks, the powdery snow, and heavy sacks we were no less than $7\frac{1}{4}$ hrs. in reaching the pass, or 6 hrs. without halts. On the S. side we were not troubled with fresh snow or cold, and being familiar with every inch of the way, the descent to the Tiefengletscher Inn took us but $2\frac{1}{2}$ hrs.

In the summer of 1903 I again crossed the pass in the same direction, this time in company with Messrs. Walter Larden, Frank Gare, and H. W. Walker. I will not record our experiences further than to say that, taking much the same route as before, we did not find, as I had hoped, with the mountain in better condition, the climb to the ridge any less laborious than on the previous occasion. To avoid getting on to snow, which was hard and icy, we had to ascend the steep rocky slope on the E. of the snow that lies on the N. side of the col to a still greater height than before in order to reach the ridge, and the descent of the latter, now a series of small gendarmes, to the col was also a tedious affair, owing to the considerable subsidence of the snow, along which it was now impossible to walk. The time we took to reach the col from the hotel was 6 hrs. 40 min., of which about 40 min. is accounted for by halts. In our descent to the Furka road we were also unfortunate in not accomplishing the journey in reasonable time. Arrived at the tract of smooth granite slabs (see above) we were unable to discover, at or near the spot we had previously passed, a way to reach the snow beyond, owing to the level having sunk many feet since our last visit. As we were perched on a rocky bluff (which may be seen in the illustration) a good deal of time was consumed in discussing the several projects which commended themselves to the members of the party for getting out of our predicament before we finally agreed to try a long, precipitous couloir advocated by our principal cragsman, Walker. This lay towards the end of the bluff of rock on which we stood and led to the snow some 150 to 200 ft. below. The time and labour spent over this couloir and the arduous nature of the ascent

on the N. side, thwarted for the time my project of demonstrating that the Untere Gletschjoch was a useful, as distinguished from a sporting, pass for tourists bound for the Furka from the Göschener Alp, or *vice versa*.

Last summer, as a result of further examination of both the N. and S. approaches to this pass, considerable improvements in the route were disclosed. On July 23, 1904, Messrs. Gare, Todhunter, and I set out from the Göschener Alp to ascertain if the pass could not be more conveniently gained by traversing the rocks below the steep snow (or, as we then found it, ice sheet), and by climbing the rocks to the W. of this slope instead of those to its E., as on previous occasions. The rocks proved easy throughout, and at no part of the ascent was the rope needed. The time we took to strike the ridge (close to the col) was a little less than 5 hrs.' actual going. This 'time' includes fully $\frac{1}{2}$ hr. consumed in a *détour* at the outset to the bridge over the river on the plateau of the Göschener Alp, owing to that over the Damma torrent, near the hotel, having been destroyed. Without this *détour* it is safe to say that the col may be comfortably reached from the hotel in a short $4\frac{1}{2}$ hrs., excluding halts.

On the S. side of the pass, to which I made my way from the Tiefengletscher Inn some days later, I practically rediscovered the way over the smooth granite slabs between the bay of snow and the perched stone and snow-slope that Gare and I had originally found, and which we failed to find in 1903, owing to its altered appearance and to our not heeding Larden's advice to investigate the slabs at a higher level. As this point forms the key, so to speak, by which the pass may be easily reached from the S. it is worth while to indicate the route at this place in some little detail. To strike the way from above from the stone-strewn shelf it is necessary to climb a little distance up the rocks to the left (*i.e.* towards the Winterstock), and then to descend the short chimney which is continued by a long inclined crack with hardly any handhold, where, however, the latter is scarcely needed. The crack leads to slabs of rock offering no difficulty, and from these the snow at the extreme N.W. part of the bay of steep névé is readily reached. The passage from the perched shelf to the snow beneath may, by this way, be accomplished in 5 or 6 min., and it needs but a little ordinary care.

To summarise, it may be stated that this pass forms a thoroughly interesting direct route, scarce needing the use of the rope at any point, from the Göschener Alp to the Furka, and the passage may be accomplished in 8 to 9 hrs., exclusive

of halts, under normal conditions. For the information of future travellers it may be remarked that the Federal map shows the detail of the route in a very imperfect manner.

An interesting feature in the expedition is the frequent occurrence of quartz crystals along the route. In reference to crystals I may mention that on the occasion of a recent scramble in the vicinity of the S. side of the pass I lit upon an apparently unvisited mine of crystals, situated at the extreme lower end of the S.E. arête of the Gletschhorn. Here I was able in a short time to collect a pound or two of fine, well-shaped specimens, mostly of the dark variety, several of which were of two, three, or more ounces in weight. The spot is a very little distance from the shortest route across the Tiefen glacier, in proceeding from the foot of the Untere Gletschjoch to the Furka.

The Gwächtenlimmi (3,184 m.=10,447 ft.).—This is an unfrequented pass which connects Handegg, *via* the Diechthenthal, with the Triftthal. The pass has been occasionally crossed* from the Haslithal to the Trift Club hut by a circuitous route involving, first, the traversing of the main ridge to the upper part of the Sackthäli glacier, and the subsequent crossing of a gap in the rock rib connecting the Triftstöckli with the main ridge. Access is thus gained to the upper part of the Trift glacier. So far as I am aware there is no record of a passage having been effected down the Sackthäli glacier direct to the Windegg Club hut, the more natural starting point for the pass on the E. side. In 1865† Herren G. Studer and Albert Hoffmann-Burckhardt traversed the pass from Handegg and descended the Sackthäli glacier on its right, *i.e.* E., side, with the intention of crossing the Trift glacier above the great icefall to the Trift Club hut. This latter was found to be impracticable, and the party, after spending the night in the open, retraced their steps next morning to the gap above referred to, and thus reached the upper part of the Trift glacier.

In order to ascertain if there were any special difficulties in reaching the Gwächtenlimmi from the Windegg hut Gare, Todhunter and I set out on July 27 last to prospect the country. We followed the Trift glacier to a little beyond the point where the Tellenbach descends to the glacier from the Furtwang glen, and then struck up easy turf and rock slopes to our right. These led us to a ridge close to and W. of point 2,617 m. on the Federal map. A little below the crest

* *S.A.-C. Jahrbuch*, vols. iii. and v.

† *Ibid.* vol. iii.

lay a considerable plateau of open glacier (the Sackthäli glacier), fed by the extensive snows of the Steinhaushorn and the Gwächtenhorn. On the further side of this plateau, the S. arm of the glacier rises steeply to some formidable crevasses which stretch from side to side. The E. side of the glacier, *i.e.* that bounded by the Triftstöckli, appeared the most promising direction, and it was accordingly approached and ascended to an impassable crevasse. The rocks bounding the glacier at this point were, however, readily gained, and by their means the glacier was again attained above the crevasses. Hence to the col there appeared no serious obstacle.

Two days later we crossed the Gwächtenlimmi to Handegg by the route just indicated. The 'times' taken to reach the pass, exclusive of halts, were as follows:—Windegg hut to the Tellenbach, 35 min.; hence to the crest of rocks, 1 hr. 30 min.; from this point to the rocks above the crevasse, 1 hr. 25 min.; and finally to the col, 1 hr. 20 min., thus making a total of just under 5 hrs. The two last 'times' were slow going, the former owing to steps having to be cut most of the way up the steep incline of hard snow, the latter on account of the heat of the day and the tedious nature of the final snow slopes.

The view from this part of the chain of summits overlooking the Haslithal is very striking and extensive. The Finsteraarhorn appears to singular advantage, whilst nearer at hand the points of the Thierberge are an effective feature. On the side of the Haslithal the descent is very abrupt, but there are two or three feasible couloirs leading down to stony slopes and to the névé of the Diechter glacier. The broad and not very steep couloir, lined with clean granite rocks, that we selected (a few hundred feet S. of the Gwächtenhorn), gave us no particular trouble, and it is doubtless the one utilised by some previous parties. The Diechterthal is an exceptionally wild and desolate valley, possessing a number of somewhat unusual features. The sharp rocky points which line the valley on the W. rise at a very steep angle from the stream and give the appearance of a series of huge monoliths a thousand feet and over in height. Cliff-climbers in search of maiden summits will, without doubt, find several here of an exciting nature, though some of them have been scaled.* Of animal life we saw none besides chamois and a few sheep until we reached the Gelmer Alp. There is scarcely a vestige

* *S.A.-C. Jahrbuch*, vol. xxxviii. pp. 83 ff.

of a track until the lower of the two principal falls of the Diechterbach is reached; and where these falls occur the way is rather difficult to find in descending, especially at the upper one. Here we found it necessary, in order to descend to the plateau below, to traverse the E. slope at a considerable height above the stream, which flows over the abyss from a wide expanse of smooth rock surface in an unbroken sheet of clear water. Before finally emerging on to the Gelmer Alp it is necessary to pass through a tract of literally gigantic boulders. The traveller here proceeds in faith, for he can often see nothing around but the surfaces of huge rocks towering up beside him as he follows as best he can the faint track which leads him first in this direction, then in another, until at length more usual conditions again prevail.

To the wild and desolate scenes of the Diechterthal the Gelmer Alp and See appear in striking and lovely contrast. To me the spot is one of great charm and interest. It presents a scene of peculiar peace and isolation from the world of tourists, and although the lake and surrounding prospect cannot be compared with the beauty of the Oeschinen See or the Engstlen See it still possesses a multiplicity of savage rocks, snows, and unfrequented routes in its vicinity, which are attractive to some natures.

In descending to Handegg from the lake it is now necessary to avoid the direct way known as the Katzenweg, as the bridge over the Aar, which formerly existed near the hotel, was destroyed when the Grimsel post road was constructed a few years ago. We were caused much inconvenience and delay, at the end of a pretty long day, through not being aware of this fact. The proper way lies on the S. side of the Gelmer torrent.

THE VATNA JÖKULL TRAVERSED FROM N.E. TO S.W.

By J. H. WIGNER.

(Read before the Alpine Club, April 4, 1905.)

NO claim of originality can be advanced for the idea of the journey which my friend Mr. T. S. Muir and myself made in Iceland last summer. As far back as 1875 there occurs in this 'Journal' an article by Mr. Bryce upon the mountains of Iceland, and in it a sentence inferring that the party which in that year made the first crossing of the Vatna Jökull had originally contemplated making the much longer

traverse from N.E. to S.W., and the writer of the article expresses a doubt as to the feasibility of the project.

Mr. Watts, very probably at the suggestion of the Icelanders, who have no great enthusiasm for their glaciers, apparently saw occasion to modify his scheme, but it is certainly curious that a period of thirty years should elapse before any serious attempt was made to carry out such an obvious suggestion.

As the ideas of most people, including mountaineers, upon the geography of Iceland appear to be extremely hazy I will take leave to describe shortly the scene of our toils during last summer's vacation. The Vatna Jökull is a huge plateau in the S.E. of Iceland, covered with glacier or névé from a height of some 2,000 ft. upwards, and in places draining down through breaches many miles wide in enormous glaciers which in some cases reach to sea-level. To névé and glaciers alike the common term Jökull is applied. The snow and ice cover an area of approximately 4,000 square miles, the size of a large English county, or rather more than one-tenth of the total area of Iceland, which is a little larger than Ireland. Its greatest length from E. to W. is some 90 miles, and greatest breadth from N. to S. about 45; in shape the Jökull is an irregular oval. It is shown on the map as almost a total blank, and the few points that are marked on its interior would have been better omitted. No indication whatever is given as to the position and height of the watershed, nor any contour lines even of the marginal glaciers.

Before our visit last summer the greater part of the Jökull was absolutely unexplored, and was, I suppose, one of the largest remaining unknown tracts in Europe. It had once been crossed from S. to N. (in the direction of its breadth) near the western extremity by Mr. Watts and a party of Icelanders in 1875. Mr. Watts described his journey in a small book—'Across the Vatna Jökull'—published in 1876, but was unfortunately not very precise in matters of detail, so that we were unable to derive any appreciable amount of guidance from his experiences. Other travellers—Dr. Thordsson, Captain Bruun, and the officers of the Danish survey—have explored the margin at various points, and made short expeditions on to the ice-field, but I believe no serious attempt to cross it had been made since Watts's journey.

Muir and myself had long considered the project of this journey, but found ourselves last summer for the first time in a position to undertake it. The idea did not appeal to any other of our mountaineering friends, or rather only to one,

whom a hard fate prevented from joining us; so after carefully considering the whole question, and discussing all obvious eventualities, we came to the conclusion that we could provide sufficiently against all probable risk and undertake the expedition by ourselves, without either amateur or professional assistance. We decided to take provisions for four weeks, and the collection and preparation of food, camp equipment, sledges, and so on, kept us busy for the couple of months before the sailing of our steamer from Leith on July 29. We landed at Fáskrudsfjord, on the east coast of Iceland, on August 1, and immediately hired horses, and a guide, who undertook to convey us to the edge of the Jökull. Of our monotonous and wearisome ride thither little need be said; and we were glad enough when at 6 p.m. on August 6 we arrived, after covering 100 miles of very rough country, within a couple of hundred yards of the ice-field.

The mist which had obscured our view during the early part of the day had lifted, giving way to a bitterly cold wind, which impressed upon us the desirability of getting whatever shelter we might for our camp. We were fairly fortunate in finding a huge boulder singularly like the Blauer Stein at Mattmark, close to a stream, and decided here to send back the guide and horses, and to start on our own account. With as little delay as possible we paid and sent off our guide, levelled a place for the tent on what was at the time the lee side of the boulder, cooked and ate an excellent dinner, and turned in. The air off the glacier was bitterly cold, and we spent a decidedly chilly night—the first of many.

The next morning's business was a very heavy one, and consisted in unpacking the whole of our belongings, apportioning the provisions into four equal weekly allowances (each of which, as a matter of fact, lasted about 8 days), and getting our loads as far as possible ship-shape for transport on the sledges. Having done this there was still much more to do. The position of the camp was fixed as well as possible by compass and sextant observations, and then Muir and I shouldered our ski and walked some 200 or 300 yards to a snow patch which led on to the glacier. I had had constructed a small odometer, of the design of which I was not a little proud, and our original intention was to affix this not to the sledge, but to one of the ski. This was soon done, and several trial runs made over a carefully measured length of snow to determine its error. As a matter of fact it did not work well on the ski, as we found out during the course of the afternoon, owing to the fact that the springiness of the



NEAR THE START.



J. H. Wigner, photo.

Swan Electric Engraving Co.

NEAR THE SUMMIT OF HÁGÖNGUR.

wood frequently allowed the spikes to come clear of the snow where there were any inequalities. I kept it on, however, for the present, and we next made a move to explore the first part of the ice-field in the direction of our march. We struck in a S.W. direction up slopes which were at first fairly steep, not perhaps from a mountaineer's but from the sledge-hauler's point of view, but gradually eased off, so that in a mile and a half we could get a view of a considerable stretch of the ice-field in front of us. The afternoon was warm and bright, but the surface over which we travelled most detestable. The surface snow had nearly but not quite melted away, and every few hundred yards we came across a veritable torrent. The streams were some 3 to 6 ft. wide, and often a yard or more deep. Owing to the almost complete absence of crevasses, and consequently of *moulins*, in this part of the glacier, the greater part of the melted snow and ice flows over the surface to the margin, making the so-called 'dry glacier' even wetter than most. We remained some little time at the top of our slope, and tried to imagine we were basking in the sun, then returned fairly quickly to camp.

On Monday, August 8, all was ready for our actual start on to the ice-field. We transported in three journeys such of our belongings as we did not want for the next night, lashed them well on to the big sledge, and started hauling over very slushy soft snow early in the afternoon. It was all we could manage with our united forces to move the sledge at all, but we hoped where the slopes eased off after a mile or two to be able to get on better. The labour of hauling was still further aggravated by the trouble we had in crossing the glacier streams, into which the sledges tended to upset upon the least provocation. In three hours or so we had towed our sledge a little over a mile, but had got over the steepest part, and we returned on ski for our last night in the low camp.

By 11 the next morning we had struck camp, transported the rest of our belongings on to the little sledge, and got under way on the same course as yesterday. The small sledge, we were pleased to find, towed vastly more easily than the other, and it took us only an hour to gain the point we had reached the night before. Here we readjusted loads, tightened up the little sledge, which was somewhat cranky, affixed the odometer to it securely, and started off with it again about 3.30. We towed on about another mile, soon on much more level ground, where we found many harmless crevasses, and in another hour, still keeping to our original course, we came once more to

dry land at the edge of the Jökull—a level plateau, with a fine surface of small stones, which appeared to be an ideal camping-place. Here we put up our tent, and from barometer readings found we had risen some 400 ft. from camp 1. After dinner we went back for the big sledge, and with great labour hauled it up to the camp, where we arrived once more at 9.45.

The result of our first day's progress, or want of progress, set us seriously to discuss the problem of our getting further. With snow and sledges in their present condition we could not reckon on covering upwards of two miles a day even with intolerable labour. We might, however, find that further on in the ice-field the snow covering was of better quality, or we might get sufficiently frosty nights to enable us, at any rate by travelling during the night-time, to reap the advantage of hard-frozen snow. We rose about 2 a.m., and again an hour or two later, but each time found the sky overcast and the temperature a little above freezing point, and consequently decided for the present to remain where we were. If within a few days the snow and weather conditions improved sufficiently we might be able to move on at fair speed; failing that the only course seemed to be to move on with only one sledge and about half our load. In this way, with only our camp equipment and about one week's provisions, we ought to be able to cover 7 to 10 miles a day, and given good weather we could thus cross to the neighbourhood of the Öräfa Jökull, some 50 or 60 miles off, whence we knew a descent could be made to civilised parts. Meanwhile if we were to pursue this course we might just as well remain in the comparative comfort of our present camp, eat up a portion of our provisions, and examine the unexplored parts of the ice-field in our neighbourhood, in particular the little peaks of the Eyjabakka Jökull, which were not even indicated on the map.

As a matter of fact we remained four days at camp 2, and spent the time fairly profitably. We set out a base line with what accuracy we could by means of the odometer, and laid down the position of several points of the Eyjabakka; made what was presumably the first ascent of one of these peaklets, on ski, and fixed its position by the aid of several easily recognisable mountains, and from it also obtained our first satisfactory view over the main mass of the Jökull, which stretched away to an apparently infinite distance with appalling monotony in the direction of our march. Monotonous though it was the view was most extraordinarily impressive, and had an indefinable beauty of its own, and has

probably left a more permanent impression on our memories than any purely pretty landscape could.

On the evening of August 12 the weather conditions changed for the better. By 6 o'clock it was freezing hard, and we made a hasty dinner and decided to try our luck with the big sledge, push on as far as we could for two or three hours, and return to sleep our last night in camp 2, which we could then remove on the little sledge on the morrow. We started away about 8 o'clock, and carried out the first part of the programme. The sledge certainly hauled much more easily than before, in spite of the fact that we once more had a steepish slope to surmount, but progress was still disappointingly slow. The labour was so heavy that even the two of us could not haul it for more than one or two hundred yards at a time without requiring a halt, and our rate of progress that evening was not much over one mile per hour. But even at this rate we reckoned that our journey would still be possible even if the prospect were not pleasing, and we returned in good spirits to our camp to spend our last night on dry land for some time to come.

Striking camp and lashing all one's belongings securely on to a sledge is a very different matter from starting off for a climb from a Club hut. Although we were up by five it was half-past eight before we started. All went well at first, but the snow soon got horribly soft, and by the time we had reached the big sledge again the going was decidedly bad. We left the big one where it was, went on about half a mile further, and then had perforce to stop about midday and camp again on the snow. In the evening we repeated our former tactics as soon as it came on to freeze once more by taking the big sledge on a couple of miles beyond our camp, and then came back in a drizzle of rain. So far we had had dry and pretty clear weather, but the next day's proceedings were varied by the presence of a dense fog. We got up at 3 and away by 5.30, and for the first couple of miles had our previous night's tracks to guide us. After this we had a new experience in steering by compass over the perfectly uniform snow-field. By stopping every hundred yards or so to look at the compass, and keeping our eyes fixed on intermediate little patches of light and shade on the snow, we found it possible to keep a pretty straight course; to observe the compass when we were actually moving was impossible. All through this forenoon the fog continued, changing gradually to a wet mist and snow, and the hauling was fearfully heavy. We found it impossible to move more than a single sledge at a time, and

thus all the distance had to be covered three times. After 6 hours of exhausting labour we stopped and pitched our tent, having come 4 miles from the last camp.

In this camp we were destined to remain 48 hours, for the weather got much worse, and developed that night into a blizzard, so that we were pretty completely snowed up. We could tolerate a single day's idleness in the tent, and with cooking, diary-writing, and picquet the time passed well enough, but we were glad when, about 10 a.m. on August 16, the storm showed signs of abating. By midday it was quite fine, and we decided to start off at once and see how the sledges would travel on the fine, powdery new snow. To our surprise and delight we found the going vastly improved, and we could tow a sledge apiece. Under these conditions we found we got on still better when wearing ski. By 6 o'clock it was freezing again, and the snow got better and better, so that the sledges came running after us with only the least pull on the tow-ropes. We had opportunity for once to look about us and enjoy the landscape. Straight ahead of us on the course we were steering, due S.W., came into view a group of rounded snow mountains, apparently some 30 miles away. On the N.W. was the fine mountain mass of Kverkfjöll, well worth a visit from any mountaineer who may happen to be in the neighbourhood, while away to the left-hand the surface of the Jökull broke away precipitously towards the S.E. coast of Iceland. Unfortunately Muir was very unwell, so that we were unable to take advantage of the good conditions and travel on through the night, as we had hoped.

During the next two days we still experienced some advantage from the new snow, and had covered altogether by Thursday night nearly 20 miles from our 'blizzard' camp. We had again encountered a good deal of fog, but in spite of that had kept a good course, and by this time had come within view of the fine mountains which form the southern extremity of the Vatna Jökull. One very handsome rock and snow peak, Thverártindsegg (1,552 m.), particularly excited our admiration, and later, as the mists cleared, a magnificent view of the Öræfa Jökull developed to the S. The face opposite to us, streaming with hanging glaciers, presented in some respects a remarkable resemblance to the Grand Combin. Its highest summit, the Hvannadalshnúkur, 2,021 m., is the highest measured point in Iceland, and as the mountain rises directly from sea-level, these 7,000 ft. of snow and ice make a very brave show. Between the Öræfa and Thverártindsegg is a breach in the edge of the snow-field, out of which flows

the immense Breithamerkr Jökull, and our next morning's march, a short one of 4 miles, for the snow was bad, took us across the upper part of this, in a direction now somewhat more westerly than before, as we had got close to the small snow mountains we had seen some days back and had to circumvent them somewhat to the W. We camped on this occasion at the early hour of 10.20 A.M., in a position specially selected for its magnificent view of Thverártindsegg. Towards 5 o'clock it began to freeze pretty hard and we decided to make another attempt at a night march, so dined quickly and got under way about 8. Once more we had steepish slopes to encounter and the snow was not so good as we had thought, and indeed got steadily worse. The monotony of the hard labour was relieved about 10 P.M. by our coming for once in a way across some very large crevasses, and in the darkness we had some difficulty in striking off a good route through them. After this came again steeper slopes, worse snow, and for me a very bad attack of neuralgia, a complaint from which both of us suffered greatly nearly all the time we were on the snow. By midnight we had come over 3 miles of very bad ground and were fairly exhausted, and after the additional discomfort of unpacking and putting up the hard frozen tent were ready for a good night's rest.

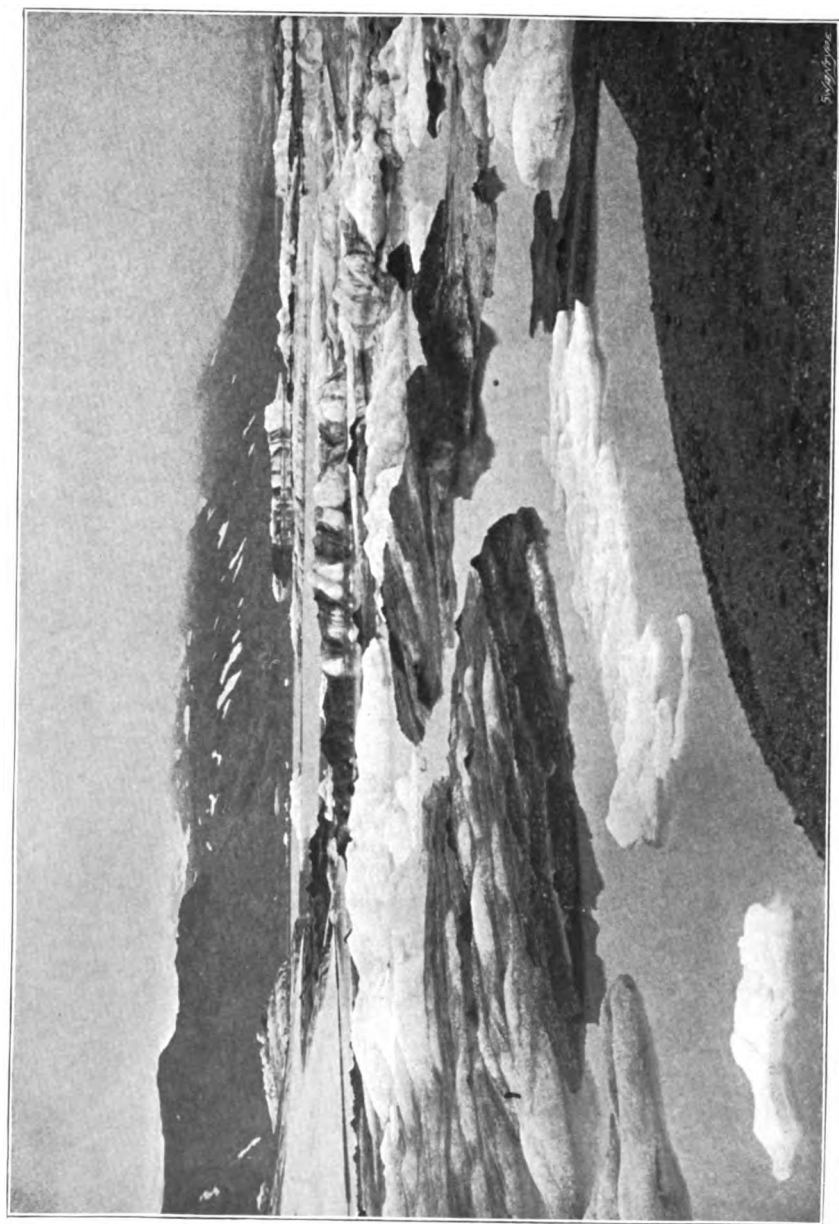
Saturday, August 20, was another fine day, and we decided to spend it by going up a conspicuous little rock peak some 2 to 3 miles from our camp. This peak, we were told by officers of the Danish survey, was Esjufjöll, but its position by no means corresponds to that given on the map. We ascended by snow on our ski as far as possible, passing the end of a magnificent bergschrund and then up easy rocks to the top. Luckily we had perfect weather and several hours to spare, and quite apart from the splendid view were glad to stay there and rest on dry ground, the first we had touched for 8 days. The view of the Örefa Jökull and of the other southern mountains was superb, and right at our feet lay the magnificent Breithamerkr Jökull, vastly wider than the Aletsch and stretching further than we could descry towards the sea. It is decorated by a very fine double medial moraine, part of which had been contributed by the rocks at the S. base of our peaklet.

After this pleasing interruption to the monotony of the tour we went on again as before. We experienced another blizzard on the night of Sunday, August 21, which once again gave us for a time good conditions of snow, all the more acceptable as the slopes were at times pretty steep. On the following

day we reached the watershed, which we crossed at a height of some 5,000 ft. As far as we could judge the backbone of the Vatna Jökull runs fairly well N. and S. between the great mass of Öräfa Jökull on the S. and Kverkfjöll on the N. From the summit rise we could see almost the whole of the south-western portion of the Jökull. To the right (N.) of us the slopes rose still higher, and another ridge appeared to join the N. and S. one, running almost due W. and rising in at least two well-defined summits, one of which, Hágöngur, was directly in our line of march. It looked about seven miles away, and we decided to go to its foot with the sledges and ascend it, hoping, as the snow was so good, to be able to reach the foot the same evening. As a matter of fact our judgment was wildly incorrect, the actual distance being about thirty miles, and it was not until a week later that I actually stood upon the summit.

Our journey from here onwards was on the whole uneventful, but somewhat more interesting, as we had clear weather and very fine views of the Öräfa, and later of the coast. Tuesday, August 23, was a red-letter day, for two reasons. First of all we covered 10 miles, nearly but not quite our record, and secondly we encamped about midday in a crevassed region where there was actually bare ice and standing water. So far we had been compelled to melt snow for our requirements, and, as our spirit supply was limited, we could have water only for drinking and cooking purposes, but on this occasion there was enough and to spare, and we had the unusual luxury of a wash, the first for 11 days. During this time the only attempt at ablutions had been made by wiping over our hands with a wad of cotton wool moistened with alcohol.

Thanks to the presence of two or three conspicuous landmarks on this part of the journey we were able to triangulate our position with considerable accuracy, and when we encamped on Wednesday, the 25th, about a couple of miles from an intrusion of rocks and moraine, we felt convinced that on the other side of them must lie the little lake known as Grimsvötn or Grænalón, which had been visited by some of the natives and which we were anxious to see, as it is shown on the map as being entirely surrounded by glacier. The next afternoon, after a very wet morning, we sallied out in quest of our lake, and after crossing the moraine were delighted to see it lying at our feet. As far as we could judge it was about a couple of miles long and one wide, and its green waters were studded with innumerable icebergs, contributed by a portion of the



J. H. Wigner, photo.

GRIMSVÖTN.

Steam Electric Engraving Co.

main mass of the Vatna Jökull, which formed its northern margin, and an arm of the Skeitharar Jökull, which flows from the Vatna round the rocks on which we stood, and forms its southern boundary. On the other two sides, contrary to the indication on the map, was dry land.

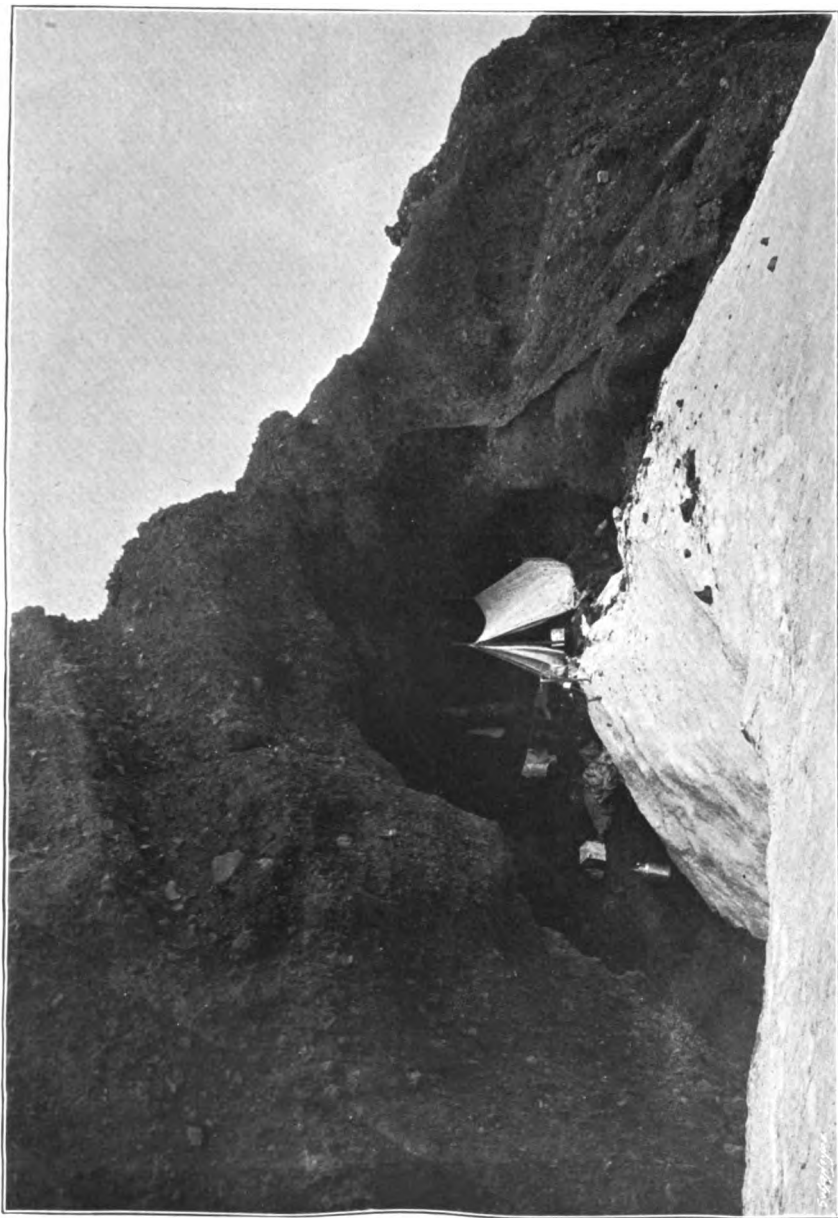
We could probably have descended from Grímsvötn direct to the sea coast, though a trip which Muir made a few days later with that object was not successful, as he was cut off between two big streams; but some other route is certainly feasible. For the present, however, there was no pressing need to do so, as we had time and a fortnight's provisions still to spare, so we decided to push on further westward. From here onwards the sledge-hauling was attended with very serious difficulties. We had experienced for many miles back a phenomenon for which I am quite unable to account, and have so far received no explanation of. This was the occurrence of large holes or pits in the snow, where we first met them quite sporadic in distribution, but gradually as we advanced westwards becoming more and more frequent until they formed a perfect network. They varied in form, but were usually a yard or two in diameter, roughly circular, and often two or three feet deep. They appeared at times to penetrate into the snowfall of two previous years, judging by the dark lines of grit which presumably indicated previous summer surfaces of the snow.* In addition to these hollows, which in themselves enormously increased our labour, we had a very bad snow surface, and had now for the first time to traverse across a slope of snow, an excessively difficult matter with sledges. In about 7 miles from our last camp we reached a very curious collection of rocks, visible from the lowlands and known to the natives as Grænafjöll. It consists of a low moraine-like wall nearly circular in form, although not quite complete, in the midst of which is a core of volcanic rock. The place had the appearance of a snowed-up crater, and we always referred to it as the crater. Here we pitched our camp once more on dry land, subsequently removing it to a magnificent cave which I discovered while Muir was making his two days' unsuccessful journey to the lowlands. When he returned we had one very fine day, which I utilised, while he was recuperating, in the ascent of

* I should be glad of any suggestions as to the origin of these hollows, the distribution of which on the Jökull was pretty sharply defined. I have recently been told that a similar occurrence has been noticed in the Antarctic by members of the Scottish expedition.

Hágöngur, the mountain we had seen from the watershed. According to the latest measurements its height is 1,960 m., or about 6,470 ft., being thus 61 m. or 200 ft. lower than the Hvannadalshnúkur, the highest measured point in Iceland. It rose to the N.W. of us in a precipitous wall of rock surmounted by a steep ice-slope. The rocks could be avoided, however, by striking the main ridge between Hágöngur and the next point to the E., and the course I took was to a col between the two. Leaving the camp on August 25 at 10.10 A.M. I walked smartly towards this col, and reached the large bergschrund 100 ft. or so below it at 11.20. The latter might probably have been crossed by a snow bridge, but being alone I preferred to spend a little time in turning it to the E., and once above it made for the summit ridge. This turned out to be heavily corniced, and forced me on to the ice-slope facing our camp, which was fairly steep compared with what we had been accustomed to, measuring 35° by the clinometer. Twenty minutes more, however, took me to the summit, a rocky ridge descending very precipitously towards the N., and quite devoid of any trace of previous visits. I believe I am quite justified in claiming it as a first ascent. I built the customary stone-man, deposited a card in it, and set myself to photograph and study the view. To the north I looked over Watts's route of 30 years before, which must have passed within a few miles of my peak, but could not identify any of his landmarks unless one of two conspicuous black peaks, probably not less than 30 miles to the N., might be that which he called the 'Housie.' As for his 'Mount Paul' I have not the faintest conception where or what it may be.

Hágöngur possesses a lower summit, to which I proceeded without difficulty along the ridge, descending only when the weather began to turn bad by another route down the face, ending in a snow gully, down which I had a magnificent glissade. I was back in camp in time for afternoon tea, and found Muir regretting not having accompanied me.

In the 'crater camp' we had perforce to remain a week, as hopelessly bad weather now set in. On Friday, September 2, however, the weather improved again, and we set out for the remainder of our journey. After an exceedingly arduous day of fourteen hours' work, five of which were spent among difficult crevasses, followed by an easy half-day, we came off the edge of the ice at a point $64^\circ 7' N. 17^\circ 35' W.$ at the S.W. of the Vatna, at that part known as the Skaptar Jökull, and, as we subsequently learned, very near to the point where Watts



J. H. Wigner, photo.

THE CAMP AT GRÆNAFJÖLL.

Swan Electric Engraving Co.

had commenced his sledge journey. We had hoped to make a couple of days' journey on ski to the extreme west of the ice-field, from which unfortunately we could not descend directly to inhabited parts, and back again, but scarcity of provisions and lack of time put this project out of the question, and we were fairly satisfied with what we had done. We had travelled along a line some 80 miles long, and with side excursions and so on had altogether covered some 150 miles on the Jökull in 26 days, our longest day's journey with the sledges being $11\frac{1}{4}$ miles.

From the last camp we made a short excursion to a little volcano in the neighbourhood, and then leaving the camp standing had a very unpleasant tramp to the nearest farm, some 12 miles away, where we hired horses, fetched down our baggage, and transferred it and ourselves to Reykjavik by the south coast route.

The description of our journey is, I imagine, not of a nature to incite any mountaineer or traveller to go to the Vatna Jökull in quest of pleasure, but for the information of any who may for one reason or another contemplate a trip of this sort I offer certain suggestions as to outfit and equipment which we have gained from our experience. With regard to food, we took a mixed dietary, which we found highly satisfactory, consisting mainly of ship's biscuit, hung beef, a little tinned meat, sugar, butter, jam, dried fruit, cheese, chocolate, soup, and plasmon. Of these we consumed about 3 lbs. per head per diem, and found this amount ample. Our tent was a light affair with a waterproof cover, weighing altogether some 7 lbs. and sewn all in one piece with the floor, an arrangement for which we were often exceedingly thankful. On the floor of the tent we spread an additional sheet of Willesden green and odds and ends of sack-ing, but we were never able to keep off the chill of the snow when sleeping. Our sleeping-bags of Jaeger blanket weighed 6-7 lbs. each and were good in their way, but hopelessly inadequate. We covered them with jaconette, stuffed inside them all the odds and ends of clothing we could lay our hands on, and slept in all our clothes, even including puttees, but scarcely ever knew what it was to be even passably warm at night. For another trip of the sort eiderdown or fur bags should certainly be taken. The most unsuitable articles of our outfit were unquestionably the sledges, although a little alteration would have made each of them perfect. For such snow as we had to traverse a metal sole to the flat wooden runners must be regarded as essential. The only sledges I have seen fitted with such a sole slide admirably upon almost any snow, but as a rule the metal

(usually German silver) is very thin and liable to tear or rip off upon the hard, jagged ice edges of a dry glacier. I should imagine a stout aluminium plate of $\frac{1}{16}$ to $\frac{1}{8}$ inch thickness, well screwed on to the wooden runners, would last admirably and prove equally efficient, while not adding vastly to the weight. With sledges such as these I am convinced we could have travelled with the same load fully 8 to 12 miles per day, and in this way one could safely undertake the journey with a very much smaller stock of provisions, and thus travel still faster; a party of two with two small sledges or one large one, and for safety a fortnight's food of the above description, could, given fair average conditions, be pretty certain of travelling a distance of, say, 90 miles along the Jökull within 7 days' actual going. As a matter of fact Muir and myself have in view a journey considerably to the north of our route of last year, in order to enable us to make observations on the Bruar Jökull, which appears to be advancing at a most abnormal rate, and to explore Kverkfjöll, which ought to be well worth a visit from a purely mountaineering point of view. After that we shall probably be content to leave further explorations of Icelandic snow-fields to other enthusiasts.

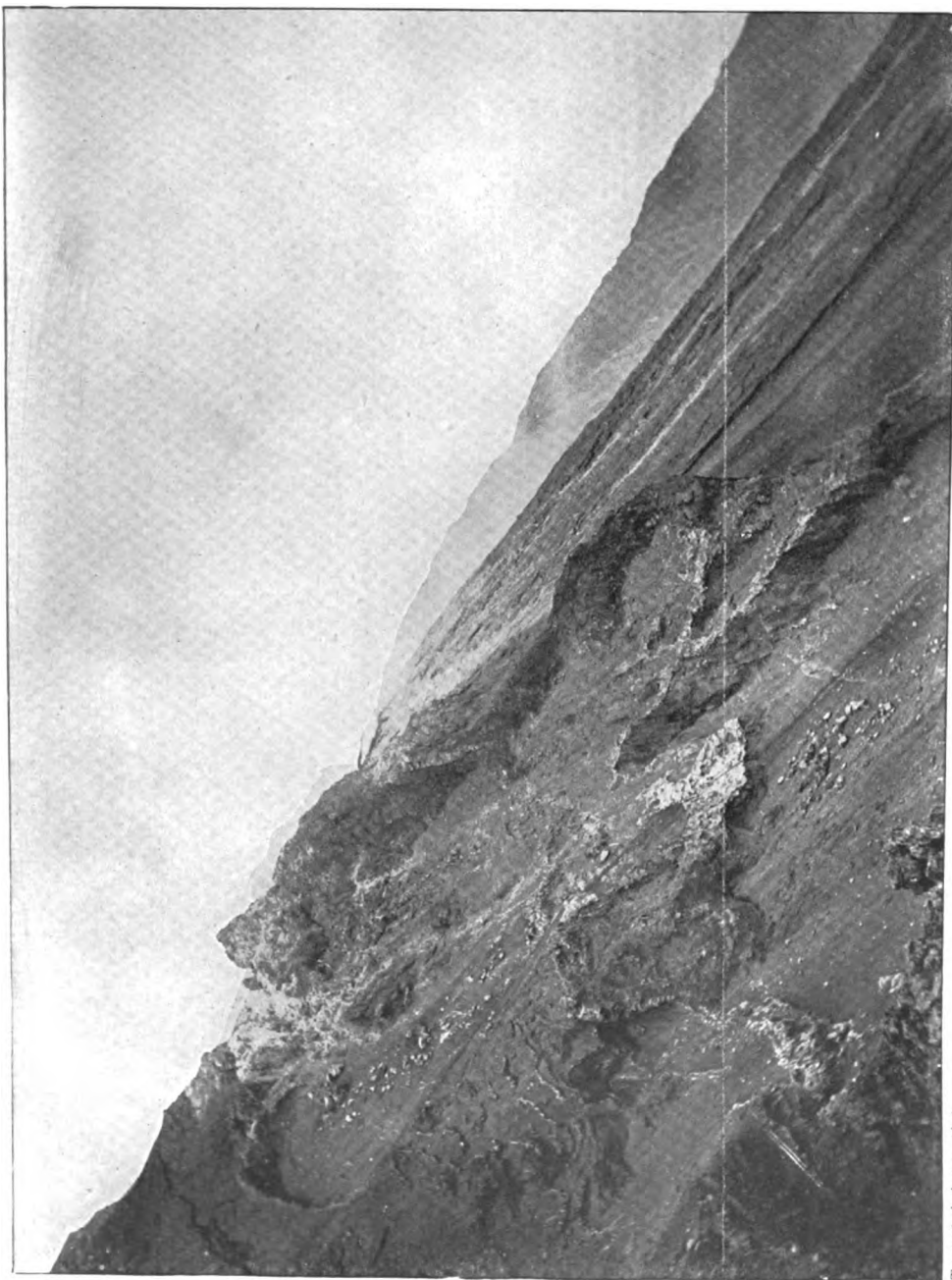
RECENT CHANGES IN THE CRATER OF STROMBOLI.

By TEMPEST ANDERSON.

(Read before the Alpine Club, February 7, 1905.)

STROMBOLI is the most easterly and northerly of the Lipari Islands. It is situated north of Sicily, close to the track of steamers plying between Naples and the Straits of Messina, and is thus an object familiar to passengers to or from Egypt or the East, though comparatively few have landed on its shores. Its almost constant eruptions have gained it the name of the lighthouse of the Mediterranean. It is almost circular, as its old name Strongyle indicates, and rises as an irregular cone out of deep water. On the N.W. side are the crater, and the Sciara or steep slope down which the ejecta roll into the sea.

The summit of the mountain, which is about 3,000 feet high, consists of a crescentic ridge, the Serra di Vancori, open towards the N. It forms part of an old crater ring, and thus presents points of similarity to Somma. Inside the crescentic ridge, and in places joined to it by irregular crests of rock, but mainly separated from it by a valley, 'A



Tempest Anderson, photo.

STROMBOLI—THE SCIARA FROM THE NORTH-EAST.

Swan Electric Engraving Co.

Fossiedda,' similar to the Atrio del Cavallo of Vesuvius, is another crescentic ridge, connected with the two extremities of which, and immediately overlooking the sides of the crater, are two conspicuous pointed rocks, the Torrelle, which partly obstruct the view of the crater when viewed from the cliffs overlooking the Sciara on its N.E. and S.W. respectively. These Torrelle, being practically unaltered by ordinary eruptions, present good points of comparison for estimating the changes that take place. Between the two Torrelle, in the midst of a sort of amphitheatre formed by them and the crescentic ridge last mentioned, are the crater and its appurtenances, the 'Apparato Eruttivo' of Italian observers. This amphitheatre is open to the N.W., and from its open side beyond the craters the steep slope of the Sciara extends down into the sea. This slope is bounded on each side by two steep cliffs, Filo di Sciara and Filo di Baraona, which are formed, like the Sciara itself, of lava-streams, agglomerates, and dykes; in fact, of almost every kind of compact volcanic material, chiefly of basic composition.

This Sciara, as is well known, is one of the most peculiar features of this volcano. It extends at an angle of about 35° , which is the 'angle of repose' for the kind of material of which it is composed, down into the deep water of the Mediterranean; and though the volcano has certainly been in almost constant eruption during the whole of the historic period, and probably much longer, it has never been able to build up a talus sufficient to rise to the level of the sea, much less to that of the lip of the crater, about which, according to the analogy of other volcanoes, it might have been expected to have built up a cone on this side comparable to the portion on the S. described above. The illustration, 'The Sciara from the N.E.', from a photograph taken by the author in 1888 from the ridge overlooking the N.E. side of the Sciara, and consequently looking S.W., shows the Sciara extending down to the right of the picture with the Filo di Baraona behind it. The pointed rock to the left of the picture is the eastern Torrella, with a gap to the left of it through which the ejecta are thrown during the larger eruptions, and roll on to the steep slopes in front and down the Sciara into the sea. The western Torrella is just visible in the distance beyond the eastern Torrella. The crater situated between the two was in 1888 a large pit obviously formed by severe explosions. It contained two small secondary cones. One, towards its western part, and close to the edge of the Sciara, was that from which the explosive

eruptions took place several times an hour; the other, towards the eastern part, emitted only smoke.

In 1904, when the author took comparison photographs from nearly the same spot, this large crater was almost entirely filled up, and the slope of the Sciara was continued upwards, so that the cone of ejecta overtopped and was visible behind the eastern Torrella. The activity in this eastern part of the crater still maintained the same quiet character as in 1888. The whole area constantly emitted vapour; there was more than one bocca visible, but they were quite small and only gave very feeble explosions, and these with a rhythm quite independent of those at the western part of the crater.

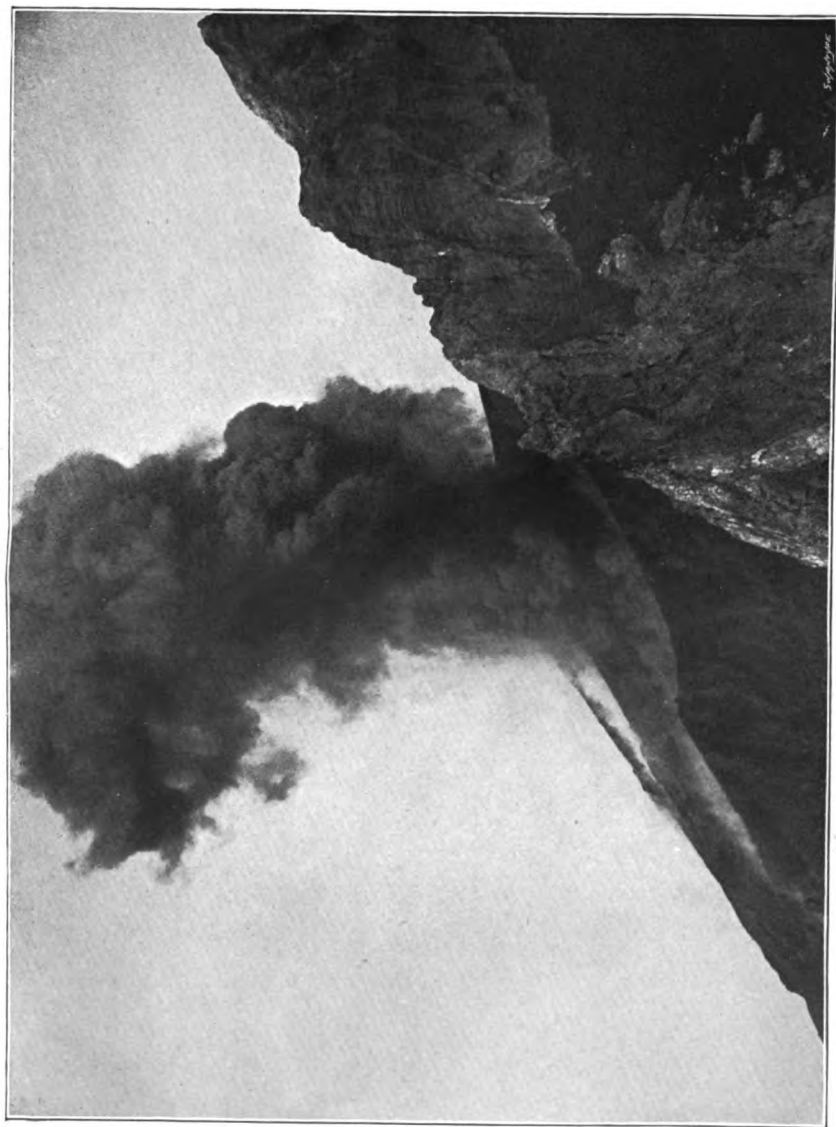
The illustration, 'Stromboli. An Explosion. Early Stage,' taken by the author on April 20, 1904, from a point to the W. of the crater, and consequently in almost exactly an opposite direction to that showing the Sciara from the N.E., shows the condition of the western part of the crater sixteen years later. The conspicuous rock to the right of the plate is the western Torrella, behind which, in 1888, was the great crater above referred to. The bocca to the left, from which the explosion is taking place, is shown in some of the earlier photographs as situated on the edge of the larger crater at its junction with the Sciara. The great crater is now seen to be filled up by ejecta which prolong the slope of the Sciara upwards over what was previously its site, while the bocca itself remains in all probability really in its former position, though apparently on the slope of the Sciara instead of on its edge.

It will be interesting to future visitors to see whether the volcano will continue to prolong the slope of the Sciara much further upwards, or whether a paroxysmal explosion will occur which will clear the great crater again.

IN THE LIPARI ISLANDS.

BY THE EDITOR.

ON April 14, 1904, Tempest Anderson and I, in company with Dr. Cool and Herr Philip, arrived at Milazzo, the ancient Mylæ, a little town at the southern end of the promontory of the same name in the N.E. of Sicily. We drove to the Albergo Genova, where we afterwards spent the night. Half a dozen street arabs pertinaciously thrust their services upon us as baggage-carriers, and amused us much at small expense. The same evening we visited the castle on the hill to the north. On the western side of the promontory, much



Tempest Anderson, photo.

Suwan Electric Engraving Co.

STROMBOLI: AN EXPLOSION.

of which was covered with olive yards, was a charming little bay; in one or two places where a gap in the cliffs was less steep a stream of olives, so to speak, flowed down to the shore. The smoke of Stromboli was visible over not quite the highest point of the olive yards. But the great feature of the view was Etna—vast, even overwhelming in size. The parasitic cones on the W., or probably S.W., ridge of it to Anderson's educated eye spoke volumes, but to me the glimpses of torrent beds and little towns perched on steep hills were more eloquent. The sunset was glorious.

The next morning on the most peaceful of seas and an ancient mail boat we crossed to Lipari. On the E. side of the Milazzo promontory the olives came down to the very edge of the shore. We noticed a line of caves just above the present water line—perhaps six feet above them—which would mean, so Anderson explained to me, that the land had risen—in the same way that at Pozzuoli the land has gone down and risen again in historic times. Etna was still the great feature of our view.

At Lipari we put up at the Hotel Traina, where Signor Traina did his best for us. The house is, like the other houses in Lipari, flat-roofed, and by climbing a ladder it was possible to reach a higher roof, from which one could see the little bay. The accommodation was, of course, somewhat primitive, but we were fairly comfortable. The same day we spent in a visit to San Calogero and its hot springs on the W. side of the island, the town of Lipari being on the E. coast.

On the way back we left the main track, and turning to the right after covering some little distance gained the lovely view of Vulcano which faces this page. In the narrowest part of the path I met a small cow in charge of a little child, who endeavoured to secure the mastery by means of a rope, but the cow acted as leading guide; the child had even less to say as to the route taken than the feeblest traveller that ever climbed the Breithorn. Whilst in search of flowers I lost the rest of our party, and returned alone through some of the deepest chasms that we came across. The soil is friable, and the rains wash it away easily, so that many of the paths are like deep ditches.

On the next day, April 16, Anderson and Herren Cool and Philip, with Francesco Conti, an English-speaking native whom we had engaged as servant, and who made himself exceedingly useful, went to Filicudi. I went with them as far as Malfa, in the island of Salina. I ought to have explained

that, thanks to the good offices of Dr. Linden of the Zoological Station at Naples, we had engaged a small steamer of about sixty tons, the property of S. Gaetano Saltalamacchia, of Lipari, so that we could go where we liked when we liked, unless Æolus had forgotten to turn the key on his riotous gang of winds, as was once or twice the case.

When we had rounded a little cape we caught sight of the small white town of Canneto, behind which is a mountain of pumice stone. This is the only place in the world, I believe, where pumice stone can be got without grit (or anything that will scratch) in it, and practically Canneto furnishes the world with pumice stone. A little further we saw the Campo Bianco and Roccie Rossi. The *Montagna delle Pauvre* in Salina then showed his fine broad wedge.

At Malfa, where the footing, though steep, was less uncertain than on the little steamer, I had the good fortune to meet with S. Joseph Bongiorno, who had lived some years in Melbourne and spoke English perfectly.

Before I met with him I had been for a delightful walk on the hill-side above Malfa, and had noticed that the children seemed better cared for and more intelligent than those of Lipari. Signor Bongiorno, who is a very keen educationist, explained to me their educational system. The children—there were then eighty-four boys and seventy-five girls under instruction—remain at school from the age of six till they get a leaving certificate. I learnt much too of the fruits and flowers of Salina; amongst the former are figs, almonds, peaches, nectarines, apricots, different sorts of apples and pears, very fine cherries, blackberries, and *nespoli*. The vines have suffered severely from phylloxera, and consequently the once flourishing trade in wine, especially *Malvasia*, has been sadly reduced. I returned to Lipari by the mail boat. In the evening our party at the Traina was increased by a professor from Belgrade and a painter from Geneva.

On the 17th the rest of the party went to Panaria, leaving me behind in Lipari. The sea was so rough that they were not able to land at the usual spot, though they managed to do so in another place with considerable difficulty. I spent the day wandering about the hills.

On the 18th we all went to Stromboli in the little steamer. We inspected Panaria and Basiluzzo at close quarters, and saw a small fleet of boats engaged in collecting sponges. Just as we got close to the shores of Stromboli a most curious gale assaulted us; it seemed to blow the fine spray over us

from all sides at the same time. I do not think it lasted more than five or ten minutes. We passed close by the Sciara and saw many big stones engaged in free gymnastics. 'They was very big large stones; they jump in water very much high.'

When we had rounded the semaphore our captain said that it was too rough to land at the usual place, and that the steamer's own boat was too small for safety in such a sea. So he proceeded to invite the natives to send out a boat to us by whistling for all the steamer was worth. By-and-by, in response to this deafening appeal, a boat came out. I found a place in the bottom of it, and, as my head was just level with the water, I was able to appreciate properly the size of the waves. The boatmen, assisted by our servant, Francesco Conti, who thoroughly understands boats himself, landed us very cleverly. They waited for a big wave and rode shorewards upon it; then the people on the beach lent a hand and we got ashore with nothing worse than a slight wetting.

Of our doings on Stromboli I need say little, as Anderson's paper is devoted to that famous volcano. We found accommodation at the house of Don Francesco Renda, to whom our best thanks are due. We made two ascents of Stromboli. On the first in splendid weather we saw everything to perfection, and the mountain was kind enough to give a special *matinée*, so to speak, for our satisfaction.

We began the ascent through vineyards where the vines were trained on low trellises and fenced with reeds to protect them from the wind-driven sand. Higher up there were some olives, which seemed to spread themselves out flatly to catch as much sun as possible and avoid the winds as well as they could. Higher still we found capers and willows growing in shifting volcanic dust; the latter provided the tying material for fastening the vines to the trellises. After passing through a paradise of *cistus* we reached in about an hour and three-quarters from the start the first of a number of big ridges of red rock (lava and tuffs, my companion said) and saw the sea off the N.E. coast of the island. We of course halted to study the Sciara. The volcano itself with its scarred rocks, black volcanic dust, exuding sulphur, and many fumaroles and periodic explosions, suggested mine and breach and the brazen throat of war; but turn your head and you have vineyards, white houses, a sapphire sea, and Strombolicchio like Neptune's trident rising from the waves. We saw a fine hawk, a barking crow, many swallows, and

several butterflies on our way up. We did not see any quails, though they are caught at this season, but this year so far only two had been netted.

Leaving the apparent top we walked down a ridge to the Ginostra side of the mountain. Thence we witnessed many terrific eruptions, huge stones visibly red hot being hurled high into the air. Many took a *salto mortale* down the Sciara and added to that huge mass which stretches for thousands of feet into the depths of the sea, so that were the waters to dry up and show Stromboli in the fulness of his stature we should gaze in wonder on a masterpiece of flamboyant architecture.*

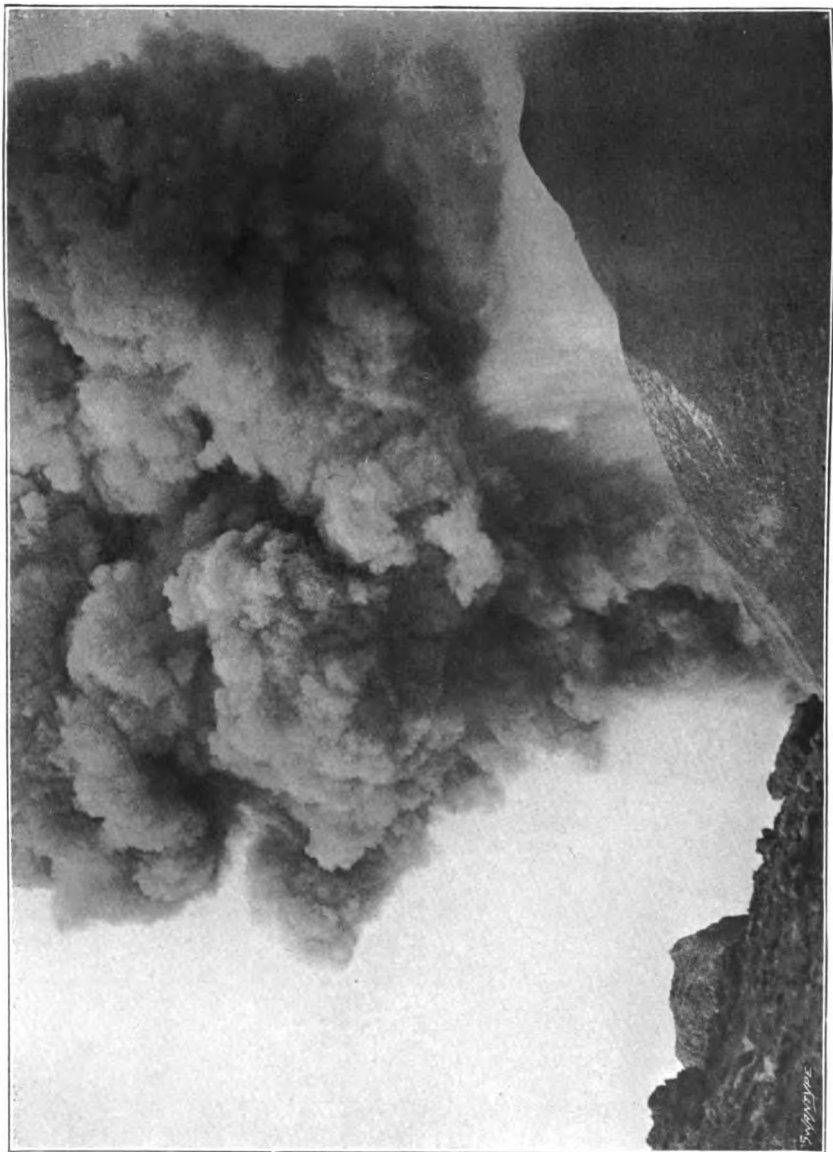
On our second ascent rain began to fall quite early in the climb, and long before we reached the top thick mist prevented us from seeing more than a few yards. Near the top the mist lifted slightly and I found some rocks near a shelter hut used by signallers, on which on a sunny day I fancy one might have scrambled about with satisfaction. The bad weather was a great disappointment, as it prevented Anderson from photographing various details of the mountain—the object of our second ascent.

But it was obviously useless to wait; the wind blew, the rain drove in our faces, the mountain seemed to swear at us. I have some recollection that the compliment was returned. In brief we departed *re infecta*.

On the 23rd we returned to Lipari by the mail boat 'Toscana,' our own little steamer having left us on the 20th with Herren Cool and Philip on board. The captain very politely, at Anderson's request, took us round the north side of the island, so that we again saw the Sciara. We landed at Canneto and had a pleasant walk to Lipari.

We spent our last day in a visit to Vulcano and Vulcanello. Conti found us a boat. With Conti and the two boatmen we made a party of five, and were attended by three dogs. The sea was calm and we had a very pleasant row. A boat from Vulcano passed us, laden with dried broom for the ovens of Lipari. The shore scenery of Lipari varied much. We passed a curious half-cleft rock, called, from its appearance, 'The Scissors.' Here there were great cliffs, here a fine cirque with vines coming down to the shore. At the Fossa del Capistello Conti landed to secure certain specimens of rock. Two fishermen's sailing boats in the distance after we had passed the end of Lipari looked exactly like a couple of sea-gulls.

* Cf. Sir Martin Conway, *The Alps*, p. 282.



Tempest Anderson, photo.

STROMBOLI: AN EXPLOSION. ADVANCED STAGE.

Swan Electric Engraving Co.

The colouring of Vulcanello was a striking red, as if the mountain were still red hot. We turned into the Porto di Levante and landed near the Faraglione not far from the house at which our friend S. Narlian so hospitably entertained Anderson on his previous visit to Vulcano in 1888. The mountain Vulcano looked an absolute desolation—furrowed, scarred, ruined. Five or six fumaroles, one larger than the rest, were smoking. At the foot of the mountain was a great thicket of broom, richly coloured and richly scented. When walking through it, if you shut your eyes, you might have imagined yourself in an English clover field in full bloom, so similar was the fragrance. The path mounted rapidly; in parts it seemed to be cut in almost solid sulphur. The crater of Vulcano I can only compare to a deep dried-up brick pond. But it was very interesting, especially as Anderson replied at once to all my questions as to fumaroles, bombs, and the other details of a volcano's outfit.

After visiting the highest point of the mountain Anderson and Conti returned the same way, with a view to further examination of certain fumaroles, whilst I chose a direct route for myself. It was steep but much shorter, and, like most volcanic climbing, very destructive to one's boots.

We then, after a visit to the Villa Narlian, where we were very hospitably received, went on to Vulcanello, the boat having been sent round to await us. We thoroughly examined the crater and then descended to the sea; the cliff just above the water gave us a little scramble before we reached our boat. The old rocks on Vulcanello were red, the newer ones dark-coloured. Then we returned to Lipari after a most enjoyable day. It is true that there was a slight haze, but the cool air, the warm sun, the clear blue sea, the wondrous red of the volcanic rocks, and the fervid gold of the richly scented broom thickets compose a memory, now rendered all the more vivid, as I write, by the rigours of an Arctic April in England.

It will have been clear from what I have said that we found little climbing in the Liparis, but nevertheless our holiday was exceedingly pleasant. In one respect these islands recall one of the greatest delights of the Alps. They are rich in flowers. Cistuses, white and purple, brooms in several varieties, a fine orchis or two, the red gladiolus in the corn (in Lipari), *Iris Sisyrinchium*—in one place in Lipari I counted forty blossoms together—occur to me at once. *Arundo donax* (the giant reed), opuntias and yellow euphorbias (I fancy the native name is 'frasca') were almost

everywhere to be seen. My friend at Malfa spoke also of jonquils and narcissi as growing wild, and on Vulcanello there were large numbers of *pancratium*, which I take to be Tennyson's 'milky-belled amaryllis.' In the garden of the villa on Vulcano were oleanders, mignonette, rosemary, ivy-leaved pelargoniums, verbenas, heliotrope, and wistarias; nor do these exhaust the list. But for me personally the broom will always be *the* flower of the Liparis. I ought, perhaps, to mention that there was a fine date palm in Don Francesco Renda's garden, bearing fruit—and good fruit too, *experto credite*.

But I must not forget to point out the special charm of these scrambles in the Liparis. The mountains rise out of the sea, and what the green alp is to the great alpine peak the blue sea is to Stromboli and his fellows. To-day the winds are busy, the dark purple waters are rough, and the angry surges are heavily crested with foam. To-morrow the sunbeams will sleep on the waveless blue and but the slightest fringe of white be seen on the black volcanic sand of the shore. But, look what way you will, your eyes will fall upon the sea, and when memory hereafter calls up recollections of the Liparis the sea will be the setting of every picture. And such a sea! The peacock's neck—the opal, and emerald, and sapphire—the bluest of radiant flowers—the sumptuous purple of wine have all been used in comparisons to indicate its glorious colouring; yet after all the Mediterranean, like sunrise on the Alps, cannot be described in words, it must be seen to be appreciated.

And in yet one other respect the Liparis will bear comparison with—nay, exceed—the Alps—in the human interest. 'A very dull person,' as Sir Martin Conway observes* when insisting on this feature of the Alps, 'looks interesting when beheld down a vista of several centuries.' What then shall we say of the Phœnicians, Greeks, Carthaginians, not to mention Æolus, Deiopea, Calypso, whose shadowy forms haunt the Sicilian waves, the fairest part of the Mid Sea, that, as George Eliot has finely said, 'moans with memories'? I wonder, by the way, whether Juno was as good as her word and Æolus gained the promised Deiopea. If so no doubt Vulcano and Stromboli gave a special pyrotechnic display at the nuptials.

* *The Alps*, p. 257.



Tempest Anderson, photo.

VULCANO, FROM WEST COAST OF LIPARI. 1904.

Steam Electric Engraving Co.

IN MEMORIAM.

ALFRED WILLIAMS.

THERE passed away at Sainte Maxime, France, on March 19, 1905, Alfred Williams, in his 78rd year.

In him died one of the most devoted lovers of the Alps; he loved all mountains, great and small, from the rugged peaks of Skye to the snows of the Himalayas, but his devotion to the Alps amounted to a passion, which deepened as the years rolled on.

Like many of us his first experience of the hills was in the English Lake District, which he visited when quite a youth. He used to relate to the present writer how different the mountains looked from their presentment in the fashionable water colour of the period, but the infinite superiority of the facts to the fiction soon asserted itself in his mind, and he set to work to draw the fells as they appeared to him. He next visited Scotland, and stayed for some months at the farm of Letter, on the N. shore of Loch Katrine, working with his wonted energy and with an ever deepening love for Nature. But it was not till after a laborious walking tour along the Riviera in summer, terminating with a visit to the Alpine valleys, that he found his true *métier* in art, and from that date till the day of his death his allegiance never wavered. This walking tour has always struck the writer as a very remarkable display of artistic energy. He and the friend who was with him started soon after daylight and walked a number of miles, making at the same time a half imperial drawing, rested in the middle of the day, and repeated the performance in the evening; and this day after day. It is a keynote to his character. No hardship was too great for him to brave if he wished to accomplish a drawing of some favourite mountain. He visited the Alps on every available occasion, camping out in little wooden huts in most out-of-the-way and exposed places, in fair weather and foul. For many years he was accompanied by his favourite guide, Anton Ritz, or Riffelhaus Toni, as he was called. He also was known as 'Der Maler Ritz,' owing to his engagements with Williams. The connection only terminated with the sad death of Ritz by drowning some time in the '90's. I have only space here to enumerate a few of the places he chose for his camps, Monte Moro, Pierre à Béranger, the mountains on the S.E. of the Italian Val Ferret (it was from this camp that he made the drawing of the Grandes Jorasses belonging to the Alpine Club), remote and wild spots in Dauphiné, and in Scotland, on the lonely shoulder above Loch Coruisk, in the Isle of Skye, during the months of February and March, at which period, though the effects are grand, the exposed spot is lashed by rain-floods and gales of wind.

But perhaps the crowning point of his career was the very remarkable journey he undertook, when getting on for 70 years of age, to the Himalayas, which resulted in the fine and interesting series of drawings which were seen at the late Himalayan Exhibi-

tion at the Alpine Club. He had to sit often for days at a time watching the mists, and hoping against hope that they would clear, in order that he might work. The snows occasionally did so for a few minutes at a time, and it is a marvel he should have accomplished anything, let alone the drawings he did do.

This is no place for a criticism of his life work, but I feel bound to call attention to his keen appreciation of the beauty of mountain form and atmosphere, and his realisation of the size of the mountains he painted. He never exaggerated or falsified for the sake of effect, and there is an utter absence of trick in his works, which makes their simplicity very impressive.

To his friends who knew him on the mountain-side or at home among his works his loss is irreparable. His genial humour and kindly sympathy will be hard to do without, and it will strike all who love the mountains with a keen pang of regret that they will no more see their rugged features portrayed by the loving hand of Alfred Williams.

COLIN BENT PHILLIP.

THE ALPINE CLUB LIBRARY.

THE following additions have been made since January :—

New Books and New Editions. Presented by the Publishers or Authors.

(Foreign works may be obtained through Mr. David Nutt, 57 Long Acre, London, W.C.)

Alpine Majestäten und ihr Gefolge. Die Gebirgswelt der Erde in Bildern. 292 Ansichten . . . mit Text von Walther Bauer . . . 4. Band.

München, Verein. Kunstanst. A.-G., 1904. M. 12

Folio, 12 monthly parts.

No more of this good work is to be published.

d'Apples, H. Croquis Chamoniards et le Tour du Mont-Blanc.

8vo, pp. 292. Genève, Pasche; Paris, Paclot [1905]. Fr. 3.50

Contents :—Conséquences d'un été à la montagne, Un orage, Les chèvres, Le Mauvais Pas, Le 14^{me} Chasseurs Alps, Jour de pluie, La descente, Le voiturier, Le tour du Mont-Blanc; etc. Pleasant to read.

Ardouin-Dumazet. Voyage en France.

8vo, maps. Paris et Nancy, Berger-Levrault. Fr. 3.50 a vol.

9^e série. Bas-Dauphiné. . . Parties des départements de l'Isère et de la Drôme. 2me édition. pp. 376. 1903

12^e série. Alpes de Provence et Alpes Maritimes. . . 2me édition. pp. 408. 1904

39^e série. Pyrénées, partie orientale . . . Parties montagneuses des départements des Pyrénées-Orientales, de l'Aude et de l'Ariège. pp. 339. 1904

40^e série. Pyrénées centrales . . . Parties de l'Ariège, de la Haute-Garonne et des Hautes-Pyrénées. pp. 341. 1904

41^e série. Pyrénées, partie occidentale . . . Département des Basses-Pyrénées. pp. 347. 1904

Battisti, C. Guida di Pergine, 1904; see Alpine Club Publications, Trento, Soc. Rododendro.

Beraldi, Henri. Cent ans aux Pyrénées. Tome 7. Les Pyrénées-Orientales et l'Ariège. Centenaire du Mont-Perdu. Le Pullulement photographique. La Vulgarisation et l'Utilitarisme. Paris (Lille, Impr. Danel) 1904
8vo, pp. 353.

A privately printed work of 300 copies. •

This is the concluding volume of a very remarkable monograph on the Pyrenees, in which their every aspect is treated of fully and in a most readable and entertaining manner. Full and accurate the work is, but never heavy. It affords pleasant as well as profitable reading at any part.

Blanc, J. H. Moille-Margot à la Montagne. Charge vaudoise en deux actes représentée pour la première fois à Lausanne, au banquet du Club alpin, à Beau-Site, le 23 janvier 1904. 2me édition. Lausanne, Fœtisch, 1905 8vo, pp. 83.

This is an amusing piece, representing a party of Swiss tourists climbing to the Cabane d'Orny, and there falling in with a typical stage Englishman, mannerless and offering to box with the whole party, and a German who throws his sausage into the water that is boiling for coffee. But boxing and sausage do not prevent preparations for the ringing of wedding bells.

Camenisch, Dr C., Rhätian Railway; see *Illustrated Europe*.

Correvon, Henri. Fleurs et Montagnes. Genève, chez l'auteur; etc., 1902, 8vo, pp. 110; ill.

Poems;—Fleur d. Alpes, le Glacier d'Aletsch, le Breuil, Ascension d'hiver, Excelsior; etc.

Davos; see *Illustrated Europe*.

De Amicis, Edmondo. Nel regno del Cervino. Nuovi bozzetti e racconti.

8vo, pp. 85. Milano, Treves, 1905

The author stayed at the hotel at Giomein. He describes the Matterhorn as seen from there and the impression it made on his mind. He also tells of the people he met. He gives a view of the mountain and of the climbers, as one who does not himself climb.

This article should be taken as a relief from the reading of serious papers on actual ascents.

Dequet, Paul. Les Pyrénées. Suite de croquis.

8vo, pp. 23. Edition de "La Province," Le Havre, 1903

Besides the ordinary edition, of which the above is a copy, one hundred copies of this work were printed on various fine papers.

Short descriptions of various scenes in the Pyrenees.

Dittmar's Führer für die Strecke München-Brennerbahn nach Bozen-Gries, Meran, Trient, Arco und an der Gardasee, nach Verona und Venedig.

2. . . . Auflage. 8vo, pp. 74; map. München, Kellerer, 1905. Pfg. 80

A clear little guide to the parts lying close to the line.

Dumas, Alexandre. Adventures in Switzerland. Une pêche de nuit. Le bifteck d'ours. 8vo, pp. 32. London, Blackie, 1905. 4d.

A school reading book.

Egli, Paul. Beitrag zur Kenntniss der Höhlen in der Schweiz. Inaugural-Dissertation z. Erlangung d. phil. Doktorwürde . . . d. Universität Zürich. 8vo, pp. 86; plates. Zürich, Zürcher & Furrer, 1904

Espitalier, Lt.-Col. G. Le Tramway électrique du Mont-Blanc, suivi de notices sur les lignes de la Jungfrau et du Gornergrat.

8vo, pp. 77; maps, plates. Paris, Masson, 1905. Fr. 1

The greater part of this appeared in 'Le génie civil,' September 1904—see *Alpine Journal* for February last—but some matter has been added, including plates of Méchel's two prints of Saussure's ascent. The whole makes an interesting pamphlet, whatever view one may take of the proposed tramway, and collectors of Mont Blanc literature should obtain this.

Europe, Illustrated; see *Illustrated Europe*.

Ferrand, H., L'alpinisme et le tourisme en 1904. In 'Grenoble et le Dauphiné' [1904], q.v.

Gerber, Interlaken; see *Illustrated Europe*.

Grenoble et le Dauphiné. Publié par MM. Audebrand, Maurice Bergès, de Beylié, . . . H. Ferrand, Kilian, . . .

Roy. 8vo, pp. 396; plates, 3 col. Grenoble, Gratier et Rey [1904]. Fr. 6

The following are among the articles ;—

- pp. 111-146 ; W. Kilian, *Les glaciers du Dauphiné*.
pp. 203-224 ; H. Ferrand, *L'alpinisme et le tourisme en 1904*.
pp. 253-284 ; J. P. Lachmann, *Les jardins alpins*.

This was published for the meeting of the French Assoc. for the Advancement of Science.

Hörmann, Leopold. *Geht's mit auf d'Rax! Bergfrohe G'sang'ln und a D'raufgab' lustige Vortragsstück'ln in der Volksmundart.*

8vo, pp. vi, 81 ; ill.

Wien, Lechner [1904]

Illustrated Europe. 8vo ; ill.

Zürich, Orell Füssli, n.d.

Gerber. Interlaken. pp. 46.

Dr J. Pernisch. *The Upper Engadine.* pp. 40.

A. Rumpf. Thusis. pp. 40.

Davos. pp. 40.

Dr H. Noë. *The line through Carynthia and the Pusterthal.* pp. 111.

Pastor E. Müller. *Spiez and the Kanderthal.* pp. 77.

Dr C. Camenisch. *The Rhetian Railway. With special reference to the Albula route.* pp. 109.

Dr Chr. Tarnuzzer. *Bündner Oberland.* pp. 167.

These popular short descriptions are also issued in French as '*L'Europe illustré*,' and in German as '*Europäische Wanderbilder*.' The parts are numbered, and it is to be noted that the numbering of the parts is different in the different languages.

Kastner, E. F. *Hochgebirge. Bilder und Stimmungen aus den Raibler Dolomiten.* Wien, Im Selbstverlag des Verfassers, 1905. Kr. 2

8vo, pp. 80 ; ill.

Poems on the mountains and a description, in prose, of the Raibler Dolomites.

' Unter mir das Tal voll Nebel,
über mir die reine Nacht,
vor mir eine lichte Weite :
Gletscherfelder firnbedacht.
In der Runde Bergariesen,
eine ew'ge Hochlandswacht,
und darüber ausgegossen
märchenhafte Vollmondspracht.'

Keel, Adolph. *Bündner-Tourist. 1650 Höhen-Angaben von Bergspitzen und Pässen.* Sm. 8vo, pp. 63. Chur, A. Keel-Gut [1904]. Fr. 1

— *Post- und Eisenbahn-Distanzen des Kantons Graubünden mit Höhenangabe der Gemeinden.* Sm. 8vo, pp. 30. Chur, A. Keel-Gut [1904]. Fr. 1

Kilian, W. *Les glaciers du Dauphiné.* Grenoble, Allier, 1904
8vo, pp. 80-115 ; plates. In '*Travaux du laboratoire de géologie . . . de l'Université de Grenoble*,' 7, 1 : extrait du volume . . . '*Grenoble et le Dauphiné*,' q.v.

Lachmann, J. P., *Les jardins alpins.* In '*Grenoble et le Dauphiné*' [1904], q.v.

Lanzo. *Le valli di Lanzo, Alpi Graie.* Edizione fatta per cura del Club Alpino Italiano, Sezione di Torino. Torino, Paravia, 1904

4to, pp. vii, 547 ; maps, plates.

The chapters are ;—

L. Usseglio, *Storia.*

L. Cibrario, *Lanzo.*

— *La valle di Viù.*

— *Da Lanzo a Ceres.*

A. Ferrari, *Nel Bacino di Viù.*

F. Vallino, *La Valle d' Ala.*

C. T. di Castellazzo, *La Bessanese.*

A. E. Martelli, *L' Uja di Madrone e di Cimmarella.*

L. Vaccarone, *La Valle Grande.*

G. Bugnetti e M. Cappa, *Da Torino a Lanzo.*

E. Ferretini, *Artisti.*

M. Cappa, *Le Industrie.*

L. Barale, *Le Guide.*

L. Camerano, *Fauna.*

F. Santi, *Flora.*

V. Fino, *Notizie mineralogiche.*

O. Z. Bianco, *Un punto trigonometrico.*

E. Mattiolo, *Carta geo-litologica.*

It is a finely got-up work, rich in illustrations.

- Mirbeau, Octave.** Les vingt et un jours d'un neurasthénique.
8vo, pp. 435. Paris, Charpentier, 1903
The scene is among the Pyrenees, which the hero would quite like if they were not mountains.
- Monte Rosa.** Laboratoire scientifique international du Mont Rosa. Travaux de l'année 1903 publiés par A. Mosso, directeur du laboratoire . . . Tome I. 4to, pp. x, 295; ill. Turin, Loescher, 1904. Fr. 15
An international physiological laboratory was started in 1903 at the Capanna Regina Margherita, in which year Dr Mosso, Prof. Zuntz and others spent some time in making various investigations. The results are published in this volume. The second volume will contain the history of the laboratory and also of an Institut International which is being constructed at the Col d'Olen.
Among the articles in this vol. are:—
G. Galeoti, Les variations de l'alcalinité du sang.
C. Foa, Les changements du sang sur la haute montagne.
A. Mosso, La respiration d. chiens sur le sommet du Mont Rose.
— Expériences faites sur les singes à Turin et sur le sommet du Mont-Rose.
— Anhydride carbonique inspiré s. les montagnes.
— Alcool à de grandes altitudes.
A. Durig et N. Zuntz. Beiträge z. Physiologie des Menschen im Hochgebirge.
A. Aggazzotti, L'échange respiratoire des cobayes dans l'air raréfié.
— Recherches sur la composition de l'air dans les alvéoles pulmonaires.
- Mosso, A.;** see Monte Rosa, 1904.
- Müller, Pastor E.,** Spiez; see Illustrated Europe.
- Musset, Alfred de.** Poésies nouvelles, 1836-1852. Nouvelle édition. 8vo. Paris, Charpentier, 1905
pp. 311-314, Souvenir des Alpes.
- Noë, Dr H.,** Carynthia; see Illustrated Europe.
- Panjou, F.** Barèges et ses Environs. Vallées de Barèges, de Luz et Caunterets, Pic du Midi, Troumouse, Cirque de Gavarnie. Lettre-Préface de M. E. Durègne, Vice-Président du C.A.F. (Sud-Ouest). 8vo, pp. vii, 111; map, ill. Paris, Mulo; Bordeaux, Ferret, 1904. Fr. 2.25
- Pernisch, Dr J.,** Upper Engadine; see Illustrated Europe.
- Roberts, Harry.** The Tramp's Hand-book. London and New York, Lane, 1903. 3/6
On tents and various makeshifts in camping out.
- Rumpf, A.,** Thuisis; see Illustrated Europe.
- Tarnuzzer, C.,** Bündner Oberland; see Illustrated Europe.
- Tibet.** Further papers relating to Tibet. Nos. 2 and 3: Cd 2054, 2370. Presented to both Houses of Parliament by Command of His Majesty. Folio, pp. 29, 277. London, Darling, 1904, 1905. 2/8
- D'Ussel, Vicomte Jean.** Excursions et sensations pyrénéennes. Cimes ariégeoises. Paris, Plon-Nourrit (1901)
8vo, pp. 186; ill.
- Vincent, A.** Six mois dans les neiges—Tarentaise et Maurienne. Journal d'un officier. 8vo, pp. 263; plates. Moutiers, Duclou, 1905. Fr. 3.50
Descriptive of a winter in alpine forts.
- Wandern und Reisen.** Illustrierte Zeitschrift für Touristik, Landes- und Volkskunde, Kunst und Sport. 2. Jahrgang. Düsseldorf, Schwann, 1904
Folio, pp. 660; plates, etc. 24 fortnightly parts, price Pfg. 50 each.
In its second year this publication keeps up its high standard in articles and in illustrations. Much of the material is of mountaineering interest; such articles, for instance, as;—
A. v. Radio-Radiis, Aig. du Géant.
A. Fischer, Brèche de la Meije.

O. Schuster, Die Davoser Berge.
 H. Sattler, Die Dresdener Hütte.
 R. Tingl, Das vordere Fieberhorn.
 F. Christian, Eine Fujibesteigung.
 J. Simon, Grand Paradis.
 F. Benesch, Das Gesäuse.
 There are in all 24 special mountaineering articles.
 The illustrations are numerous and excellent.

Older Books.

- An Alpine Tale:** suggested by circumstances which occurred towards the commencement of the Present Century. By the author of "Tales from Switzerland." London, Westley: Seeley, 1823
 2 vols, 12mo.
 The tragedy of this religious tale is connected with the catastrophe of Bagnes. From the notes it appears that the author was a gentleman who had travelled through Switzerland, and also visited Chamonix.
- Anderson, William.** Tales of Discovery, Enterprise, & Adventure for the young. Edited by William Anderson.
 8vo; ill. Edinburgh and London, Gall & Inglis, [c. 1855]
 This contains, *inter alia*;—
 pp. 99-109, Macdonald's passage of the Splügen, from Headley.
 pp. 143-146, Mont Blanc at sunset, from Blackwood's.
- B.; see B[ridel].**
- Badin, Adolphe.** Grottes et cavernes. Bibliothèque des merveilles.
 8vo, pp. 348; ill. Paris, Hachette, 1867
- Balzac, H. de.** Le médecin de campagne. Paris, Calmann-Lévy, n.d.
 8vo, pp. 312.
 The scene is round the Grande Chartreuse. The novel was written in 1833.
- (Batenham, G.)** The traveller's companion. In an Excursion from Chester through North Wales.
 Chester, printed for G. Batenham by R. Evans (1827)
 Sm. 8vo, pp. 100; plates, map.
- Beauclerk, Lady Di.** A summer and winter in Norway. Illustrated by the author's sketches.
 8vo, pp. xii, 148; ill. London, Murray, 1868
- Beckford, Wm.** Italy, with sketches of Spain and Portugal.
 8vo, pp. vi, 338. Paris, Baudry, etc., 1834
 pp. 34-40, Tyrol, 1780.
 pp. 142-170, Grande Chartreuse and Salève, 1782.
- du Bédat, A. B.** Une ascension au Pic du Midi.
 8vo, pp. 25. Saint-Gaudens, Abadie, 1901
- Bonney, T. G.** North Wales, Lake Country, Passes of the Alps, Bernese Oberland, Dauphiné, North Italy, Tyrol, East Switzerland, High Alps; *see* Picturesque Europe.
 — *see* Walton, E.
- Bridel, L. et P.; see** Switzerland, Conservateur suisse.
- Bryant, William Cullen.** The poetical works. New edition.
 32mo, pp. xix, 231. London, Routledge, 1861
 Bryant lived 1794-1878. Some mountain poems occur in his works.
- Buss, Dr Ernst.** Führer für Glarnerland und Walensee. Herausgegeben v. Verkehrsverein d. Kantons Glarus.
 8vo, pp. 140; map, plates. Glarus, Bäschlin, 1898
- Carne, John.** Reise durch die Schweiz. Dresden u. Leipzig, Arnold, 1828
 To the note given with this item in the last number of the Journal may be added;—'A Swiss Tour' dealt with Chamonix, the Gemmi, Grindelwald, the Grimsel, etc., and was anonymous. The 'Reise' is a translation of this, giving the author's name, with notes and criticism,

- pp. 117-192, signed 'Karl von Jura,' dealing largely with Meyer's ascent of the Jungfrau. Carne's 'Letters from Switzerland,' 1834, reproduce 'A Swiss Tour,' in an altered form, omitting the visit to Chamonix.
- Cheever, Rev. George B.** Wanderings of a pilgrim in the shadow of Mont Blanc. 8vo, pp. vii, 166. New York and London, Wiley, 1848
- The pilgrim in the shadow of the Jungfrau Alp. 8vo, pp. xii, 214. New York and London, Wiley, 1848
- These two are bound in one volume. Editions of these works, separately or together, with or without Bartlett's plate, were numerous.
- Colaud de la Salcette, J. L. C.** De Grenoble au Bourg d'Oisans, à la Grave et à St-Jean-de-Maurienne par le Col du Galibier en 1784. In Ann. S. T. D., 14, 1888; pp. 190-222.
- A previously unpublished description.
- Cooke, G. A.** Topographical and statistical description of North Wales; . . . [*? 3rd edition.*] London, Robins (p. 1819)
- Sm. 8vo, pp. 200: map, frontispiece.
- This is part 3 of Cooke's 'Topographical Library . . . the British Traveller's Guide.'
- Cooper, E. H.** Wyemarke and the Mountain-Fairies. Illustrated by 'Wyemarke,' G. P. Jacomb-Hood. 4to, pp. 84; plates. London, Duckworth, 1900. 3/6
- The stories centre in Zermatt.
- Daniel l'Ermite,** Sur la Suisse, 1605; see Switzerland, Conservateur suisse.
- Darrah, H. Z.** Sport in the highlands of Kashmir, being a narrative of an eight months' trip in Baltistan and Ladak, and a lady's experiences in the latter country; together with hints for the guidance of sportsmen. Roy. 8vo, pp. xviii, 506; plates. London, Rowland Ward, 1898
- Dauphiné.** Précis d'un voyage fait à la Bérarde en Oysans, dans les grandes montagnes du Dauphiné, en 1786. [*? Par Dominique Villars.*] In Ann. S. T. D., 8, pp. 245-261, 1883. Reprinted from Annales du département de l'Isère, janvier-mars 1809.
- De Amicis, Edmondo.** Alle Porte d' Italia. Illustrato da 172 disegni di Gennaro Amato. 4to, pp. 416; ill. Milano, Treves, 1892
- This is an elaborately illustrated edition of a work originally published in 8vo at Rome in 1884. The beautiful valleys and the magnificent passes of the north of Italy have been the scene of much terrible warfare. It is with this terrible side of the history of the region that this book is almost entirely concerned. The illustrations of place and incident add value to the work.
- Desnoyer, Ch., et Ad. d'Ennery** [ps. i. e. Eug. Philippe]. La Bergère des Alpes. Drame en cinq actes, représenté, pour la première fois, à Paris sur le Théâtre de la Gaîté, le 31 octobre 1852. Paris, Lévy, 1852
- Folio, pp. 26.
- Dix, Edwin A.** A midsummer drive through the Pyrenees. 8vo, pp. xvi, 332; plates. New York and London, Putnam, 1890
- Donnet, Gaston.** Le Dauphiné. Illustrations d'après nature. . . Dessins originaux d'Artistes dauphinois. Paris, Soc. franc. d. éditions d'Art, L. H. May [1900?]. Reduced price, fr. 7
- Sm. folio, pp. 352; num. ill.
- Ducommun, J. C.** Taschenbuch für den schweizerischen Botaniker. 2 vols, 8vo, pp. 1024. Solothurn, Selbstverlag des Verfassers, 1869
- Durand, Cap. Adrien Armand.** Ascension au Pelvoux. In Ann. C. A. F., vol. 14, 1887, pp. 12.
- This contains previously unpublished notes by Durand on his ascent in 1830 to the Pointe Puiseux of the Pelvoux: with notes by Lt.-Col. Arvers.

Ebel, J. G. Anleitung auf die nützlichste und genussvollste Art die Schweiz zu bereisen. Im Auszuge ganz neu bearbeitet von G. v. Escher. Achte Original-Auflage. Zürich, Orell Füssli, 1843
8vo, pp. 726; frontispiece, panoramas, map.

This is the last edition of Ebel. The authorised editions, published by Orell Füssli, were issued, in German, in 1793, 1804-5, 1809-10, 1818, 1823, 1830, 1840, 1843; and in French, in 1805, 1810-11 (reprinted 1817), 1819, 1827 (reprinted 1828). Tournaisen, Bâle, issued a French translation in 1795. In 1789-1790 Heidegger published a guide-book to Switzerland, but this was soon overshadowed by Ebel's work. This in the four volumes, to which it soon grew, was inconveniently large; so in 1818, after the death of Ebel, Heidegger's book was, with additions and corrections from Ebel, brought up to date by Glutz-Blotzheim, and later editions of this were edited by Schoch and Escher. Copies of all these editions are now in the Club Library, as well as some of the many pirated editions which from 1816 onwards were issued by Langlois or Audin in Paris.

d'Ennery, A.; see Desnoyer, Ch.

Europe, Picturesque; see Picturesque Europe.

Evans, Rev. J. Letters written during a tour through North Wales, in the year 1798, and at other times; . . . The third edition.

8vo, pp. xix, 415. London, Baldwin, 1804
pp. 177-126, Description of Snowdon.

The author writes, pp. 212-214:—"I have now been traversing one of the most wonderful parts, and worthy of observation, in the three kingdoms; which, in point of romantic scenery and variety of productions, is not perhaps to be equalled by the boasted wonders of the Rhætian Alps. The views are grand, picturesque, and pleasing: they exhibit a rich variety both of the sublime and beautiful. . . . But the mind of sensibility cannot take a nearer view of these same scenes without experiencing an involuntary terror. The almost constant snows, and inaccessible ascents, gloomy caverns, resounding torrents that precipitate themselves from the summits, the dark forests that here and there clothe their sides, and the enormous fragments detached by time from their foundations: all unite to impress the ideas of awe and apprehension. It is in scenes like these . . . that the mind, smiling at the insignificant objects which hitherto engrossed its affections, nobly wings its flight and gains the skies."

Favre, A.; see Switzerland, Beiträge, 28.

Fearnside, W. G.; see Tombleson's Upper Rhine.

Ferrand, H. Massif des montagnes de la Chartreuse. Guides Pol.

8vo, pp. 79; map, ill. Valence, Toursier [1900]. Fr. 1

Gastineau, H.; see Wales illustrated, 1830.

Gesner. Voyage de Gesner au Mont Pilate; see Switzerland, Conservateur suisse.

Golbéry, Ph. de. Histoire et description de la Suisse et du Tyrol.

8vo, pp. 640; 92 steel plates. Paris, Didot, 1838

This forms vol. 3 of the 'Europe' section of 'L'Univers pittoresque,' and is founded on Lewald and Lutz.

Gore, Major St John. A Tour to the Pindari Glacier.

8vo, pp. 102; map. Calcutta, Thacker, 1898

The author accompanied Sir Baker Russell in 1898.

Griffiths, A., The Pyrenees; in Picturesque Europe, q. v.

Guillemin, P.; see Puiseux, V.

Heim, A.; see S.A.C., St Gallen.

Hicklin, John. Excursions in North Wales: A Complete Guide. . . . [3rd edition.] London, Whittaker, etc.; Chester, Prichard, 1856

Sm. 8vo, pp. ix, 226; plates, map.

- Earlier editions, 1847, 1851. This guide book is a revised version of ;—
Hemingway, J., 'Panorama of the beauties, curiosities, and antiquities of North Wales, exhibited in its mountains, vallies, waterfalls, . . . intended as a pocket companion to the tourist and traveller.'
London, Groombridge; Chester, Seacombe, 1835
2nd edition. Sm. 8vo, pp. viii, 320; map, plates.
The fifth edition of this, 1847, was the first by Hicklin. The plates vary in the different editions. In the 1851 edition they are most elegant, 'from original drawings by G. Pickering.'
- Hoffmann, G.** Panorama des Maderaner-Thales; see S.A.C., Bâle.
- Hooker, Sir Wm Jackson.** Journal of a tour in Iceland in the summer of 1809. Not published: Yarmouth, printed by J. Keymer, 1811
8vo, pp. lxii, 502; plates, one col.
A second edition was published in London in 1813.
Sir Wm J. Hooker, 1785-1865, botanist, Director of Kew Gardens.
His Icelandic collections were lost by fire on the ship on the return voyage, and the 'Journal' was composed from memory.
- Humboldt's travels and discoveries in South America.** Second edition.
Sm. 8vo, pp. viii, 276; ill. London, Parker, 1846
- Kitto, John, D.D.** Uncle Oliver's travels in Persia: . . . Two volumes in one.
Sm. 8vo, ill. London, Bohn, 1846
vol. 1, pp. 19-50: A curious account of Ararat and Demawend, with strange illustrations. 1st edition [1838].
Kitto, a layman though D.D., lived 1804-1854. In 1829 he travelled in Persia.
- Leggett, B. F.** A tramp through Switzerland. New York, Alden, 1887
8vo, pp. 90.
- [Lowe, Miss E.]** Unprotected females in Norway; or, the pleasantest way of travelling there, passing through Denmark and Sweden. With Scandinavian Sketches from Nature. London and New York, Routledge, 1857
8vo, pp. viii, 295; ill.
- Lytton, Earl of [Edward Robert Bulwer, first Earl].** Glenaveril; or the metamorphoses. London, Murray, 1885
2 vols, 8vo.
vol. 1, pp. 239-333: The Alps.
Lord Lytton lived 1831-1891. He was an ambassador and also Viceroy of India. On 'Glenaveril' the 'Dictionary of National Biography' says;—'Unfortunately the novel in verse has no chance with the novel in prose in our day, and "Glenaveril" fell exceedingly flat.'
- Macgregor, J.** The ascent of Mont Blanc, a series of four views, printed in oil colours by George Baxter, the original sketches, and the description, by J. Macgregor, Esq., M.A. [1855]
Obl. 4to, pp. 4 of letterpress.
The prints are;—1. The Glacier du Tacconay. 2. Leaving the Grands Mulets. 3. The Mur de la Côte. 4. The Summit. They are mounted on cards, with Baxter's stamps.
- Marmontel, Jean François.** Marmontel's Shepherdess of the Alps.
4to, pp. 47-72; plate. In Angelica's ladies library; or, Parents and guardians Present. London, Hamilton: Harlow, 1794
This volume contained plates by Bartolozzi from paintings by Angelica Kauffmann. The plates have been removed from this copy. Marmontel, poet, story-writer and critic, 1723-1799, published 'La Bergère des Alpes' as one of his 'Contes moraux.' It occurs in the second volume of the first complete edition of the 'Contes,' pp. 43-92, Paris, Merlin, 1765. It was frequently re-published and translated, either by itself or with others of the 'Contes.' Among other appearances in English, it was issued in a chapbook form, 'a very interesting, pathetic and moral history,' at Durham, Newcastle, York, Coventry, Glasgow (to mention those that are to be found in the British Museum). The translation used in those chapbooks is not that used in the 'Ladies

Library.' It also occurs in Greek verse, in a volume of translations published in Vienna in 1797. The tale had an extraordinary popularity. It appeared also as a 'Pastorale en trois actes, et en vers' . . . 12mo, pp. 44. Bruxelles, Boucherie, 1770. For a time it was fashionable to choose an alpine scene for the setting of a sentimental tale. Except as an example of this fashion, the tale is of no interest in an alpine library.

Maugiron, Marquis de. Lettre et mélange de dissertation écrite à la société Royale de Lyon sur un voyage aux Glacières de Savoie en 1750. In *Rev. Alpine*, vol. 2, 1896; pp. 110-112.

Previously unpublished.

Moesch, Dr C. Geologischer Führer durch die Alpen, Pässe und Thäler der Centralschweiz. Zürich, Raustein, 1894
8vo. pp. iv, 120.

Norway, Unprotected females in, 1857; see [Lowe, Miss E.]

— Handbook for travellers in Norway. 5th edition, revised. With maps and plans.

London, Murray; Paris, Galignani; Christiania, Bennett, 1874
8vo. pp. 232.

O'Flanagan, J. R. Impressions at home and abroad; or, A Year of Real Life. In two volumes. 8vo. London, Smith, Elder; Dublin, Cumming, 1837
Vol. 2, Switzerland, Savoy, and Piedmont—including Grindelwald and Chamonix, a pedestrian ramble in 1836.

du Pasquier, Léon; for life of; see Switzerland, Matériaux, 28.

Payn, James. The Lakes in Sunshine. Being photographic and other Pictures of the Lake District. With descriptive letterpress by James Payn.

London, Simpkin, Marshall; Windermere, Garrett, 187

4to, pp. 99, 92: photographs and woodcuts.

(Pennant, Thomas.) The Journey to Snowdon.

4to, pp. ii, 183; 11 plates. London, Printed by Henry Hughes, 1781

This volume is complete in itself, though published to form the second of the three volumes of Pennant's 'Tour in Wales.' Pennant did much climbing about the Snowdon range, which is here described. Good plates.

Thomas Pennant, traveller and naturalist, lived 1726-1798. Dr Johnson said of him, 'He is the best traveller I ever read; he observes more things than anyone else does.'

[Philippe, E.]; see Desnoyer, Ch.

Picturesque Europe. [Fourth, popular, edition.] London, etc., Cassells [1900]
5 vols, folio, plates.

Contains inter alia;—

vol. 1, pp. 40-57, T. G. Bonney, North Wales.

2, pp. 178-194, J. Grant, Scotland.

pp. 215-235, T. G. Bonney, The Lake Country.

vol. 3, pp. 30-54, T. W. Hinchliff, The Italian Lakes.

pp. 55-77, T. G. Bonney, Passes of the Alps.

pp. 172-197, A. Griffiths, The Pyrenees.

pp. 229-250, T. G. Bonney, Bernese Oberland.

vol. 4, pp. 1-23, T. G. Bonney, Auvergne and Dauphiné.

pp. 76-95; 185-210, W. M. Williams, Norway.

pp. 145-170, T. G. Bonney, North Italy.

vol. 5, pp. 11-38, T. G. Bonney, Tyrol.

pp. 77-100, T. G. Bonney, East Switzerland.

pp. 145-175, T. G. Bonney, The High Alps.

This work was first published in [1876-9]; reissued in [1881-1886] and in [1892-1897].

Piperoff, C.; see Switzerland, Beiträge, 37.

Pison du Galland, François. Voyage dans la Tarentaise, en Savoie, au Petit Saint-Bernard, . . . en août 1788. In *Ann. S. T. D.*, 20, 1895; pp. 332-389.

Previously unpublished.

- Pol, Guides; see Ferrand, H., and Toursier, G.**
- Puckler Muskau, Prince.** Mémoires et voyages. Lettres posthumes sur l'Angleterre, l'Irlande, la France, la Hollande, et l'Allemagne. Traduites de l'édition allemande par J. Cohen. Bruxelles, Meline, 1833
Sm. 8vo, 6 vols.
Vol. 3, Travel through North Wales and ascent of Snowdon in 1827.
Vol. 5, the Righi and St Gothard in 1829.
This was published anon. as 'Briefe eines Verstorbenen.' In the English edition of 1832, the name of the author is given on authority of Berlin reports.
- Puiseux, Victor.** La première ascension du Mont-Pelvoux, 8 août 1848. Par P. Guillemin. In Annales d. Alpes, Gap, vol. 1, part 6; pp. 261-270; plate. Mai-juin, 1898
A letter from Puiseux (1820-1883) dated 1877 describing his attempt in 1847 and ascent in 1848: with notes by M. Guillemin.
'C'est donc à M. Victor Puiseux, membre de l'Institut, savant mathématicien et astronome, que revient l'honneur d'avoir, le premier, foulé le point culminant du Pelvoux.'
- Rose, Thomas.** Westmorland, Cumberland, Durham & Northumberland, Illustrated, from original drawings by Thomas Allom, &c. With historical and topographical descriptions, by Thomas Rose. London, Fisher, 1833 (i.e. 1836)
4to, pp. 220; 217 double plates.
- Sand, George.** Lettres d'un voyageur. Nouvelle édition. Paris, Lévy, 1869
8vo.
pp. 271-312, Journal de mon voyage de la Vallée-Noire à Chamonix.
- Shepard, J. S.** Over the Dovrefjelds. London, King, 1873
8vo, pp. 305; frontispiece.
- Signot, Jacques.** La totale et vraie description de tous les passages . . . par lesquels on peut passer et entrer des Gaules es Ytalies. Paris, Denis, 1515
Reprinted in Ann. Soc. Tour. Dauph. 10, pp. 178-194, 1885.
The first edition of Signot's work was published by Brie, Paris, 1507.
- Small, John,** Edited by. A hundred wonders of the world in nature and art. Described according to the latest authorities, and profusely illustrated. 8vo, pp. 607; ill. London and Edinburgh, Nimmo, 1876
pp. 12-126, Mountains, volcanoes, caves and grottoes.
Small, 1828-1886, was librarian of Edinburgh University.
- Smith, John.** A guide to Bangor, Beaumaris, Snowdonia, and other parts of north Wales; with a map, . . . Third Edition Improved. 8vo, pp. 88. Liverpool, Smith; London, Simpkin, Marshall, 1833
The author travelled in 1825 and in 1828.
- Standen, R. S.** Continental way-side notes: the diary of a seven months' tour in Europe. Printed for private circulation (London) 1865
8vo, pp. viii, 344.
Trieste, Italian Lakes, Splügen, Tyrol, etc.
- Suter, J. Rudolph.** Helvetiens flora, enthaltend die phänerogamischen Gewächse Helvetiens. Vermehrt herausgegeben von Joh. Hegetschweiler. Zürich, Orell Füssli, 1822
2 vols, sm. 8vo.
The title is also in Latin, 'Flora helvetica, . . .' The first edition was published in 1802.
- Switzerland. Conservateur suisse,** ou recueil complet des étrennes helvétiques. vols. 1-8. Lausanne, Knab, 1813-1829
These volumes acknowledged in last 'Journal' contain, *inter alia*, the following;—
vol. 1, pp. 148-249: B[ridel], Lettres sur les Grisons.
pp. 255-270: P. B[ridel], Dans la Suisse souterraine.
vol. 2, pp. 127-176: P. B[ridel], De Bex à Sion.
pp. 177-293: Course en Suisse.
vol. 4, pp. 81-114: P. B[ridel], Sur un genre de beautés particulières aux perspectives de montagnes.

- pp. 115-167 : Voyage de Gesner au Mont Pilate. Traduit du Latin.
 pp. 170-284 : P. B[ridel], Coup d'œil sur une contrée pastorale
 des Alpes.
 pp. 285-313 : L. B[ridel], Voyage fait en 1800 dans les Cantons
 dévastés.
 pp. 424-430 : La Stockhorniade. Trad. du Latin.
 vol. 5, pp. 170-230 : P. B[ridel], Mélanges d'un voyageur dans les Alpes.
 pp. 231-284 : [—], Course au St Bernard en Avril 1801.
 vol. 7, pp. 71-116 : Daniel l'Ermite, Sur la Suisse, 1605.
 pp. 184-211 : P. B[ridel], Sur les chutes de montagnes en Suisse.
- Switzerland. History of Switzerland.** Lardner's Cabinet Encyclopedia.
 8vo, pp. xx, 360. London, Longmans, 1832
 Presented by G. W. H. Ellis, Esq.
- **How we did them in seventeen days!** to wit: Belgium, the Rhine, Swit-
 zerland, and France, described and illustrated by one of ourselves; aided,
 assisted, encouraged, and abetted by the other!
 8vo, pp. 68; plates. Truro; printed by Lake & Lake, n.d.
- **Matériaux** pour la carte géologique de la Suisse. Beiträge . . .
 28. Texte explicatif de la carte du phénomène erratique et des anciens
 glaciers du versant nord des Alpes suisses et de la chaîne du Mont-
 Blanc. Par A. Favre, précédé d'une introduction par E. Favre et
 suivi d'une biographie de Léon du Pasquier par M. de Tribolet.
 4to, pp. 77; portraits. Berne, Schmid & Francke, 1898
 Mostly reprinted from Arch. d. Sc. Genève, 57, pp. 187-205, Nov. 1876;
 and 12, pp. 395-412.
- — 37; N. F. 7. Geologie des Calanda von Dr Chr. Piperoff.
 4to, pp. 66; map. Bern, Schmid & Francke, 1897
- Tessin-Touriste.** Guide illustré Italo-Suisse.
 8vo, pp. 198; ill. Lugano, Bernardoni & Tarabola, 1893
- Tomblason's Upper Rhein.** Ober-Rhein. Le Rhin Supérieur. Edited by W.
 G. Fearnside. London, Black & Armstrong, 1852.
 8vo, pp. 184; 70 plates steel.
- Toursier, G.** Guide pratique du Vercors et Royans. Guides Pol.
 8vo, pp. 80; maps, ill. Valence, Toursier [1900]. Fr. 1
- de Tribolet, M.;** see Switzerland, Beiträge, 28.
- En Valais.** Souvenir de la Vallée d'Anniviers. Obl. folio, 12 lithographed
 plates, without letterpress. Genève, n.d.
 Poor plates.
- Villars, Dominique.** Précis d'un voyage à la Bérarde en Oisans dans les
 grandes montagnes . . . Sep., 1786. Printed in Ann. C. A. F., 1886. A less
 perfect version appeared in Mém. d'Agric., d'Econ. rurale . . . publ. par la
 Soc. Roy. d'Agric., Paris, 1787; and another version in Ann. S. T. D., 1882.
- Waaser, Subprior Magnus.** Beschreibung einer Reise auf den Titlisberg,
 1739 od. 1744. Reprinted in S.A.C. Jahrb., vol. 32, 1897, pp. 322-3; from
 Fuessli's Staatsbeschreib. d. Eidgenos., vol. 4, Schaffhausen, 1772.
 This is a letter dated 5 Weinmonat, 1767.
- Wales illustrated in a series of views,** Comprising the Picturesque Scenery,
 Towns, Castles, . . . Engraved on steel from Original Drawings by Henry
 Gasteau. Accompanied by historical and topographical descriptions.
 4to, pp. 224; 103 double plates. London, Jones, 1830
- Walton, Elijah.** English Lake Scenery. With descriptive text by T. G.
 Bonney. London, Thompson, 1876
 Folio, pp. 31; 22 col. plates.
- Warner, Rev. Richard.** A walk through Wales, in August 1797.
 Bath, printed by Cruttwell, sold by Dilly, London, 1798
 8vo, pp. 236; frontispiece, sketch maps.
 Chiefly North Wales and Snowdonia.
 This was a very popular volume. A third edition was published in 1799.

- Warner, Rev. Richard.** A second walk through Wales, in August and September 1798. Bath, printed by Cruttwell, sold by Dilly, London, 1799
8vo, pp. viii, 365; 2 plates, sketch maps.
North Wales, except Snowdonia.
A second edition of this was published in 1799.
Richard Warner lived 1763-1857. He acquired his topographical tastes while curate with William Gilpin, the author of 'Observations relative to picturesque beauty.'
- Wilbraham, Hon. E. B.** Narrative of an ascent of Mont Blanc in August, 1830. pp. 98-114, in *Tales of adventure from the old annuals.* New edition. London, Sampson Low, 1895
This is reprinted from the 'Keepsake for 1832.'
- Williams, W. Mattieu.** Through Norway with a knapsack. A new and improved edition. London, Stanford, 1876
8vo, pp. xvi, 320; map, vignette and frontispiece.
- Through Norway with ladies. London, Stanford, 1877
8vo, pp. xvi, 380; map, plates.
- Norway; in *Picturesque Europe*, q. v.
- The World of Wonders: a Record of Things Wonderful in Nature, Science, and Art.** New edition. London, Paris & New York, Cassell, 1882
4to, pp. viii, 416; ill.
Contains articles on Alps, red snow, avalanches, landslips, Peter Botte, glaciers, etc.
The first edition was issued in 1869. There have been at least seven editions.
- Zeller, H.** Gebirgsaussicht gezeichnet vom Gipfel des Titlis des 15n August 1832 von H. Zeller.
- Zittel, Emil.** Ringsum die Jungfrau. *Touristenblätter.* Karlsruhe, Braun, 1874
8vo, pp. 164.
- Zschokke, Hch.** Autobiography. London, Chapman and Hall, 1845
8vo, pp. 220.
Presented by G. W. H. Ellis, Esq.

Club Publications.

- The Alpine Club.** List of Members. 1859
Mr Whympster has presented to the Club a copy of an exact reprint of the 1859 list. A few copies of this may be had on application to the Assistant Secretary, price 2/6.
- Circulars belonging to 1859.
Mr Whympster has also presented to the Club exact reprints of three of the earliest Circulars printed by the Club, of which original copies were not in the library.
- Alpiner Reise-Club; see Vienna.**
- American Alpine Club.** By-laws. List of members. 8vo, pp. 34. 1905
pp. 14-34, Activities of members in the years 1903-4; with bibliography.
- C.A.F.** Commission française des glaciers.
Observations sur l'enneigement et sur les chutes d'avalanches . . . dans les départements de la Savoie. 4to, pp. 18. 1904
- **Alpes Maritimes.** Monsieur de Cessole has presented some further reprints of papers written by him and published in the 'Bull. de la Section des Alpes Maritimes.'
- **Section de la Drôme, Valence.** Bulletin, no. 2. 1905
8vo, pp. 298; ill.
Among the articles are;—
J. de Flandreysy, L'art de voyager.
A. Berger, Notes d'un vieil alpiniste.
C. Mossant, Ombrière-Ansage.
H. Ruzan, Le Rhône.
H. Rostolland, Les caravanes scolaires.

C.A.F. Section du Sud-ouest. Bulletin, 55-56. Juin et Décembre, 1904
8vo, pp. 138; ill.

Among the articles are;—

H. Russell, Vignemale.
L. Briet, Le Long du rio Ara.
Vicomte d'Ussel, L'Aiguille inaccessible de Mède.
L. Gaurier, Cauterets.

C.A.I., Sez. Ligure, Genova. Rassegna Sezonale. 8vo, pp. 57. 1905

— **Milan.** Tariffe per le guide. 8vo, pp. 22. 1901

This is printed also in the *Annuario* for 1901.

— **Annuario xvi.** Sm. 8vo, pp. 128. 1904

This contains;—List of members, guides and porters, rules, etc.

— **Index to Annuari 1-16,** pp. 75-95, in *Annuario*, 1904.

— **Ski-Club Milano.** Statuto. 1902

8vo, pp. 136-137, in *Annuario* del C. A. I., Milan.

The reports of the Ski-Club are published each year in the *Annuario*, beginning with 1902.

— **Torino;** see Lanzo, *Le valli di*, 1904.

— **Verona.** Anno xxxi. 8vo, pp. 17. 1905

Circolo alpino Gressio; see Gressio.

Climbers' Club Journal. Vol. 6, nos. 21-24. 1903-4

8vo, pp. 199; ill.

Among the articles are:—

J. M. A. Thomson, First Ascent of east buttress of Lliwedd.

W. P. Haskett Smith, Shakespeare as a mountaineer.

J. Tyndall, Holiday among the Lakes.

A. P. Abraham, Scawfell Accident.

C. C. Packe, Night on Scawfell.

W. Smithard, Climbs on the High Tor at Matlock.

E. A. Baker, Climbing on An Tealloch.

G. E. Foster, The Third ascent of the Matterhorn.

Club alpino Savonese; see Savona.

D. u. Oe. A.-V. Tagesordnung der xx. Generalversammlung in Zell a. See
am 18. Juli 1893.

Folio, pp. 6.

— **Kalender des D. u. Oe. A.-V. für das Jahr 1905.** 18. Jahrgang.

München, Lindauer, 1905

Sm. 8vo, pp. 268; 3 Beilagen: Notizbuch, Führer-Tarife 2, und Panorama
v. Grossglockner.

This useful work contains among other things: full information as to
the D. u. Oe. A.-V., its sections, publications, etc.: list of Guide-books
and maps, huts, guides: etc. The 'Kalender' is very thorough in its
lists, except in the list of Alpine Clubs, which has always been very
imperfect. The names of sections should also be given more fully
when there are several towns of the same name. The Bergführer-
verzeichnis, formerly published by the Berlin section, has since 1902
formed a part of the Kalender.

The Club now has 319 Sections and 63,077 members. The 'Vorort' for
1905 is Innsbruck.

— **Führer-Tarife, Heft 1.** Brixen u. Umgebung, Pustertal, Deferegggen,
Mals, etc. 8vo, pp. 32. München, Lindauer, 1904

— **Heft 2.** Lechtal, Mittenwald, Kufstein, Zillertal, Taufers, Bozen,
etc. Sm. 8vo, pp. 93. München, Lindauer, 1905

These are issued as 'Beilagen' to the 'Kalender.'

— **Akad. Section Wien.** Liederordnung. Folio, pp. 4. n.d.

— **Vereinslied der Section.** 8vo, p. 1. n.d.

— **Bayerland in München.** IX. Jahresbericht. 8vo, pp. 91. 1905

— **Berlin.** Satzungen. 8vo, pp. 9. 1905

— **Jahresbericht für 1904.** 8vo, pp. 219. (1905)

Sektionsbericht: Inhalt d. Vorträge: Tourenbericht: Bibliothek: Mit-
gliederverzeichnis: etc.

- D. u. Oe. A.-V. Linz.** Jahresbericht. 8vo, pp. 67; plates. 1904
 This contains;—
 H. Ernst, Rothasel, der Bergstock.
 R. Damberger. Bergfahrten im Bereiche d. Hofpürglhütte.
 A. Lelaut, Elmgruben u. Steierseehütte.
- **München**, Sektion Männer-Turn-Verein. Satzungen. 8vo, pp. 12. 1903
 — Jahresberichte, 1. u. 2. 8vo. 1903, 1904
 — Die Erbauung eines Unterkunftshauses auf d. Hochalm im Karwendelgebirge. 4to, pp. 4. 1904
- **Sonneberg.** Der Hohe Göll und sein Gebiet. Von Dr Moriz Zeppezauer. Festschrift z. Feier d. Eröffnung d. Purtschellerhauses. Salzburg, 1900
 8vo, pp. 42; ill.
- **Teplitz.** Die Teplitzer Hütte. Eine Reise-Skizze, von R. Czermack. 8vo, pp. 19. n.d.
- **Wiesbaden.** Jahres-Bericht für 1904. 1904
 8vo, pp. 28.
- **Würzburg.** 28. Jahresbericht. 8vo, pp. 30. 1904
 — Mitglieder-Verzeichnis. 8vo, pp. 12. 1904
 — Einladung z. kostümierten Alpen-Kränzchen. 1905
 A large card, with col. ill.
- **Zweigverein England.** **Alpine Association for Great Britain** (1904.) Notice of formation. Folio. 1904
- Fédération d. Sociétés Pyrénéistes; see Pyrenees.**
- Federazione prealpina; see Milan.**
- Garessio.** Circolo alpino Garessio. Regolamento. Sm. 8vo, pp. 8. 1897
 Associated with the Federazione prealpina, q. v. under Milan.
- Lecco.** Società alpina operaja A. Stoppani (1883). Statuto. 8vo, pp. 23. Brivio, Caimi, 1901
 'La Società ha per iscopo l' unione e la fratellanza, il divertimento, le passeggiate ed escursioni e segnalazioni in montagna a norma delle stagioni e concorrendo in tutte quelle opere riconosciute atte a promuovere ed incoraggiare la moralità e l' intelligenza degli operai.'
 — xx° Anniversario di Fondazione. Folio, pp. 12; ill. 14-16 Agosto, 1903
 This society was first named 'Compagnia alpina di Lecco,' then 'Circolo alpino operajo Lecchese,' and later 'Soc. Alpina.' It is associated with the Federazione prealpina, Milan, q. v.
- **Soc. Escursionisti Lecchesi** (1899). Statuto. 8vo, pp. 12. 1900
 This is also associated with the Federazione prealpina.
- Leipzig, Akadem. Alpenverein.** IV. Jahres-Bericht. 8vo, pp. 16. 1904
 The notes herein include first ascents in Corsica.
- Milan.** Federazione prealpina. Statuto e regolamento per le segnalazioni a minio in montagna. 8vo, pp. 16. Milano, Caimi, 1903
 — Le prealpi; see Soc. escurs. Milanese, below.
 Of the Federation, Signor O. Brentari writes;—'E l' unione di tutte le piccole Società Alpine fiorenti fra le Alpi e le Prealpi del Piemonte e della Lombardia. Lo scopo è d' unire quanti vogliono fare dell' alpinismo economico, semplice, senza pericolose esagerazioni, senza guide, senza troppi banchetti; . . . rendere più che sia possibile popolare l' alpinismo, specialmente fra i piccoli impegnati, gli operai, gli studenti. . . .' In conjunction with the 'Federation' are 12 small local clubs of alpinists and excursionists, e.g. see Garessio, Savona, Ossola, Lecco. Compare with this the Federation, under 'Pyrenees.'
- **Soc. Escursionisti Milanesi**, 1891. Le Prealpi. Rivista Trimestrale. Anni 1-2. 1902, 1903
 — Le Prealpi. Rivista Bimestrale e Boll. Ufficiale della Federazione Prealpina. Anno III. Sm. folio; ill. 1904
 — Statuto. 8vo, pp. 13. 1903
 — La festa degli Alberi e inaugurazione del Vessillo della Società. Folio, pp. 12; ill. 9 Aprile 1905
 This contains portraits of M. Cermenati, G. Sinigaglia, G. Segantini, etc.

- Milan, Soc. Escursionisti Milanesi. Sezione skiatori, 1904. Statuto. 1904**
8vo, pp. 4.
- München: Akad. Alpenverein. XII. Jahresbericht, 1903-4. 1904**
8vo, pp. 71.
- Oesterr. Touristen-Klub, Section Dresden (1901). 1. Jahrbuch. Redigiert v. Ernst Altkirch. 8vo, pp. 96; plates. 1905**
This is the first year-book of the Dresden section, which was founded in 1901. It is well printed and well illustrated. The contents are ;—
O. Beck, Elbsandsteingebirge.
H. Kurze, Die Kletterberge.
H. Gebler, Aus dem böhmischen Mittelgebirge.
E. Schade, Das Wandern im Hochgebirge, Bekleidung und Ausrüstung.
L. Günthersberger, Vajolet.
E. Altkirch, Die sinnliche Freude am Bergsport.
Bergsteigerregeln.
Wie deuten wir uns das Wetter in den Alpen ?
- Ossola. Società escursionisti ossolani, Piedimulera, 1899.**
Statuto. 8vo, pp. 16. Domodossola, Porta, 1904
'Allo scopo di diffondere, facilitare e rendere popolare l'alpinismo si è costituita . . . la Soc. escurs. ossolani.' This is associated with the Federazione prealpina, Milan, q. v.
- Pyrenees. Fédération des Sociétés Pyrénéistes, 1903. 1903**
Statuts. 8vo, pp. 4.
This is a federation of various Sections of the C.A.F., of local 'Sociétés excursionnistes,' and of the 'Soc. Ramond.' A short account of the Federation, with portraits, appeared in the Christmas (1904) number of 'Le Tour de la France,' q. v. under Pamphlets, etc., Spont, H.
- **Soc. d. Touristes du Haut-Vallespir, Prats-de-Mollo. Renseignements touristiques sur la Haute Vallée du Tech. 4to, pp. 3. [? 1904]**
This is associated with the 'Fédération,' above.
- Rhododendro, Soc.; see Trento.**
- Russian Alpine Club, Moscow. Year-book, no. 3: for 1903. Moscow, 1905**
8vo; pp. viii, 157; plates.
This is entirely in Russian. The contents are ;—
N. de Poggenpohl, First ascent of the col Gobi.
Mlle M. Preobrajenskaya, The Kistinka Valley and source of the Aragwa.
Dr Stchoureffski, Suanetia to Karatchai.
Dr Täuber, Bernese Oberland and Valais.
A. K. de Meck, The Yermoloff hut.
Accident on Mont Blanc, August 1902.
- S.A.C. Statuten. 8vo, pp. 16. Solothurn, Zepfel, 1904**
— **Carnet de poche à l'usage des membres du C.A.S. pour l'année 1905**
Sm. 8vo, pp. 274. Zurich, Tschopp, 1905
Statuts, cabanes, assurance des guides, guides brevetés, tarif des guides, statuts de l'association suisse des clubs de skis, etc.
- **Catalog der Bibliothek. 8vo, pp. 95. Zürich, 1905**
- **Basel. Panorama des Maderaner-Thales im Kanton Uri, nach einer hinterlassenen Zeichnung des verstorbenen Georg Hoffmann in Basel von ihm nach der Natur aufgenommen im Juli 1852. 1865**
- **Beigabe zum Panorama. Ein Führer in das Maderanenthal und seine nächsten Umgebungen. Herausgegeben von einigen Mitgliedern der Basler Section des S.A.C. 8vo, pp. 54. Basel, Schneider, 1865**
- **Jahresbericht der Sektion Basel pro 1904. 42tes Vereinsjahr.**
Beilage: Vegetation und Flora der Umgebung von Basel von Dr A. Binz. 8vo, pp. 65. (Basel, 1904)
- **Katalog der Bibliothek der Sektion Basel. 3. Aufl. 8vo, pp. v, 70. Basel, Birkhäuser & Dubi, 1897**
- **Thiersteiner Joggeluner. Unabhängiges Organ des Alpenvereins Babylon. 4to, pp. 4. [1896]**
This comic leaflet was issued in connexion with the annual banquet of

- the Sektion. This, together with the Katalog and the Jahresbericht, has been most kindly sent by Herr Wortmann, Librarian of the Section.
- S.A.C., Bern.** Statuten. 8vo, pp. 18. 1903
- Mitglieder-Verzeichnis. 8vo, pp. 24. Februar 1905
- **Diablerets.** Chansonnier des Sections romandes du C.A.S. 1903
8vo, pp. 87; 47 songs with music. Lausanne, Duvoisin, 1902
The first edition of this was published in 1896.
- **Section Neuchâteloise.** Panorama des Alpes par Maurice Borel; vue prise du Crêt du Plan à Neuchâtel. Janvier, 1901
- **Oberaargau.** Generalversammlung. Folio, pp. 4. Juni, 1898
- **St Gallen.** Sæntis-Panorama gezeichnet von A. Heim. 1871
- Katalog der Bibliothek. Aufgabe von 1904. 8vo, pp. 40. 1904
- **Tödi.** Panorama vom Ruchen Glärnisch. Für die Section aufgenommen und auf Stein gezeichnet v. Albert Heim. Glarus, Senn & Stricker, 1870
- **Weissenstein.** Verzeichniss der Bibliothek. 8vo, pp. 12. Solothurn, 1894
- Bibliothek-Katalog. 8vo, pp. 34. 1905
- Jahresbericht pro 1904. 18. Vereinsjahr. 8vo, pp. 24. 1905
- Savona. Club Alpino Savonese.** Regolamento organico. 8vo, pp. 15. 1901
Associated with the Federazione Prealpina, q. v. under Milan.
- Sierra Club.** Announcement. Fifth Annual outing. Mt. Rainier, etc. July-August. Sm. 8vo, pp. 27. 1905
- Ski Clubs. C.A.I. Milan, q. v.**
- **Berne.** Alpiner Wintersport. Basel, 28. Oktober, 1904
Folio. Vol. 2, no. 1.
On and after vol. 2, no. 4, this becomes a 'Beilage zum Ski,' q. v. below.
- **Luzern;** see Pamphlets, Das Schnee-Huhn.
- **Schweizer. Ski-Verband.** Ski; illustriertes offizielles Organ. 2 December 1904—onwards
8vo, nos. 1, 4, 6, 10—onwards.
The Beilage to this is 'Alpiner Wintersport' above, no. 4 of which is published with 'Ski' no. 1.
- Statuts: in C.A.S., Carnet de poche, 1905; q. v.
- **Soc. escursionisti milanese, q. v.**
- Soc. Alp. delle Giulie; Trieste.** Alpi Giulie, Rassegna bimestrale. Anno ix 8vo, pp. 156; ill. 1904
The principal item in this volume is the continuation of 'Sull' orografia delle "Giulie alpine,"' by N. Cobol—one portion of which occurs in each of the 6 parts of the volume.
- Società alpina A. Stoffani; see Lecco.**
- Società escursionisti Lecchesi; see Lecco.**
- Società escursionisti Milanesi; see Milan.**
- Società escursionisti ossolani; see Ossola.**
- Société d. Touristes du Haut-Vallespir; see Pyrenees.**
- Trento. Società Rododendro.** Strenna pel 1904. Folio, pp. 68; ill. 1903
The articles in this are;—
N. Pedrolli, Gita alla Cima Tosa.
— Gita alpina del Petrarca.
D. Reich, I castellieri del Trentino.
D. Emer, Alpi! Alpi! and other poems.
Dr Battisti, I laghi del Trentino.
Guido, La Cima di Boai.
— Da Rubbi a Peio.
I rifugi d. Soc. alp. tridentini.
- Bollettino. Folio, ill. Maggio, 1904—onwards
A monthly publication.
- Guida-Orario d. Ferrovia della Valsugana. 1904
Obl. 8vo, pp. 11; map, ill.
- Guida di Pergine, Val dei Mocheni et Pinè. Dr Cesare Battisti. Trento, 1904
8vo, pp. 94; map, ill.
- Trieste. Club turisti Triestini.** Il Tourista. vols. 1, onwards. 1894—onwards
Folio and monthly to vol. 6, 1899; 8vo and quarterly thereafter.
This club is largely interested in speleology.

- Verona. Società pro montibus della Provincia da Verona.**
Statuto. 8vo, pp. 7. 1904
This Society scarcely comes under the heading of Alpine Clubs, but its work is associated with alpine districts. It is one of many similar societies of similar title, having for their objects, the encouragement of afforestation and of all matters of pastoral and agricultural economy and the protection of plants, birds and animals in alpine regions.
- Vienna. Alpiner Reise-Club.**
Mittheilungen. 4to. vol. 1, no. 1. 1898
— Wiener Bergsteigerbund. Satzungen. 1905
8vo, pp. 9. MS.
- Zürich: Akadem. Alpen-Club. IX. Jahresbericht.** 8vo, pp. 43. 1904
List of expeditions of members, with full particulars of all new expeditions: and list of members.

Pamphlets, Periodicals, and Magazine Articles.

- Alpiner Wintersport**; see Alpine Club Publications, Ski Clubs, Berne.
- Alpinisme.** Les femmes et l'alpinisme. In *La Vie Heureuse*, Paris, vol. 3, no. 9. Folio, pp. 170-171; portraits. Septembre, 1904
- Bach, R.** Die Grenze zwischen Britisch-Colombia und dem Kanadischen Yukongebiete. In *Globus*, Braunschweig, vol. 85, no. 24. 23 Juni, 1904
4to, pp. 379-383; map, ill.
- Brooks, Alfred H.** An exploration of Mount McKinley, America's highest mountain. In *Smithsonian Report for 1903*.
Washington, Govern' Printing Office, 1904
8vo, pp. 407-425; plates. Reprinted from *Journ. of Geogr.* Chicago, vol. 2, no. 9, November, 1903
- Brown, R. Marshall.** Cirques: a review. In *Bull. Amer. Geogr. Soc.*, New York, vol. 37, no. 2. 8vo, pp. 86-91. February, 1905
- Chaignon, André.** How two women climbed Mont Blanc. In *the London Magazine*, vol. 13, no. 77. 8vo, pp. 570-576; ill. December, 1904
- de Curzon, Henri.** Comment on monte au Mont-Perdu. In *Le Magasin pittoresque*, Paris, Année 72, no. 15-16. 1 et 15 août, 1904
Folio, pp. 345-349; 377-381; ill.
- Dansey, Rev. R. P.** The glacial snow of Ben Nevis. In *Symons's Meteorological Mag.*, no. 470, vol. 40, pp. 29-31; ill. March, 1905
This article refers to an accumulation of snow and ice, measuring in August about 100 x 50 yards, said to have the characters of a glacier, except that it is not permanently fed by névé. It is an interesting suggestion that there is a glacier in Great Britain, but it would have been better had the article been kept back until the fuller information, which it states to be needed, had been obtained. The character of the ice and its movement, if any, are still undetermined.
- Deutsche Alpenzeitung.** Vol. 8, 2nd vol. of the 4th year. Folio, pp. 308; plates.
München, Gustav Lammer, Oktober 1904-März 1905. M. 6
This is a finely and copiously illustrated periodical. A special feature of illustration not to be found elsewhere is the reproduction of various 'Exlibris' with alpine subjects. Drawings as well as photographs have been used as the sources of the illustrations. The text has many articles on climbing and much information on huts, alpine clubs and literature, equipment, etc.
We may mention a few of the chief articles, to show the subjects treated of;—
A. Zott, Die Meije.
Th. v. Rothberg, Aus d. Allgäuer Alpen.
A. Hofbauer, Das Sass Songher.
E. Christa, Monte Rosa.
H. Hoek, Ueber Schneeschuhenlaufen.
J. Engelsperger, Die Fünffingerspitze.
O. Sehrig, Skitouren.
H. Pfann, Erste Ueberschreitung des Ushba.

- Ebeling, M.** Die Ergebnisse einer Studienreise im Gebiet des Jostedalbræ. In Zeits. d. Ges. f. Erdk. Berlin, no. 1. 8vo, pp. 5-19; map, ill. 1905
- Fay, C. E.** Pioneer climbing in a new Switzerland. Fascinations and dangers of mountain-climbing in the Canadian Rockies. In The Technical World, vol. 11, no. 6, Chicago. 8vo., pp. 693-703; ill. February, 1905
— Reprint of this.
- Foster, G. E.** The third ascent of the Matterhorn. In Climbers' Club Journal, vol. 6, no. 24, pp. 181-187; reprinted from the 'Leisure Hour.'
- Glaciers.** Bericht der Gletscher-Kommission für das Jahr 1903/4. (Hagenbach-Bischoff.) Winterthur, Kaufmann, 1904
8vo, pp. 297-303. Reprinted from Verh. d. schw. naturf. Ges. 1904.
- Guillarmod, J. J., Dans l'Himalaya.** A review of this book occurs in the Scottish Geogr. Mag., vol. 20, no. 11, pp. 584-589. November, 1904
- Haffner, E.** Det norske fjeldsystem. In Norske Geogr. Selskab Aarbog, vol. 15. 8vo, pp. 1-36. Christiania, 1904
- Harwood, W. G.** Outposts of Empire. In The World To-Day, Chicago, vol. 8, no. 2, pp. 148-156; ill. February, 1905
Illustrations of Albertan mountains, Canada.
- Höstel, W.** Der Simplontunnel. In Über Land u. Meer, Stuttgart, vol. 93, no. 24. Folio, pp. 503-505; ill. 1905
- The Illustrated Nippon,** no. 15. Tokyo, 1 January, 1904
Folio, pp. 8 of illustrations.
Fine views of mountains in Japan and elsewhere.
Presented by the Rev. Walter Weston.
- Illustrated Switzerland.** Editor E. E. Lehr-Turnbull.
Folio, col. and other ill. Monthly. Berne, Benteli, 1905. 20c. a number
This new paper is edited by the editor of the 'Swiss Advertiser,' noted in the last number of the Alpine Journal, now absorbed in 'The English Herald.' It is excellently illustrated and has much mountaineering information. It is obtainable in London, price 6/- a year.
- Jaeger, Dr Fritz.** Bericht über den Anfang der deutsch. ostafrik. Expedition . . . unter Leitung von Prof. Dr C. Uhlig. In Zeits. d. Ges. f. Erdk. Berlin, no. 3, pp. 215-217. März, 1905
Ascent of Kibo, August 2, 1904.
'Wir wurden alle drei mehr oder weniger heftig von der Bergkrankheit befallen. Wir erreichten den Kratertrand des Kibo an der Johannes-Scharte (etwa 5950 m.). Uhlig konnte einen starken Rückgang der Eismassen im Krater seit 1901 feststellen. Das ist insofern auffällig, als gerade in diesem Jahr die Regenzeit in Ost-Afrika besonders ausgiebig war. Die Witterung muss hier oben ganz anders verlaufen als unten.'
- Lendenfeld, E. v.** Über die Abschmelzung der Gletscher im Winter. In Globus, Braunschweig, vol. 85, no. 24. 23. Juni, 1904
4to, pp. 277-279.
- Merzbacher, Dr. G.** Forschungsreise im Tian-Schan. Reprinted from Sitzungsber. d. mathem.-phys. Klasse d. k. Bayer. Akad. d. Wiss., Band 34, Heft 3. 8vo, pp. 277-369. München, Roth, 1904
— Vorläufiger Bericht über eine in den Jahren 1902 und 1903 ausgeführte Forschungsreise in den zentralen Tian-Schan. Petermanns Mitteilungen, Ergänzungsheft Nr. 149. Gotha, Perthes, 1904. M. 8
4to, pp. 100; map and two panoramas.
Herr Merzbacher explored the glaciers and valleys round Khan Tengri, the summit of which he attempted, but failed, to reach. A large map and two very fine panoramas, one a tele-panorama, accompany the narrative.
- New Zealand.** Successful ascent of Mount Cook. In Christchurch Press. March 23, 1905
Messrs. Teichelman, H. E. Nowton and R. S. Low, with the two guides J. Clarke and P. Graham, left the Hermitage on January 31st last, and ascended next day to the Haast Ridge bivouac. February 2nd

- was spent in cutting steps up to Glacier Dome. These were used next day, when the summit was reached at 5 p.m. by the north-east arête.
Le Prealpi; see Alpine Club Publications, Milan.
- Reusch, H.** Riingsbræen. In *Norske Geogr. Selskab Aarbog*, vol. 14.
 8vo, pp. 119-124. Kristiania, 1903
- *Fra Kaafjorden i Lyngen*. In *Norske Geogr. Selskab Aarbog*, vol. 15.
 8vo, pp. 14-34. Kristiania, 1904
- Russell, Henry.** *L'art de gravir et d'explorer les Pyrénées*.
 8vo, pp. 8. Pau, Garet, 1905
- Das Schnee-Huhn.** Korrespondenzblatt der "Schneehühner": Offizielles Organ des Ski-Club Luzern. 52 numbers.
 4to, ill. Luzern, April 9, 1904-April 1, 1905. Fr. 3
- On the number for April 16, 1904, there is added to the title, 'Führer auf die Gipfel der Schweizeralpen,' and on and after October 15, 'Korrespondenzblatt, etc.' is omitted.
- Each number consists of pp. 4, and contains an illustrated route-guide to some Swiss mountain.
- Ski**; see Alpine Club Publications, Ski Clubs.
- Spont, H.** Aux Pyrénées. L'ascension du Néthou. In *Rev. Illustrée*, Paris, vol. 14, no. 18. Fol., 6 pp.; ill. 1 Septembre, 1899
- *La conquête du Mont-Perdu par Ramond, en 1802*. In *A travers le monde*, Année 8, no. 32. Folio, pp. 351-2; ill. 9 août, 1902
- *A travers les Pyrénées. Les Monts Maudits. Le Vignemale, Le Néthou, Les campements*.
 In *Le tour de France*, folio, ill. vol. 1, nos. 1, 2, 4, 7. Mai, juin, août, décembre, 1904
- Tyndall, J.** A holiday among the Lakes. In *Climbers' Club Journal*, vol. 6, pp. 26-41: reprinted from *Saturday Review*, ? 1852.
- Uhlig, Dr C.**; see Jaeger, F.
- Wigner, J. H.** Note on results of expedition to Iceland. In *Scottish Geogr. Mag.*, vol. 20, no. 11, pp. 597-598. November, 1904

ALPINE NOTES.

'THE ALPINE GUIDE.'—Copies of Vol. I. of the new edition of this work, price 12s. net, and of 'Hints and Notes, Practical and Scientific, for Travellers in the Alps' (being a new edition of the General Introduction), price 3s., can be obtained from all book-sellers, or from Messrs. Stanford, Charing Cross.

THE LIBRARY CATALOGUE is now printed and may be obtained, bound in cloth, on application to the Assistant Secretary, 28 Savile Row. Price 3s.; postage 4d.

THE ALPINE CLUB OBITUARY IN 1905.—A. Williams (1878), F. J. Stevens (1899), Dr. Edouard Richter, Honorary Member.

THE FOUNDER'S MEDAL, ROYAL GEOGRAPHICAL SOCIETY.—We take the following from the 'Geographical Journal,' May 1905, p. 560:—'The Founder's Medal to Sir Martin Conway, for his explorations in various mountain regions and in Spitsbergen, prosecuted during a long series of years, and for the valuable contributions to geography resulting from those explorations in the form of papers, maps, and other publications.' We heartily congratulate Sir Martin Conway on the great and well-deserved honour which has been conferred upon him by the Royal Geographical Society.

TIBET.—In the 'Geographical Journal' for May 1905, pp. 494–5, in the account of the discussion on Sir Frank Younghusband's paper on 'The Geographical Results of the Tibet Mission,' will be found some very interesting remarks by Mr. D. W. Freshfield. In referring to Captain C. G. Rawling's expedition to Western Tibet and Rudok, Mr. Freshfield points out that, thanks to Captain Rawling's discoveries, 'we need not correct our text-books by inserting a new highest mountain in the world.'

GLACIAL RESERVOIRS AND THEIR OUTBURSTS.—In the number of the 'Geographical Journal' referred to above will be found an article on this very interesting subject by M. Charles Rabot. The paper treats of such outbursts in the Alps, Norway, Iceland, Spitsbergen, Greenland, Alaska, and the Himalaya. In a 'Note' which follows M. Rabot's paper Mr. D. W. Freshfield expresses the hope that M. Rabot's article (which is accompanied by copious statistics) will fulfil the writer's object by attracting the attention of glaciologists, geologists, and travellers to the class of catastrophes which he describes. Mr. Freshfield calls attention to the two great catastrophes recorded in recent times in the Caucasus, viz. 'the periodical outbursts proceeding from the Devdoraki glacier under Kasbek in the middle of the last century, which on more than one occasion destroyed the Dariel road, and the great flood of the torrent of the Gezel Don glacier in the same district in 1892.'

PRARAYÉ.—We learn from the 'Rivista Mensile C.A.I.' for April, p. 127, that the new hotel at Prarayé will be opened this summer, though the actual date is not given.

LLIWEDD.—The first ascent of the lower E. buttress of Lliwedd from the N. was made on April 21, 1905, by Messrs. A. E. Elias and J. M. Archer Thomson. They climbed the first portion by a narrow couloir, and thence by the central rocks of the face.

L'ENLAIDISSEMENT DE LA SUISSE.—Under this title there appears in the 'Journal de Genève' for February 10, 1905, an article which calls attention to the disfigurement of Switzerland in terms with which we find ourselves in full sympathy. After referring with entire approval to the refusal of the Grisons authorities to sanction a funicular railway to the Piz Landquart, it proceeds:—

“ Il faut attirer les touristes ! ” C'est le honteux prétexte avec lequel on cherche à excuser tous les vandalismes. Mais de plus en plus les touristes eux-mêmes se rebellent et s'indignent contre cette Suisse traquée et ridicule qu'on leur offre comme un champ de foire ou un quartier d'exposition.'

It then calls attention, with warm approval, to Mr. E. W. Hallifax's letter to the 'Westminster Gazette' protesting against the projected Zinal and Gabelhorn railway. It is pleasant to find the objections made by English lovers of the mountains so strongly supported by so influential a paper as the 'Journal de Genève.'

REVIEWS AND NOTICES.

Zeitschrift des Deutschen und Oesterreichischen Alpenvereins, vol. xxxv. 1904.

THE current volume—the tenth which has appeared under the editorship of Herr H. Hess—is of special interest, as it contains an account of the memorable Suanetian campaign of 1903, a short report of the expedition of 1902 to the Mustagh Range, and an important paper on the glaciers of the Argentine Cordillera.

This year geology is represented by Herr J. Blaas, whose paper on 'Structure and Relief in the Alps' treats for the most part of the Eastern Alps. Herr E. Oberhummer's third article on 'Alpine Cartography' deals with Swiss map-making. The productions of the earlier workers from Türist (1495) to Meyer (1786), and also of some modern cartographers, are briefly reviewed, the bulk of the chapter being devoted to the history of the Dufourkarte and to the technical differences between it and the admirable Siegfried-atlas.

Professor R. Hauthal contributes from La Plata a paper on the glaciers in the neighbourhood of Lago Argentino, in the Patagonian Cordillera. The ice streams of this region have been subject, in the past, to great oscillations in their periods of advance and retreat; at present the only one which is advancing is the Bismarck Glacier, whose tongue stretches $2\frac{1}{2}$ kilometres into the lake. The author discusses the subject of moraine-formation at considerable length; one of the photographs, taken in 1900, shows the margin of the Bismarck Glacier with some huge blocks of stone, of which there had been no trace the year before, the only explanation being that they had formed part of the ground moraine and had been thrust up laterally by some movement of the ice. Professor Hauthal believes that, under certain conditions, an *advancing* glacier can exert considerable erosive action on its bed.

Dr. L. v. Hörmann, with the aid of Herr Ernst Platz's excellent sketches, describes the costumes worn by the natives of Montavon, the Bregenzerwald, and the Walzerthal—the only Vorarlberg valleys where the 'Volkstracht' is still found. The Walzerthal 'Tracht' appears to be more quaint than becoming. It seems inevitable that, with the advent of the tourist, the old dress will disappear from these districts, even as it has vanished from so many other Alpine valleys.

The papers essentially on exploration and mountaineering occupy more space than usual in this year-book. Dr. H. Pfannl gives a necessarily condensed account of the expedition undertaken in 1902 with Dr. Wessely, Dr. Guillarmod, and Messrs. Eckenstein, Knowles, and Crawley to the Karakoram Range with the object of attacking K2, and with the hope of ascertaining to what degree the power of climbing is affected by diminished air-pressure at altitudes previously unattained by mountaineers.

After travelling by way of the Zoji La, Dras, and the Indus

Valley to Askole, the party arrived in the second week in June at the Baltoro Glacier, ascended it for eight days, and then turned N. up the Godwin-Austen Glacier to the foot of K2, for which they obtained from the natives the name Chogo Ri (Great Mountain). On gaining the point marked 'Possible Saddle' on Conway's map it was discovered that the Godwin-Austen Glacier extended about eighteen miles further to the N.E., and about midway up this higher glacier basin the furthest camp was placed, at a height of 19,450 ft., and was occupied from July 1 till August 6. During this time the glacier was explored, and a series of reconnaissances were made, in order to find a route by which coolies could be taken to a high bivouac on K2, Doctors Wessely and Guillaumod gaining a height of 22,000 ft. But the work was impeded by the persistent bad weather and heavy snowfalls. Eventually Dr. Pfannl, disabled by illness, was accompanied by Dr. Wessely to a lower camp, and unfavourable weather stopped further operations.

The party seem to have been well equipped, and the commissariat and transport arrangements to have been carefully organised. The author believes that, as men in good health quickly adapt themselves to the altered conditions, one of the great peaks will soon be climbed. The experience of this expedition, however, would indicate that everything will depend on the possibility of efficiently supporting the actual climbers with supplies, &c., from the lower camp.

The expedition to the Caucasus, which took place under the guidance of Herr W. R. Rickmers in 1903, is the subject of a series of papers by various members of the party. The journey from Kutais over the Laila to Suanetia is excellently described by Fräulein C. v. Ficker, and Herr Rickmers tells with his usual buoyancy and vigour how the first ascent of Shtavler was made and how the journey to Elbruz was cut short by the disappearance of all the provisions beneath the waters of the Nakra. During the last seventeen years the crags of Ushba have looked down on some stirring scenes—not always chronicled—but surely on nothing so dramatic as the events recorded in the succeeding chapters. Herr H. v. Ficker's paper relating the unsuccessful attack on the south peak of Ushba supplements the account already given to the Alpine Club by Herr Rickmers. The author describes the preliminary reconnaissance and discovery of the narrow couloir giving access to the lower ice slope, the long and desperate struggle with the formidable western rock-wall, the fall of the leader—Herr Schulze—and the perilous and exhausting task of lowering the unconscious comrade to the foot of the rocks.

The narrative is continued by Herr A. Schulze, the only member of the first party who shared in the final attack. Herr v. Ficker's hand had been disabled at the moment of the accident. This time the dangerous rock-face was safely climbed; some idea of its difficulty may be gained from the times given. The ascent from the Gul camp to the summit of the S. peak occupied seventeen hours, inclusive of halts, and of this period nearly eight hours

were spent on the western wall, estimated to be about 500 ft. in height. The author, who led the party, describes the steep pitch near the top of the precipice as the most difficult and hazardous place he had ever climbed.

As the summit was not gained till daylight was fading the descent had to be commenced directly, and after an alarming electrical disturbance had passed off the night was spent on the highest snow-slope, at a height of some 15,000 ft.

A fortnight later the adventurous traverse of both peaks of Ushba from N. to S. was accomplished, and Dr. G. Leuchs gives a most lucid and interesting account of this exploit. On the first day of the expedition the author, with Herren Distel and Pfann, ascended the Ushba Glacier (on the W. side of the mountain) to the foot of the great icefall, where the night was passed, and here the sleeping bags were left behind.

Next day a way was forced through the icefall to the shoulder of the N. peak, and after six or seven hours of rather risky ice-work on the steep N. ridge the second bivouac was made at about 15,000 ft., 2½ hours below the summit.

In respect of distance covered the third day was a short one; the N. peak was crossed, but extraordinary and unexpected difficulty was encountered in traversing the saddle, above the S. end of which the third night had to be spent. Here Herr Leuchs had the serious misfortune to lose his rucksack, which fell on to the Ushba Glacier with most of his spare clothing and nearly all the remaining provisions; so that during the last forty-two hours of the climb the party were almost foodless.

On the fourth day the top of the S. peak was gained by a climb of four hours up rocks covered in many places with ice. The descent of the western rock-wall was facilitated by the ropes and loops left by Herr Schulze's party; the fourth bivouac was at the top of the narrow couloir above the Gul Glacier, and the village of Gul was reached at 1 P.M. on the fifth day.

This expedition must rank as one of the most remarkable displays of skill, determination, and endurance in mountaineering annals. Fortunately the weather remained favourable throughout; had the climbers been overtaken by really bad weather after leaving the N. peak their situation would have been serious in the extreme. It is noteworthy that the members of the party were led to the conclusion that the N. summit is the higher of the two peaks, this opinion being supported by aneroid readings.

From these exciting incidents in distant lands we turn to the more familiar scenes of the Alps. The following two chapters deal with a form of sport which the climate of these islands does not favour—i.e. winter expeditions on ski—Herren E. Schottelius and H. Hoek describing ascents respectively of the Strahlhorn and of the Blindenhorn. In the first mentioned expedition the ski were left below the Adler Pass.

Dr. Karl Blodig continues his attractive paper on the Saasgrat, and after recounting several ascents of the Mischabel peaks con-

cludes with the traverse in one day of the Nadelgrat from the Lenzjoch to the Dürrenhorn, his companion on this occasion being Mr. E. T. Compton, whose admirable sketches, as before, illustrate the article.

Mont Blanc is the subject of two papers, both describing guideless ascents made in 1903 from the Italian side under somewhat unfavourable conditions. In one case Herren Hacker and Pichl made a variation of the Dôme route; in the other Herren v. Radio-Radiis and Weber slept at the Col de Miage and traversed the Aiguille de Bionnassay. Both parties had to pass the night at the Cabane Vallot during the ascent.

The remaining six chapters, collectively occupying nearly half the volume, are devoted to monographs on various mountain groups in the Eastern Alps, the authors maintaining in almost every instance that these particular districts are undeservedly neglected by mountaineers. This section of the book is illustrated by many excellent full-page reproductions of photographs by Herren Benesch, Kleintjes, Mayr, and others.

Dr. F. v. Cube contributes the first part of a treatise on the topography and mountaineering history of the Hornbach range, in the Algäu Alps, and Herr H. Leberle begins a similar article on the Wetterstein group, much frequented as to its highest peak, the Zugspitze, but, comparatively speaking, forsaken elsewhere. This chapter closes with a good account of an eventful ascent of the Wetterwand in 1903.

Dr. F. Hörtnagl's paper takes us S. of the Inn valley to a much higher range, the Kaunergrat, in the N. of the Oetzthal Alps, while Herr M. H. Mayr sings the praises of the seldom visited Pfunderer peaks, in the S. of the Zillertal Alps.

Another neglected district—this time in the Dolomites—finds its champion in Dr. V. W. v. Glanvell, who describes a number of first ascents in the Fanis-Tofana group. The summits mentioned as having been strangely disregarded by climbers lie to the W. and N. of the Tofana massif; they offer the attractions of interesting rock-climbing problems, and are accessible without great difficulty from Peutelstein or Falzarego.

The series concludes with a supplementary chapter to Dr. K. Bindel's monograph of 1899-1900 on the Sella group, bringing the climbing records and other information up to date. An excellent large-scale map of the Langkofel and Sella groups accompanies the volume.

The Alps. By W. Martin Conway. Painted by A. D. McCormick.
London: A. and C. Black. 1904.

This, as might naturally have been expected, is a delightful book. On the one hand, it does not endeavour to describe the indescribable. 'The great revelations of nature's majesty are indescribable. Who that had never seen a thunderstorm could learn its majestic quality from description?' On the other hand, it is no mere question of *εἶπω τι τῶν εἰωθῶτων*; the book has been written and the

illustrations painted by two of those who know, 'to remind those who know; to suggest further visions of a like character to those they possess within themselves.'

The book is divided into twelve chapters, of which Chapter V., entitled, 'The Moods of the Mountains,' perhaps appeals to us most. From it we extract the following account of climbers in a storm. It will awaken vivid memories in most of us:—

'This final onrush is often a most magnificent and solemn sight. The gathering squadrons of the sky grow dark, and seem to hold the just departed night in their bosoms. Their crests impend. They assume terrific shapes. They acquire an aspect of solidity. They do not so much seem to blot out as to destroy the mountains. Their motion suggests a great momentum. At first, too, they act in almost perfect silence. There is little movement in the oppressively warm air, and yet the clouds boil and surge as though violently agitated. They join together, neighbour to neighbour, and every moment they grow more dense and climb higher. To left and right one sees them, behind also and before. The moments now are precious. We take a last view of our surroundings, note the direction we should follow, and try to fix details in our memories, for sight will soon be impossible. Then the clouds themselves are upon us—a puff of mist first, followed by the dense fog. A crepitating sound arises around us; it is the pattering of hard particles of snow on the ground. Presently the flakes grow bigger and fall more softly, feeling clammy on the face. And now, probably, the wind rises and the temperature is lowered. Each member of our party is whitened over; icicles form on hair and moustache, and the very aspect of men is changed to match the wild surroundings. Under such circumstances the high regions of snow are more impressive than under any other, but climbers must be well-nourished, in good hard condition, and not too fatigued, or they will not appreciate the scene. No one can really know the high Alps who has not been out in a storm at some great elevation. The experience may not be—in fact is not—physically pleasant, but it is morally stimulating in a high degree, and æsthetically grand. Now must a climber call up all his reserves of pluck and determination. He may have literally to fight his way down to a place of shelter. There can be no rest, neither can there be any undue haste. The right way must be found and followed. All that can be seen is close at hand, and that small circle must serve for guidance. All must keep moving on with grim persistence, hour after hour. Stimulants are unavailable, and food is probably inaccessible. All depends upon reserve stores of health and vigour, and upon moral courage. To give in is treason. Each determines that he, for his part, will not fail his companions. Mutual reliance must be preserved.

'At first the disagreeable details are most keenly felt by contrast, but, when an hour has passed and the conflict is well entered upon, they are forgotten. We become accustomed to our surroundings and can, if we will, observe them with a deliberate interest. How the winds tear the mists about! There is no constant blast of air,

but a series of eddying rushes, which come and pass like the units of an army. Each seems to possess an individuality of its own. Each makes its attack and is gone. One smites you in the face; another in the back. Some seem not devoid of humour; they sport with the traveller in a grim way. Others are filled with rage. Others come on as it were reluctantly. . . . Unpleasant is it? Well, perhaps! but it is good to have had such experiences. They develop a man's confidence, employ his powers, and enrich his memory.*

From Chapter XI., entitled 'The Human Interest,' we take the following:—

'Some part of the popularity of the ascent of Mont Blanc from Chamonix is due to the fact that the mountain is the highest in the Alps; part is due to the fascinating beauty of the ice and snow scenery passed through; but far the highest attraction is the long and interesting history of the climb. No one, I suppose, ascends Mont Blanc without a thought of Balmat and De Saussure, and at least some dim consciousness of the number of early climbers who mounted by the way he takes, and felt all the strange emotions and high excitements they so naively recorded. What would the Tödi be if robbed of the memory of Placidus à Spescha? Even a Mont Ventoux can attain dignity and importance by association with so great a man as Petrarch.' †

The last chapter is devoted to volcanoes which we hardly expected to meet with in this book; because, as the author remarks, 'there does not exist a single volcano in the Alps nor, so far as I am aware, even the ruins of one. To the mountain-lover, however, in the broad sense—and it is for such I am writing—volcanoes are as interesting as any other definite type of peak, and I therefore propose to devote this chapter to a consideration of them from the picturesque and climbing point of view.' ‡ We venture to think that most readers will be grateful to Sir Martin Conway for this chapter.

Among the passages that we noted for remark we find, 'We quit the valleys for the high snows in search of beauty. From the heights we return to the valleys on the same quest. Everywhere we may find it, and to find it is all we need ask; for it is like pure gold, whereof no fragment is intrinsically more precious than another.' § 'The green of the Alps is the true keynote of Swiss colour.' ¶ But space forbids us to do more than quote them.

We have noticed but one error, a misquotation on p. 126, last line, where 'reach out' has been substituted for 'puts forth.' And though this is not a work such as absolutely demands an index, yet if the author had supplied one he would have still further increased the gratitude which we feel towards him for this excellent book.

Grateful, too, all readers will be to Mr. McCormick for his

* Pp. 115-9.

† P. 264.

‡ P. 274.

§ Pp. 226-7.

¶ P. 249.

delightful illustrations. We have left ourselves small space for comment upon them, but one or two we must mention. Our favourites are: No. 65, 'In the Val d' Aosta,' which recalls to us many an afternoon halt in that paradise of Italian softness and exuberant fruitfulness; No. 80, 'The Aletschhorn, with clouds gathering at sunset'; No. 42, 'The Breithorn from Schwarz See'; and No. 26, 'The Madonna del Sasso, Locarno.'

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall on Tuesday evening, February 7, at 7.30, the Bishop of Bristol, *President*, in the chair.

Messrs. T. T. Jefferey, L. H. T. Martin, A. E. Russell, and E. H. Stevens were balloted for and elected members of the Club.

The PRESIDENT stated that news had been received of the death of Dr. Edouard Richter, an honorary member of the Club, the author of 'Die Gletscher der Ost-Alpen' and editor of 'Die Erschliessung der Ost-Alpen.' He also informed the Club that Mr. Weston had presented to the Club a very beautiful and valuable Japanese Kakemono, by Kanō Hōgen, a leading artist of the Kano School, which was found and acquired by him at a monastery in the mountains of Japan. With reference to the Winter Dinner, he proposed, on behalf of the Committee, the resolution of which notice had been given in the circular, 'that it is desirable that a committee be appointed to consider the possibility of holding the next Winter Dinner in a larger room.' He said that the value of the Dinner with many members depended a good deal on their being able to bring a guest. A large number of members were already prevented from doing so; the figures which would be mentioned by the Hon. Secretary showed that it would be necessary to reduce the number of guest tickets to be balloted for still further next year if no change was made. Moreover it was necessary to bear in mind that the jubilee of the Club was approaching, when an unusually large attendance at the Dinner might be anticipated, and it would be well to face the difficulty before that occasion arrived. The Committee, therefore, desired to have an expression of opinion from the Club as to whether the question of holding the Dinner in a larger room should be considered. It was proposed to appoint a small sub-committee, consisting partly of members not now serving on the General Committee, to inquire into the matter.

The HON. SECRETARY went into the figures of the numbers dining for some years past. He said that the decisive factor was the number of members who dined, and that this showed a steady tendency to increase; during the five years preceding the introduction of the ballot it had remained nearly stationary, between 160 and 170, only rising above 170 in the last year, but in 1902 and 1903 it had risen to above 180, and last year had advanced to 205. The consequence was that it had been necessary for a good many

persons to dine in an overflow room, which it had been the special object of the ballot to avoid. He thought the experience of the last three years had proved that the ballot was only a palliative, not a remedy, and that it was absolutely necessary to face the prospect of moving into a larger room.

Mr. SOLLY said that there was another room at the *Métropole* which could accommodate a much larger number than the present room, so that after all it might not be necessary to go elsewhere.

Dr. WILLS referred to the importance of good ventilation.

The resolution was then carried by a large majority.

Dr. TEMPEST ANDERSON read a paper on the 'Lipari Islands and their Volcanoes,' which was illustrated by lantern slides.

Mr. A. J. BUTLER and Mr. MUNRO made a few remarks as to the strange case of Mr. Booty, who, at the very hour of his death in England, was seen by some English sailors to run into the flames of Stromboli pursued by a mysterious figure in black. (See *Notes and Queries* for March 1, 1851.)

Mr. NARLIAN, a former resident in the island of Vulcano, was present and spoke. He said that he and his family had had a very hot time in 1888-89. The eruptions had continued for two years, and at last became so severe that they had to leave the island. One curious incident had occurred in connection with the repair of a telegraph cable. Soundings were taken by the repairing steamer at one spot on two consecutive days, and were found on the second to be 300 ft. less than on the first. This showed a remarkable alteration in the level of the sea bottom.

A GENERAL MEETING of the Club was held in the Hall on the evening of Tuesday, March 7, at 8.30, the Bishop of Bristol, *President*, in the chair.

The Earl of Minto and Mr. Henry Candler were balloted for and elected members of the Club.

The PRESIDENT regretted to state that Mr. Julius Meurer had retired from membership of the Club. He also read the following letter from the Sierra Club of San Francisco:—

To the President and Secretary of the ALPINE CLUB.

San Francisco, Cal. : January 19, 1905.

Gentlemen,—The Sierra Club desires to extend through you to the members of your Club a most cordial invitation to join with us and the Mazama Club in a joint outing to be held during July and August of 1905 in Paradise Park, in the vicinity of Mt. Rainier, and to join us in a climb of that mountain.

On account of the joint nature of the outing this year it will afford an exceptional opportunity for bringing together the members of the English-speaking mountaineering clubs and creating a closer bond between them.

Since the members of your Club reside at such a distance from the Pacific Coast, the Mazamas and the Sierra Club have arranged for the care of those of your members who may desire to join with

us on the same basis as our own members. All that each member will be required to bring with him will be his personal effects and sleeping outfit, the transportation of equipment and commissariat being provided by us. Further details of the trip will be announced by us at an early date and will be communicated to you.

Trusting that many of your members will be able to join with us in this outing and avail themselves of this opportunity of visiting one of the grandest mountains in the United States, we remain

Very cordially yours,

WM. E. COLBY, J. N. LE CONTE, E. T. PARSONS,
Outing Committee of the Sierra Club;

and said that a letter had been received from the Outing Committee of the Mazamas, which was couched in very similar terms, and mentioned that Mt. Rainier had a larger area of living glacier than all of the Swiss Alps. He was sure that the Club would join him in heartily thanking the two Clubs for their hospitable invitation, and hoped that some members would be able to take advantage of it.

The HONORARY TREASURER then presented the accounts for 1904. He said that it would not be necessary to detain the meeting, as there were no items of expenditure which gave any material for comment. In fact, he would only draw attention to one figure—namely, the amount by which the income exceeded the expenditure, which was considerably higher than in any previous year. On the other side there was a novel item, the dividends from the consols purchased a year ago; a further sum of 500*l.* had just been invested in the same way. Referring to the 'Alpine Guide,' he said that slow but steady progress had been made: some portions were already in the printers' hands, and proofs of a considerable number of sections would be ready by the summer, so that section editors who wished to do so might take them out and correct them on the spot.

Mr. WILLINK suggested that the 'Alpine Journal' might be issued with the pages cut.

Dr. CLAUD WILSON expressed a hope that this might not be done.

The HON. TREASURER promised that the matter should be considered.

Mr. R. WYLIE LLOYD asked how much longer the lease of the Club premises had to run, and what would happen when it expired.

The HON. TREASURER said that the present lease expired in June 1910; the Committee were fully alive to the importance of the question raised, but nothing could be done at present.

Captain SCOTT, of the 'Discovery,' gave an address on 'Antarctic Glacier Work,' which was illustrated by lantern slides.

Mr. BUTLER asked if any vegetation had been found.

Mr. FRESHFIELD inquired the rate at which the glaciers moved. In Arctic regions they moved at a more rapid rate than on the Alps. He also wished to know whether there was atmospheric denudation of rocks to form moraines. He supposed that it was impracticable for explorers to carry sufficient on their backs to allow of moun-

taineering. The presence of sledges of course greatly interfered with any attempts at climbing.

Mr. HEATHCOTE asked what had been the highest temperature registered.

Sir R. M. BEACHCROFT wished to know the experience of the expedition in the use of ski, and their practice as to the use of alcohol.

Captain SCOTT, in reply, said that there was no vegetation except lichen, and in a few sheltered spots some mosses. There were no land animals, only the two that were dependent on the sea for food, the penguin and the seal. There was only one insect, about the size of one-third of a pin's head, found in the moss. The movement of the glaciers was very slow; there was scarcely any observable. They were once undoubtedly three or four thousand feet higher than at present, and the inland ice was probably some four hundred feet higher on the whole, and then poured out from the interior; but now it had subsided and no more poured out. The moraines were formed by the barrier pushing along the land. There was now no denudation by freezing water, but at one time the climate must have been much milder and allowed of this. He would not like to say in regard to mountaineering that it was unsafe to explore without a sledge, but he would not like to have attempted it on account of the blizzards and the very low temperature. The highest they had it in the sun was only 48° F. and that was against a rock. At the ship the temperature did not rise above 34° F. With regard to ski, they had not found them of use, though at first they expected that they would be of great service. As to the use of alcohol, the usual amount of rum was served out on board ship. Whiskey was, for some reason, not liked. On the sledge journeys no alcohol was taken.

Dr. WILSON, of the expedition, said he could not say to what family the single curious small insect they had found belonged. Its curious unlikeness to anything else indicated how long a time the Antarctic land had been geologically separate from all other land.

The PRESIDENT proposed a vote of thanks to Captain Scott, which was unanimously accorded.

A GENERAL MEETING of the Club was held in the Hall on Tuesday evening, April 4, at 8.30, the Bishop of Bristol, *President*, in the chair.

Dr. W. H. HOEK was balloted for and elected a member of the Club.

The PRESIDENT informed the Club that the Royal Geographical Society had, with the approval of the King, bestowed one of its two royal gold medals on Sir Martin Conway, in consideration of the eminent services he had rendered to geography, especially in connection with the Himalayas, the Andes, and Spitsbergen. The PRESIDENT was sure that the Club would congratulate Sir Martin and itself. He deeply regretted to have to say that the Committee at their last meeting had received a letter telling of the death of Mr. Alfred Williams; he had been a member of the Club since 1878, and

had bestowed unremitting trouble on the painting of his alpine pictures, living in a very rough and ready way among the mountains, in order to study them. Many members would remember his beautiful drawings of the mountain views in the neighbourhood of Darjeeling, which formed so conspicuous a feature in the Himalayan exhibition, held two years ago.

With regard to the Winter Dinner, the PRESIDENT said that the Committee appointed to consider the question had gone very carefully into the matter, and had visited the various rooms in London which could in any way be considered suitable. This Committee had unanimously recommended that the room at the Métropole be given up, in view of the fact that to remain there meant to continue placing severe restrictions upon members as to the introduction of guests. Further, they found that the only room that would be suitable for the numbers likely to dine this year or in future years was a room at the Hotel Cecil. The acoustic properties of this room appeared to offer a good chance of the speeches being well heard. If the Dinner were held there every member would be able to bring a guest. They therefore recommended that the Dinner be held at the Hotel Cecil. This recommendation the General Committee approved of, and he now laid their report before the Club.

On a vote being taken by show of hands, the report was unanimously approved of.

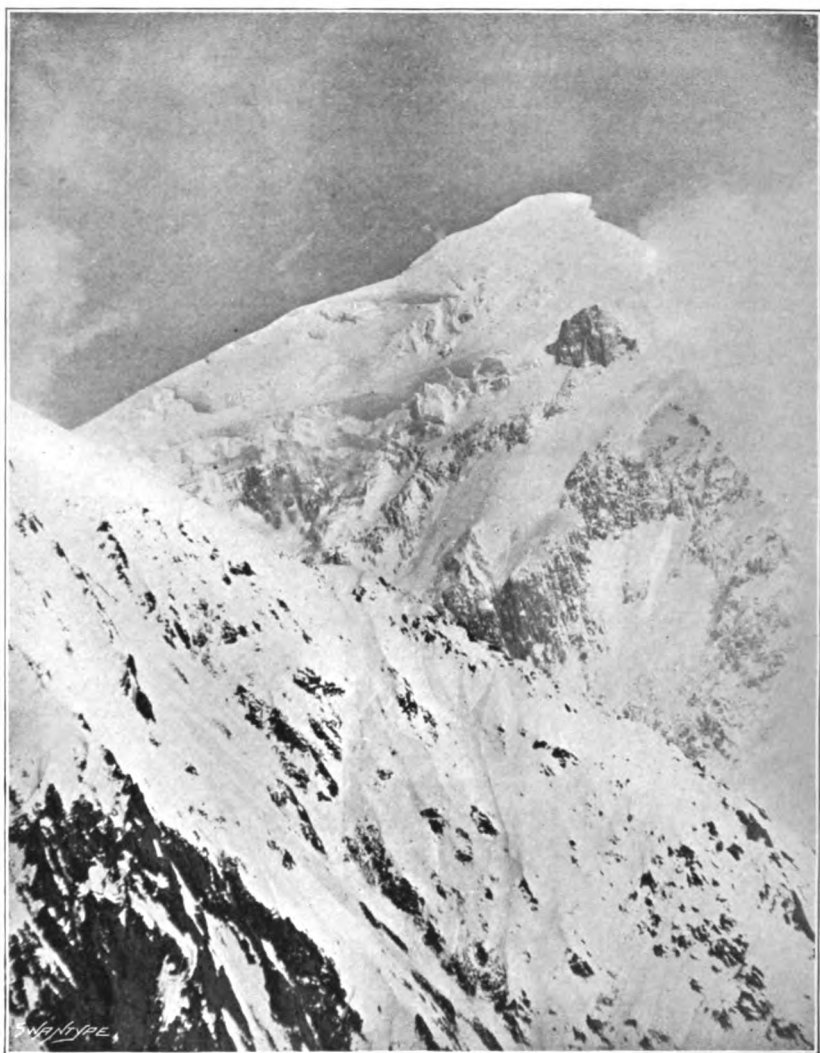
Mr. J. H. WIGNER read a paper on 'The Vatna Jökull Traversed from East to West,' which was illustrated by lantern slides.

Sir MARTIN CONWAY said that he had been much interested in the paper, as it had recalled some similar experiences of his own. He would like to ask whether the party had encountered sodden snow in the middle of the snow field, for his experience of uncrevassed glaciers was that they offered sodden areas, into which one might sink up to the knee. He would also like to ask whether the labour of drawing the sledges was not very great. He thought they ought to congratulate the party on having successfully accomplished a tough bit of work.

Mr. A. J. BUTLER asked if the party had seen any signs of present volcanic activity.

Mr. WIGNER, in reply, said that they had come across patches of sodden snow, but they did not with ski sink much into it. They had not seen any signs of volcanic activity that were recent. With regard to the labour involved in crossing, he supposed that what he said with reference to time taken would have shown how considerable this was. Working as hard as they could, they could do three or four miles in the day. To cover about four miles took about eight hours' work. They found that it was a great advantage to have ski. There was very little vegetation on the peaks, and the only bird met with was an occasional raven. When they came off the glacier they left their sledges, and on the second day reached a farmhouse, where they procured ponies, on the backs of which the sledges were brought down.

A hearty vote of thanks accorded to Mr. Wigner brought the proceedings to a close.



From photograph by Dr. & Mrs. Bullock Workman.

Swan Electric Engraving Co.

PYRAMID PEAK, 24,500 ft., at head of CHOGO LUNGMA GLACIER,
upon which ascent to height of 23,394 ft., was made Aug. 12, 1903.

Telephotograph from distance of 10 miles. Ridge in foreground
about 3 miles distant from camera.

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(No. 169.)

SOME OBSTACLES TO HIMALAYAN MOUNTAINEERING
AND THE HISTORY OF A RECORD ASCENT.

BY DR. WILLIAM HUNTER WORKMAN, F.R.G.S.

(Read before the Alpine Club, May 16, 1905.)

THE mountaineer who aspires to make ascents in the higher Himalayas must be prepared to encounter and overcome many difficulties before he can hope to accomplish his object. Peaks above 20,000 feet lie largely in unexplored localities, distant from human habitation and far above vegetation. They tower up in an intricate labyrinth of mountain *massifs* of rock and ice separated from one another by deep winding valleys, filled with pathless glaciers, which afford the only avenues of approach.

This Himalayan wilderness is wild and savage beyond conception. Its peaks as a rule rise in sharp points or serrated combs, flanked on one or all sides by tremendous precipices, above which lie steep snow and ice slants, and their tops often consist of huge cornices, which from time to time fall in giant avalanches, scoring the precipices beneath. But few of the peaks can be regarded as climbable, owing as well to the inaccessibility of their bases as to their own physical conformation. One may travel a whole season, and find only two or three high summits that can be scaled under ordinary conditions.

The mountaineer must be thoroughly equipped for rock, snow, and ice work, and must provide both himself and his attendants with tents, outfit, and supplies, adapted to the inhospitable region he proposes to visit. As his field of

operations lies entirely beyond and above inhabited districts, he will be thrown wholly on his own resources.

Coolies furnish the only means of transport—a very unsatisfactory means, as they go on such expeditions unwillingly, have no sympathy with the aims of the explorer (probably regarding him as an insane enthusiast), are with difficulty induced to go on snow and glaciers, and are likely to desert as soon as bad weather or especial difficulties are encountered. They cannot be depended on for a day, and break their contract without the least regard for their pledged word or their thumb-marked signature. They are the worst element to control in the whole range of difficulties.

Contending with natural obstacles furnishes a wholesome stimulus to a bold and resolute person, but the constant fear of opposition and treachery on the part of the transport-coolies damps enthusiasm, and tends to paralyse that determined effort which is essential to success. The defection, which sooner or later is practically certain to occur, happens usually at a critical moment, and dashes the prize from the hand that after months of effort is stretched out to secure it.

Providing food for coolies is a serious problem, taxing one's powers of organisation to the utmost. In the inhabited valleys there is no trouble, as they get their food at the villages. The rub comes for the journey beyond the last village. If you arrange that they shall provide their own food and employ special coolies to carry it, they will furnish an amount sufficient for only two or three days; and when that is used they will tell you they can go no further, as they have no food left.

The mountaineer, who expects to accomplish anything, must organise and maintain at his own expense a special commissariat service between the nearest large village where grain can be obtained and his base camp. The smaller villages cannot be relied upon, as they raise only sufficient grain for the needs of their own inhabitants. In 1903, while we were on the Chogo Lungma, we procured the *ata* or meal for our coolies—some four tons—from the Government agent at Shigar, the grain depot of that region, six marches below our base camp. Although he agreed to deliver it regularly under seal, his service was very irregular, and the *ata* shrank 20 per cent. in bulk at the hands of the coolies who carried it. Failure to deliver nearly caused a famine among our coolies at one time.

The surface rocks of the Himalayas are largely in a con-

dition unfavourable to climbing, being soft, brittle, and much splintered. The slants of the rock peaks, where actual precipices do not exist, are covered with loose débris, which, in the absence of paths, makes climbing fatiguing and dangerous. The greatest care has to be exercised by the leaders of a party not to dislodge rocks upon those behind. The falling of a single rock will soon start a rock avalanche—for which, in any case, a sharp look-out has to be kept. On the steeper parts great attention has to be paid to the selection of hand- and foot-holds, which often give way on slight pressure or traction. We found quite a number of sandstone and quartzite cliffs the surfaces of which were so disintegrated that their constituents could be rubbed to sand between the fingers.

Then the effects of altitude have to be encountered. Even persons who are not affected with mountain sickness suffer a certain amount of lassitude, as you know, above 16,000 or 17,000 feet, together with loss of breath on comparatively slight exertion. There seems to be no reserve oxygen in the blood, and the respiratory movements cannot be interrupted for a single second without causing distress. Holding the breath for any purpose, such as to take a snapshot or to stoop to pick up an object from the ground, is immediately followed by panting. This condition makes rock-climbing, where one has to hold the breath to draw oneself up, practically impossible above 17,000 feet. One can only go where foot-holds large enough to rest oneself on to breathe can be had. All movements must be made in a most measured manner. No spurts are permissible. Three or four quick steps in succession revenge themselves by causing painful loss of breath in the effort to replace in the tissues the oxygen thus used. When, however, one has learned to exert one's strength in a manner adapted to the diminished pressure and oxygen, a continuous advance may ordinarily be made without the necessity of pausing constantly to recover breath.

In addition to the usual difficulties presented by steep ice slopes, which here are many times larger and longer than in the lower European mountains, the great amount of new soft snow accumulated during frequent storms, without time to harden, constitutes a hindrance as well as a source of danger to the climber. It is met with above 16,000 feet on glaciers and mountains, and may be anywhere from ankle- to waist-deep. On two occasions we found it up to our shoulders.

During the night the cold may harden its surface so that it will bear the weight of a man, but, shortly after the sun

strikes it, it softens and the foot sinks into it with every step. The mechanical obstruction thus offered, and the wearisome lifting of the feet from deep holes and the plunging forward into new ones, at altitudes where at best one can breathe comfortably only on measured exertion, form serious obstacles to progress.

Coolies soon become discouraged and will not go on, so that camps cannot be forced up to points necessary to the attainment of the mountaineer's ambitions. Several times we had to go into camp by ten o'clock in the morning, as the coolies could not advance further. On glaciers the use of snow-shoes or ski obviates this inconvenience to a large extent, and enables one to make excursions from high camps which would otherwise be impossible; but on sharp mountain slopes these cannot safely be used.

Soft snow constitutes a danger, in that it sometimes covers treacherous ice slopes and conceals crevasses, without being hard enough to form a firm bridge over them. It also furnishes material for the, in some respects, most dangerous variety of avalanche and the most difficult to guard against, which may overwhelm the mountaineer from above, or, starting from where he is ascending, perhaps in consequence of his movements, carry him down with it. Hence prudence demands that no attempt on a steep snow peak should be made till at least the third day after a severe storm. Time should be allowed for the new snow to become settled and fixed by sun and frost, or shed the bottom of dangerous slopes.

Avalanches, be they composed of fresh snow or the result of the breaking-away of huge masses of hardened snow and ice that cornice the brows or accumulate on the projecting buttresses of precipitous peaks, are constantly falling. The mountaineer must be ever on his guard, both on his daily route and in establishing his camp, not to place himself in their possible path. In regard to these, as in regard to some other dangers, 'eternal vigilance is the price of' safety.

As Himalayan avalanches are of much larger dimensions, and descend from greater heights than those of lower mountains, so they travel over greater, often incredible, distances after striking the bases of the precipices. The largest one I have anywhere seen, with a width of half a mile, came down from a mountain flank about ten minutes after we had cleared its front, and shot across the Chogo Lungma Glacier for nearly a mile. The large upper branch of the Chogo Lungma, a mile wide, is swept across its whole width by avalanches from both sides, making the ascent of it a most risky undertaking.

Such bagatelle hardships as those involved in camping in powdery snow with the temperature anywhere from 15° to 0° Fahr., with no means of heating except the flame of a primus stove, used to melt a meagre supply of water to allay the cravings of thirst, or the endurance of great heat, both direct and reflected during the day, when the solar thermometer may register from 190° to 206° Fahr., with the consequent exceedingly painful inflammation and blistering of the face and lips, it is almost needless to mention to the hardy mountaineers of this club. I have been kept awake many a night by the intense burning and throbbing pain associated with deep cracks in my inflamed lips, resulting from the attempt to open my mouth to introduce a morsel of food.

Allowing the beard to grow in the case of those who are favoured by Nature with hirsute capabilities acts as a partial preventive of these unpleasant effects of heat as well as a protection against cold. Every male member of our last expedition, except myself, vied with every other in developing this badge of manhood to its utmost capacity.

As a consequence of my determination to preserve as civilised an appearance as possible, I have pleasing memories of the delights of sitting in the snow, on a biscuit tin, in the twilight of my tent, after the day's march, with the aid of a cup of ice water and a razor, trying to coax a day or two's growth of beard to part company with my blistered and scaling cheeks and chin.

Another circumstance which handicaps the mountaineer is the large amount of uncertain and stormy weather that prevails during the climbing season. From the middle of June to the last of August in Baltistan, and much later in the Eastern Himalayas, the monsoon makes its influence felt with south and south-west winds, and frequent rain and snow fall. During the summer of 1902 we rarely had more than two clear days in succession, and only once did the number amount to four. In 1903, with one interval of three fine days early in July and five from August 8th to 12th, there were only a few days when it was not stormy or the sky covered with heavy clouds.

The conquest of a summit of 21,000 feet, which, I can assure you, is no light task, however easily men may mount to this and greater heights on paper, is likely to require from one's ordinary base, from four days to a week—and of a higher one proportionately more—the greater part of which time is spent in pushing successive camps, two or more

of which usually have to be pitched on snow, to the point from which the final effort is made.*

It is scarcely necessary to say that it is not advisable to be caught on an exposed mountainside, whether in camp or on the march, in a Himalayan snowstorm, with the danger of being frozen to death or carried away by avalanches or the wind.

In this connection account has to be taken of the extreme suddenness with which storms, often of severe character, come on with but little warning. At seven o'clock in the morning the sky may be brilliantly clear, and at ten snow may be falling. During the monsoon I found the existence of cirrho-stratus clouds, even of extreme tenuity, whether over the whole sky or only at the horizon, to be an unfailing sign of an approaching storm. When these were seen a storm was sure to break within twenty-four, generally within twelve, often within six, and sometimes within three hours.

On one occasion we started at four o'clock a.m., by the light of the full moon, to ascend an ice-fall. The sky was absolutely cloudless except for a thin, narrow, hazy stripe just above the extreme southern horizon. By eight o'clock this stripe had spread itself over the whole sky. At half-past eight a thick mist rolled down over the surrounding peaks, obscuring the sun, and at nine snow was falling thick and fast, driven by the wind in blinding sheets. After the monsoon has ceased these clouds are less significant.

There are other points to which I should like to call your attention, but the limits of a paper compel me to draw the line here.

The village of Arandu is situated in the extreme north of Baltistan, in lat. $35^{\circ} 52' N.$ and long. $75^{\circ} 23' 40'' E.$, at the head of the Basha Valley, twenty-three marches, or about 350 miles, north of Srinagar, the capital of Kashmir, and about 550 miles from Rawal Pindi, the nearest Indian railway station. It is the last village met with before one comes to the pathless ice-stream of the great Chogo Lungma Glacier, from whose snout it is distant only 1,184 feet.

* The actual time required depends on the weather, the altitude of the base camp, and the distance of the latter from the peak to be ascended. The above remark applies more particularly to the mountains of Baltistan. In Ladakh and further to the E., where the snow line is higher, it might be quite possible to scale a peak of the above height from a camp at or just below the snow line.

This village served as the base from which Mrs. Fanny Bullock Workman and myself carried out an exploration of the Chogo Lungma and five tributaries, and of the Alchori Glacier during portions of the summers of 1902 and 1903.

Its houses, like those of similar villages, neither attractive nor interesting architecturally, are merely roofed enclosures made of stones, mud, and wattles, intended to shelter sheep, goats, pigs, and fowls, as well as human beings. They shelter also numerous other smaller forms of animal life, whose presence deprives one of all desire to investigate the secrets of their interiors. It takes as much courage to enter one of these abodes as to thread one's way among the unfathomable crevasses of a glacier.

Of the adventures of the journey from Srinagar to Arandu I will not speak. On the marches through the rough and desert Dras and Indus and fruitful Shigar and Basha valleys transport was furnished by coolies from the villages passed through, who were changed at the end of every march. For the work beyond Arandu a permanent corps was necessary, to collect which a Government agent was sent ahead to the Basha Valley. On arrival at Arandu we found some 150 coolies from the different villages awaiting us, from whom we selected eighty-five of the strongest and best clothed to go with us, and several more to perform special services.

It was desirable to take one of the Basha lambardars, or village head men, with us in charge of the coolies, to keep them in order and distribute their food, which we provided at considerable trouble and expense. The only one of the lambardars who had sufficient backbone to be willing to undertake this service was the lambardar of Arandu. The others, as we afterwards learned to our cost, were a craven, worthless lot, who could not be depended on even to furnish the supplies for which they were paid.

The Arandu lambardar accompanied us on both our expeditions. He was a pretty fair mountaineer, and by no means a coward. There was something in him to which one could appeal, which was more than can be said of many of his race. His moral code was not modelled after the strictest Christian ideals. On one occasion, when sent down to Arandu in an emergency to bring up supplies, although he knew we had urgent need of all he could get, he did not hesitate to dispose, at a good price, of a sheep and several dozen eggs and fowls, charged to our account, to a sportsman whom he met, telling us they were lost in the snow.

Still, though we never felt sure of his loyalty, through a

judicious mixture of coaxing and threatening and promises of a good 'bakhshish' he was induced to remain fairly faithful to us, and proved really useful in keeping the coolies up to their work. In comparison with the nine other Basha lambardars we came to regard him almost as a friend, and as a pattern of Balti morality.

The Chogo Lungma Glacier runs a winding course about W. by N. from Arandu for a distance of 30 miles to its source in a col nearly 20,000 ft. above sea level. In these 30 miles it rises from a height of 9,500 ft. at Arandu to 19,000 ft. at the base of the snow wall leading up to the col. Its width varies from a mile at its lower end to about 2 miles at its upper middle portion. It lies among imposing peaks of from 20,000 ft. to nearly 25,000 ft. altitude, those enclosing its upper third being heavily covered with snow. Large sections of its surface are seamed by wide crevasses and split up into ice-falls and séracs of great size, which would afford abundant sport to those interested in this phase of mountaineering.

Twenty-one miles up the glacier a bold rock promontory projects into the glacial ice-stream at the confluence with it of the large Haramosh branch. This promontory is the end of a ragged spur sent down from a magnificent triangular snow *massif* known to the Indian Survey as the Indus Nagar Watershed Peak No. 4, whose top is fixed by the Survey at 22,810 ft. This peak is, with perhaps one exception, the most prominent landmark on the Chogo Lungma, being visible from most points on its upper half and upper branches as well as from heights for a long distance around. Its silent majesty, the purity of its unbroken snow-mantle, and its graceful pointed contour, attract the eye and fascinate the imagination. One never tires of looking at it, and memory recalls it ever with delight. Its apex is certainly the most beautiful snow-needle of the many I have seen.

Upon this promontory, which lies in a region of rock, snow, and ice, a good day's march above the smallest scattered tree-growth, we established our base camp, about 100 ft. above the glacier, at an altitude of 14,000 ft. The surface slopes sharply, and we were obliged to build out terraces on which to place the tents. This formed our headquarters, from which we started out to explore the higher neighbouring regions, and to which we returned as the work was accomplished or when we were driven back by stress of weather.

Here all our supplies and outfit were collected. Here the coolies built huts for themselves in the crannies of the rocks

with slate slabs, which lay around in abundance ; and a busy village soon arose on a spot never before trodden by the foot of man. Gangs of coolies were occupied in cutting and bringing firewood from the hillsides further down the glacier, and fetching provisions for us and themselves from Arandu, where these were delivered from the villages in the valley below. Here also our mail was brought by dak or post-coolies in our employ, who were kept constantly on the route between the camp and Skardo, the last post-village, seven marches distant.

Time at this camp never hung heavy on our hands, even when, as was the case for days together during both seasons, we were storm-bound ; for there was always plenty of work to be done in taking observations, writing up notes, developing negatives, making repairs and preparations for further movements, and looking after the thousand and one matters that pertain to the organisation of a mountaineering and exploring expedition which employed from 85 to 100 coolies.

From the promontory rise two sharp rock summits, one of which so strongly resembles the Riffelhorn at Zermatt as seen from the Gorner Glacier that we christened it the Chogo Lungma Riffelhorn. Although a pigmy in comparison with the peaks around it, it is a giant as compared with the Zermatt peak, having an altitude of 15,337 ft. to the latter's 9,617 ft. It is peculiar, in that a wide band of black slate is superimposed from bottom to top on the grey granite of which it mainly consists. We scaled it several times during both seasons, and built a cairn on its summit, in which records were left. It affords some very fair but rather dangerous rock-climbing, as its surface rocks are rotten and splintered.

Soon after our arrival in 1902 three splendid snow-peaks, soaring up from an ice-clad mountain ridge which forms one of the barriers of the upper arm of the Chogo Lungma, attracted our attention, and we determined, should weather permit, to make a more intimate acquaintance with them. We dared not hope to conquer the highest, which, the dominant peak of the glacier, seen from nearly every part of it, pierces the sky at an elevation of 24,500 ft. To ascend this would necessitate camping at from 21,000 ft. to 22,000 ft. among the tumbling ice masses at the base of its cone, a proposition which we felt the coolies could never be brought to attempt, and which in any case could only be thought of during a prolonged period of the finest weather, an event not likely to happen.

But we hoped to be able to climb the two lower summits,

which were sufficiently high and difficult to satisfy the ambition of any ordinary mountaineer. During the summer of 1902 the weather was so continuously bad that no opportunity to carry out our plan presented itself. There were only two or three consecutive pleasant days. We made reconnaissances, however, on two sides of these mountains in the course of our exploring work, ascended a peak of 17,814 ft. and a col of 19,260 ft. in their neighbourhood, and gained a good idea of where they could and could not be attacked. From two attempts upon the steep, snow-covered, avalanche-furrowed wall leading up to them we found the scaling of this would prove by no means the least difficult part of the undertaking.

Fortified with the information thus obtained, and provided with additional outfit suggested by our experience of 1902, we returned to our base camp early in July 1903, determined to seize the first favourable opportunity to lay siege to the ramparts which beckoned to us so enticingly from above. The latter half of July and the first week in August we lay storm-bound in our camp most of the time, with everything ready to start as soon as the weather should take a decided turn for the better. Favourable intervals were employed in expeditions in the glacial world around.

At last, on the 8th of August, the storm king appeared to have spent his rage. The barometers rose, the sky cleared. The three peaks stood out white and glistening in their mantle of newly fallen snow, seeming to nod to us and say, 'Now is your time; *carpe diem*.'

Everything was made ready. Twenty of the best coolies were selected to carry our impedimenta, consisting of one warm eight-by-eight mountain tent, four flannel-lined mummy tents, a week's food supply for us, two primus stoves, petroleum, and two coolie tents. These coolies were ordered to cook three days' rations for themselves, and two extra coolies were chosen to go with us to the first camp with the rations thus prepared. Our khansamah was instructed to despatch four more coolies with additional supplies, under charge of one of our Gurkhas, to follow our track on the second morning after our departure.

On the 9th of August, at half-past five o'clock, when it became light enough to pick our way through the sérac belt, which guarded the approach to the camp, we started with one camp servant and the twenty-two coolies; the Europeans of the party consisting of Mrs. Bullock Workman, myself, the guides Petigax and Savoie, and the porter Petigax *filis*.

The ascent of the mountains really began at this camp, since after leaving it we were always on ice and snow and the path was always upward.

We passed through the séracs without any great difficulty, and crossed the Chogo Lungma to the base of a large ice-fall about three-quarters of a mile long, with which a tributary, named by us Basin Glacier, joins the Chogo Lungma. As the ice-fall was impassable, we ascended the steep snow-covered slope bordering it, and got upon the glacier above. This glacier, which we had explored in 1902, leads up directly under the precipitous walls of the peaks which were our objective, at the base of the first of which we proposed to make our attack. Above the ice-fall its surface was fairly smooth and afforded a good path, except for a covering of soft snow, which grew deeper as we ascended. On its north-east side towers a range of fine rock summits, a specimen of which you see in the accompanying telephotograph.

We encamped at 1 p.m. on the ice near the head of the glacier, in eighteen inches of snow, under the flanks of the first peak, at an elevation of 16,851 ft. Opposite, on the north side of the glacier, rises the steep and dangerous avalanche-scored slant leading up to the Bhayákara col, which we had climbed in 1902. As we looked at its furrowed slopes we were thankful we were not obliged to travel that way a second time.

At daylight of the 10th we were again in motion. Directly from camp we struck up the sharp flank of the wall, which was here continuous with that of the first peak, and fell in an uninterrupted series of broken ice slopes from summit to base. Our route, as we made it, traversed some of these and zigzagged up others, with frequent detours to find snow bridges over the appalling crevasses which blocked our way in all directions.

For the first two and a half hours the snow was hard, and good progress was made, though the coolies wanted to rest much oftener than was desirable. We had to urge them constantly, telling them it was necessary to cover as much ground as possible before the snow softened, when their work would become more arduous. This information, however, did not appear to stimulate their climbing enthusiasm. In fact, I never knew a coolie's enthusiasm stimulated by anything except a 'bakhshish' and the return march. On this last he always became wonderfully active and needed no urging.

By eight o'clock we reached a small terrace beneath an overhanging ice-cliff, where we stopped for breakfast. The

heat of the sun, which burns with fiery fervour at these altitudes, had now softened the snow appreciably, and from here on we sank into it every few steps—at first to the knees, and later to the waist. This rendered progress slow.

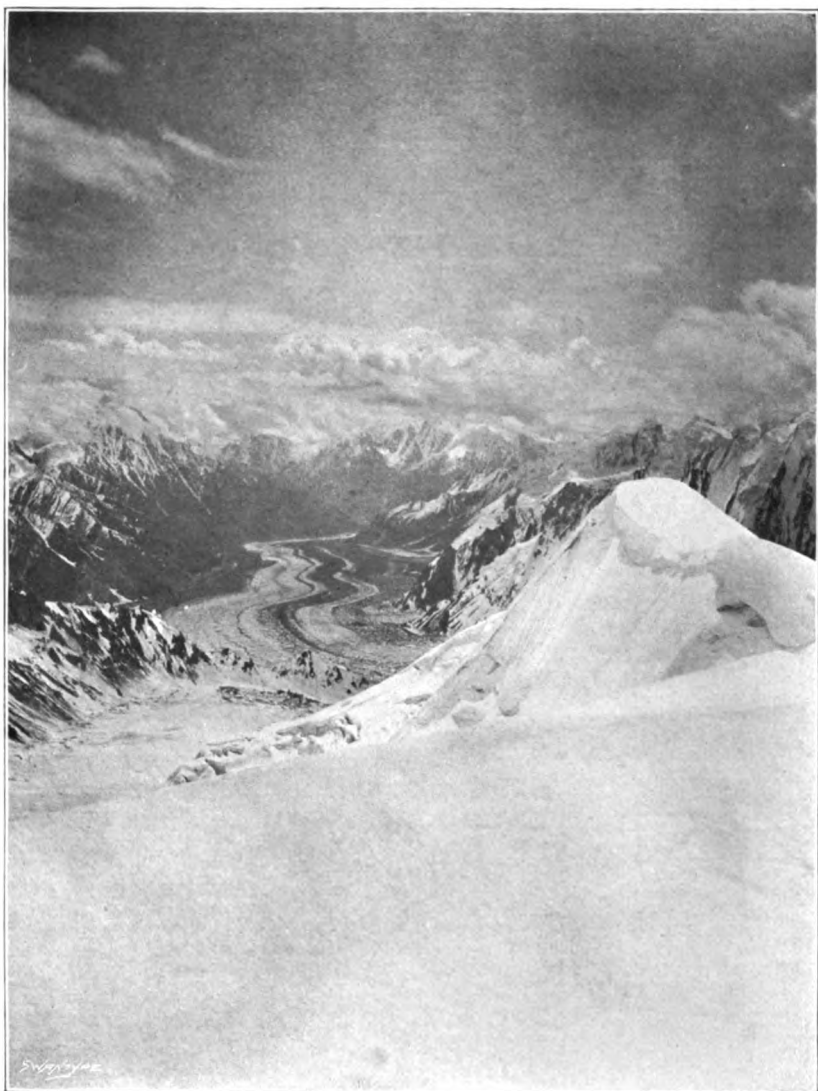
The coolies now had to be urged on with redoubled earnestness and to be helped as well. All our exertions were required to keep them up to the work. We were so nervous lest they should fail us, and thus wreck our cherished plans, for which we had sacrificed time, money, and endeavour, and which seemed at last to have a chance of being crowned with success, that we gave little heed to the technical difficulties, which were by no means slight.

Some of the coolies murmured a good deal, but there was no open insubordination. We kept them on the move, and at one o'clock reached a small slanting snow plateau, at a height of 18,811 ft., where we decided to camp, as they had had a fatiguing climb of $7\frac{1}{2}$ hrs. The soft snow had to be trodden down, as usual, to make places for the tents.

The latter were scarcely pitched when the wind rose, the sky darkened, and a snow squall swept down with a violence which threatened to tear them from their rather insecure moorings. This soon passed, and the sun shone again with full power in a clear sky, sending the mercury in the solar thermometer up to 192° Fahr. The view from this camp was remarkably fine. I will show you only one feature of it, the *coup d'œil* down twenty-five miles of the Chogo Lungma, with its beautifully marked, curving, medial moraines.

We were up at three o'clock on the morning of the 11th, as we intended to start the caravan for higher regions at five. At four the servant was sent to call the coolies, whose tents stood behind a snow hillock some five hundred feet distant. After a time he brought word that they refused to get up. Our tents being now struck and all our effects packed ready to march, we did not propose to stand shivering on the snow in a freezing temperature, at an altitude of nearly 19,000 ft., awaiting the caprice of the coolies. We further knew that this open disobedience of orders, if tolerated even for a short time, would put an end to discipline, and result in a failure to get any of the peaks.

Savoie and myself therefore descended at once to the coolie camp, and found the coolies all snugly ensconced in their tents, not one having stirred. Without any ceremony we tore the tents down about their ears, and, as they crawled out from under the prostrate canvas, commanded them to put on their boots and get ready to march. Our determined



From photograph by Dr. & Mrs. Bullock Workman.

Swan Electric Engraving Co.

View down the CHOGO LUNGMA GLACIER from just below second camp at 18,811 ft., showing winding moraines. About twenty miles of the glacier seen.

Snow peak of 17,814 ft., at right ascended in August, 1902.

attitude had the desired effect. By six o'clock, an hour late, we had them loaded and started.

Our plan on this day was to pass the first peak by and, traversing its flank, camp, if possible, at a height of 21,000 ft. or more, on the plateau from which the second peak rises. Mrs. Bullock Workman, with Petigax, the porter, and her coolie, led the way; whilst Savoie and myself remained with the baggage coolies, to apply the *vis a tergo* necessary to force them on. The slopes were sharp and the new snow was knee-deep.

In assisting the coolies over a crevasse my topi was struck from my head by the stick of one of them, and bounded down the steep slant with lightning speed several thousand feet to the glacier below, where it probably now reposes. Possibly several hundred years hence it may be yielded up by the ice at the end of the snout, and furnish material for surmises as to what sort of a tragedy has happened in the snows above. Till we got into camp, several hours later, my head had no protection from the burning rays of the sun, except that afforded by a light shawl. The effect of this exposure manifested itself the next day in a severe headache, handicapped by which I performed the final arduous ascent of over 4,000 ft.

Mrs. Bullock Workman and her party soon distanced the leaden-footed coolies, and at nine o'clock were five hundred feet above the caravan, nearing the brow of the upper plateau, at a height of about 20,200 ft., when the expected defection of the coolies occurred. Half a dozen of them, severely affected with mountain sickness, threw themselves down in the snow and lay as if dead. All endeavours on our part, short of actual violence, to induce them to move were unavailing.

The others now refused to go further, and no amount of coaxing, threats, or offers of six times their daily pay had any effect to make them go even five hundred feet higher, to the edge of the plateau above. We were therefore obliged to recall the advance party and turn back to a small snow shelf, safe from avalanches, lower down at the base of the cone of the first peak, where we camped at an altitude of 19,358 ft. It was now evident that we had got the coolies to the highest possible point, that no further assistance could be expected from them, and that we must make the remainder of the ascent of the higher peaks over the only available route from here, up the sharp broken slants of the first peak to its summit, which route we had sought to avoid by camping higher up.

The afternoon was spent in preparations for the next day's supreme effort, which we were determined to turn to as good account as possible, while Savoie and Petigax *fil*s trod out steps in the then softened snow for more than a thousand feet up the cone. We went to bed early, but did not sleep well. As soon as we began to doze, and the respiratory movements diminished in number and force, the tissues did not get enough oxygen, and we would awaken with a start, gasping for breath. All the party were affected in the same manner. This did not tend to fortify us any too well for the coming struggle, fatigued as we were by three days of hard climbing.

I would here call attention to the fact that when any cause is acting that tends to interfere with respiration a person can breathe better in the erect position than when lying down. At this height, where we suffered when lying, we breathed perfectly well when sitting or standing, which was also practically the case at the highest altitude reached. The fact that the whole party was kept awake by want of breath when trying to sleep at 19,358 ft. points to the possibility that, in case of an attempt upon one of the highest summits, if camps could be established at heights of 23,000 ft. to 25,000 ft. and above, as they would have to be, sleep might be entirely prevented or interfered with by deficient oxygenation of the blood to such an extent that a party would be incapacitated from this cause alone from going any higher.

At two o'clock on the morning of the 12th we were astir, and at three Mrs. Bullock Workman, myself, the two guides, porter, and two instrument coolies, specially equipped with nailed boots and warm clothing, started forth by the light of the moon, at the beginning of the last quarter, in a temperature of 15° Fahr., with a light north wind, upon what was destined to prove a notable climb. Roping, we attacked at once the steep pyramid before us, zigzagging up the now hard-frozen slope or traversing, as the nature of the inclines demanded.

At one place we had to make a long traverse of a slant of nearly 70°, just above a perpendicular snow precipice, the bottom of which could not be seen, which appeared all the more gruesome in the uncertain moonlight. Near the middle of this traverse two crevasses running at right angles to our course had to be crossed, which we were just able to jump. But little was said as we pressed steadily upward in the sugary snow. We were anxious lest our feet, which suffered severely in spite of heavy mountain boots and stockings,



From photograph by Dr. & Mrs. Bullock Workman.

Swan Electric Engraving Co.

CAMP AT 19,358 ft., AT THE BASE OF THE CONE OF Mt. CHOGO.

should be frost-bitten. As long as they were painful we felt they were safe. We beat them often with our axes to keep up the circulation.

High peaks rose around us like shadowy sentinels of the night, ghostly witnesses of our temerity in thus invading their untrodden domain; but they were silent, and offered no remonstrance in the shape of avalanches to voice their displeasure, as one by one they sank beneath our path.

Towards the top some exceedingly steep places were encountered, that caused us to tread cautiously and pant for breath. Just before sunrise the cold was hardest to bear. At 7.15 we stood upon the top, a rounded snow cornice, that at an altitude of 21,500 ft. overhung a sheer precipice of several thousand feet, falling away to Basin Glacier, from which we had ascended. The temperature here was 16° Fahr., and there was but little wind.

Of the glorious sunrise, presaging a perfect day, we will not speak. Stopping about half an hour to take a little food, expose some plates, and read our instruments, and leaving one of the coolies who here gave out, we set out for the second peak, descending a narrow snow arête and crossing a second one to get upon its flank. The gradients of this, though considerably sharper than they appear in this photograph, are not so steep as those of the first peak, and its ascent was only a question of avoiding crevasses and endurance of the effects of altitude and of the fatigue incident to moving upward in snow about ankle-deep.

By 10 o'clock we were within 20 minutes' climb of the top. Here the party separated. Mrs. Bullock Workman, the porter, and coolie went on to complete the ascent, and reached the summit at 10.30. This was found, like the first, to be a cornice overhanging a precipice, and the readings showed its altitude to be 22,568 ft.

Petigax, Savoie, and myself started for a point apparently about 1,000 ft. higher, on the south-west arête of the third peak, which commanded a view toward the west. The peak, as seen from where our party separated, was entirely snow-bound, its apex being formed by a pointed, sharply defined cornice, which seemed to soar away into the deep blue sky like the curling crest of a mighty wave about to break.

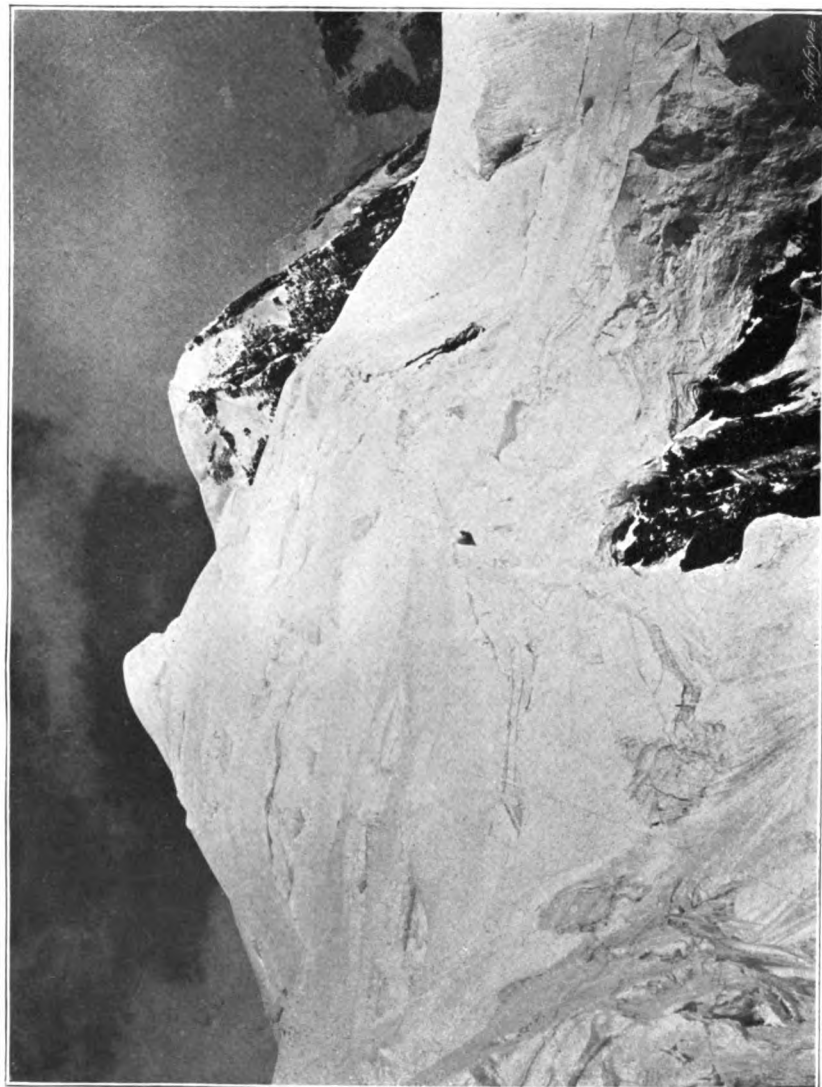
Directly beneath the cornice is a tremendous precipice, whilst on its east side the mountain falls in another precipice some 7,000 ft. to Basin Glacier below. This is a type of many high Karakoram peaks, which end in similar cornices pointing towards the north and usually overhanging abrupt precipices.

The direction in which they point is due to the prevalence of south and south-west winds. The above simile is not so fanciful as it may at first appear, for but little effort of the imagination is required to make these crested cornices seem actually in motion, and they do from time to time break away and give rise to avalanches of incredible size and power.

We ascended over the rising snow plateau to the base of the final pyramid, one angle of which is formed by the long snow arête, as steep as the slopes of the first peak, which runs up in an unbroken line to the top. Leaving here all unnecessary luggage, we attacked this arête, and, after some stiff work, reached the spot selected at 12.30 P.M. Calculations based on the readings here taken, compared with those taken at the same time at our lower station, give the altitude of the point attained as 23,394 ft.

We did not for a moment entertain the idea of attempting to reach the summit, some 1,100 ft. higher. This, under the circumstances, would have been a foolhardy undertaking. It is probable we might in the course of the afternoon have reached the top, but the peak would have been our mausoleum, for we could not have regained camp that night, and a night in the open at that altitude would have meant certain death from cold, to say nothing of the danger from fatigue. Could we have camped at 21,000 ft. to 22,000 ft., the whole party would, in all probability, have gained the summit at 24,470 ft., as the day was windless and perfect, the finest of the whole summer thus far. Had the weather been uncertain, or had a wind of 10 to 15 miles an hour blown against us, we should not have reached the second summit. We had seized and utilised, as far as possible, the only opportunity in two seasons.

The view from this point was extensive and indescribably grand. Over the space of three-quarters of a circle countless thousands of spires of every size and shape shot up in the sky as far as the eye could reach. We could see from Nanga Parbat, 60 miles away in the south-west, around to Masherbrum, the Golden Throne, Gusherbrum, and K., 90 to 100 miles to the east. Prominent between these last and us were the Mustagh Tower and our old friends the Biafo giants. Beneath, stretching away for 30 miles, banded by its remarkable, winding, medial moraines, was the Chogo Lungma Glacier. In the foreground, across the Chogo Lungma, stood the so-called Indus Nagar Watershed Peak No. 4, 22,810 ft., its apex nearly 600 ft. below us. Nine miles behind it rose the imposing form of Mount Haramash, 24,270 ft., and in the



From photograph by Dr. & Mrs. Billock Workman

Swan Electric Engineering Co.

**Mt. CHOGO, 21,500 ft., and Mt. LUNGMA 22,568 ft., as seen from height
of about 17,000 ft. on north side.**

distance, bounding the horizon, the immense mass of Nanga Parbat, 26,629 ft. Just beneath lay the second peak, on whose summit the remainder of our party was resting, looking from this elevation like a flattened snow-field slanting backward from the ragged edge of the abyss, whose wall it helps to form.

After remaining half an hour, all the time we felt we could allow, to take readings, photograph, and gaze upon such a view as in long mountain experience none of us had ever seen before—the one view of a lifetime, a view to enjoy which for half an hour was only an aggravation—we reluctantly turned our steps downward to rejoin the rest of the party on the second peak, where we arrived at 3 P.M. Here the view was nearly as imposing as that from above.

After another half-hour's rest we all started to descend to camp, which must be reached before darkness set in, as the dangerous slopes of the first peak could be safely negotiated only by daylight. Picking up the second coolie on the summit, where he had sat contented the whole day, glad to escape the higher work, we made a safe descent, and regained our tents at 7 P.M., after 16 hrs. of by no means easy work, just as the short twilight was deepening into darkness. Here our sleeping-sacks had a good deal more attraction for us than food, and without a ceremonious meal we turned in for the night.

The first of the two peaks conquered was named Mount Chogo, the second Mount Lungma. On the whole we felt repaid for the two long periods of waiting and the hardships we had endured, though we could not forgive the coolies, whose defection had deprived us of a greater prize otherwise within our grasp.

We had been just in time. The next morning at daylight, with barometers falling and clouds rolling across the sky, we struck tents and descended as fast as possible to our base camp. At one place, the slope being favourable, the opportunity to hasten our pace by a glissade was taken advantage of by the whole party, including the coolies, who seemed to enjoy immensely this to them new form of sport.

Before we were half-way across the Chogo Lungma we were enveloped in a snowstorm. When we came to the séracs, which in any case would be difficult to pass in the snow-darkened air, the bridges by which we had crossed five days previously were found destroyed by the movements of the glacier, and a new route had to be sought.

These séracs are the worst of any on the glacier to get

through, being composed of much-shattered ice-pinnacles, many of them knife-edges falling on both sides to profound crevasses, rendered flaky and brittle by the alternate thawing and freezing to which they are subjected.

By the exercise of care and patience the passage was negotiated without accident, and we pitched our tents once more on their terraces at Riffel camp.

Himalayan mountaineering is yet in its infancy. The work accomplished up to this time must be regarded as pioneer work, done in spite of many obstacles, some of which may in the future be eliminated.

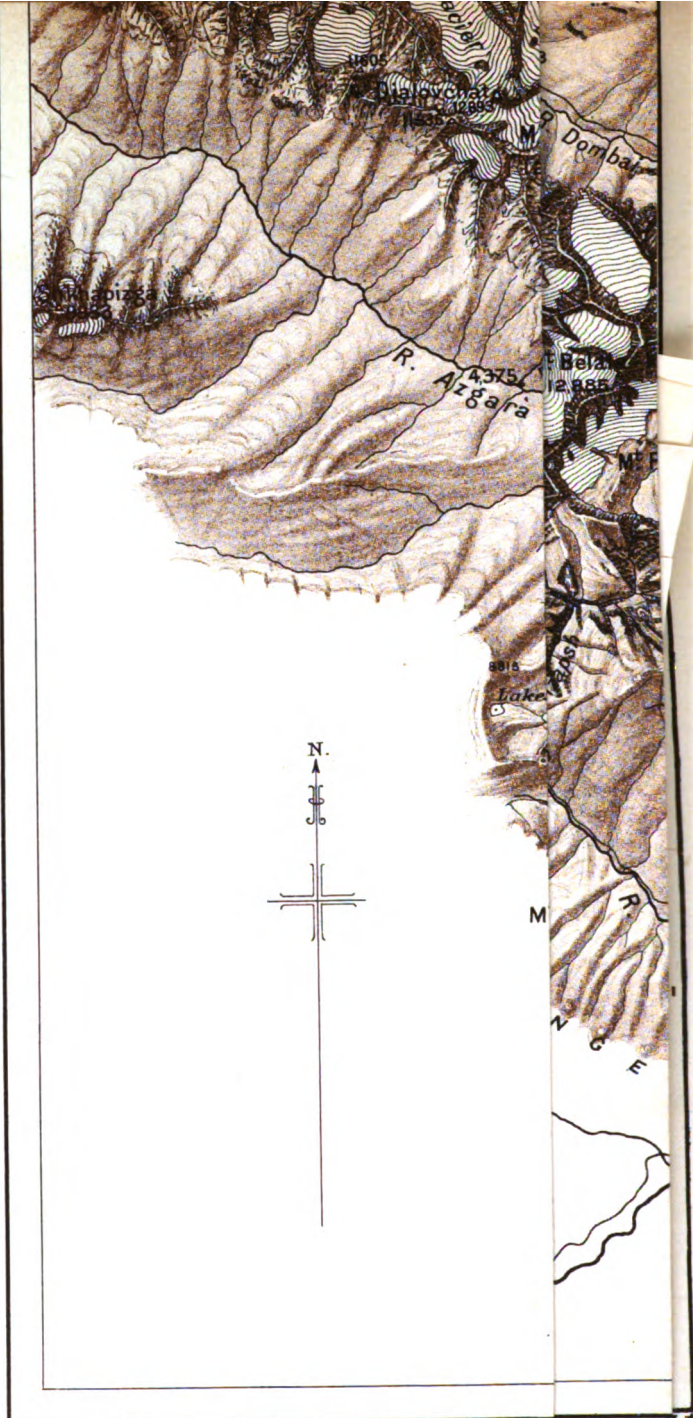
As attention is turned to this field, and a better knowledge of its topography and existing conditions is obtained, and perhaps improved means of overcoming some of its difficulties devised, greater altitudes will undoubtedly be reached and new records established. Record ascents, however, are of little value, except so far as they furnish an opportunity to increase our knowledge of natural phenomena and their relations to man at high altitudes.

Some optimists look to see the highest peak on earth conquered in the near future. I do not feel so sanguine that that day is at hand. Practically nothing is known of the highest mountain, situated in the middle of a land closed to foreigners. The next three I have seen at comparatively short distances. The technical difficulties presented by them appear to me to be great.

If these four, or others approaching them in height, are conquered, it will only be by hardy, bold, thoroughly trained mountaineers, provided with means of transport superior to any now obtainable, after prolonged sieges, during which they will have to meet and overcome not only the physical obstacles presented by the peaks themselves, but also those offered by altitude, heat, cold, snow, wind, and weather, which will be found more accentuated the higher the points attained. In any case, a favourable disposition of the natural forces will be essential to success.*

* The word 'record' in the title of this paper is used as referring to the highest substantiated ascent yet made in mountaineering. The contention that Mr. Graham reached an altitude of 24,000 ft. has, on various grounds, whether rightly or wrongly, been so strongly disputed that it must be regarded as far from proved, and therefore the altitude mentioned cannot properly claim a place among those acknowledged to have been made.

From the time of Mr. Fitzgerald's expedition till the above described ascent in 1903 the summit of Aconcagua was, unless the writer is greatly mistaken, generally conceded to be the highest point attained by mountaineers.—W. H. W.



IN THE WESTERN CAUCASUS.

By ALEXANDER VON MECK.

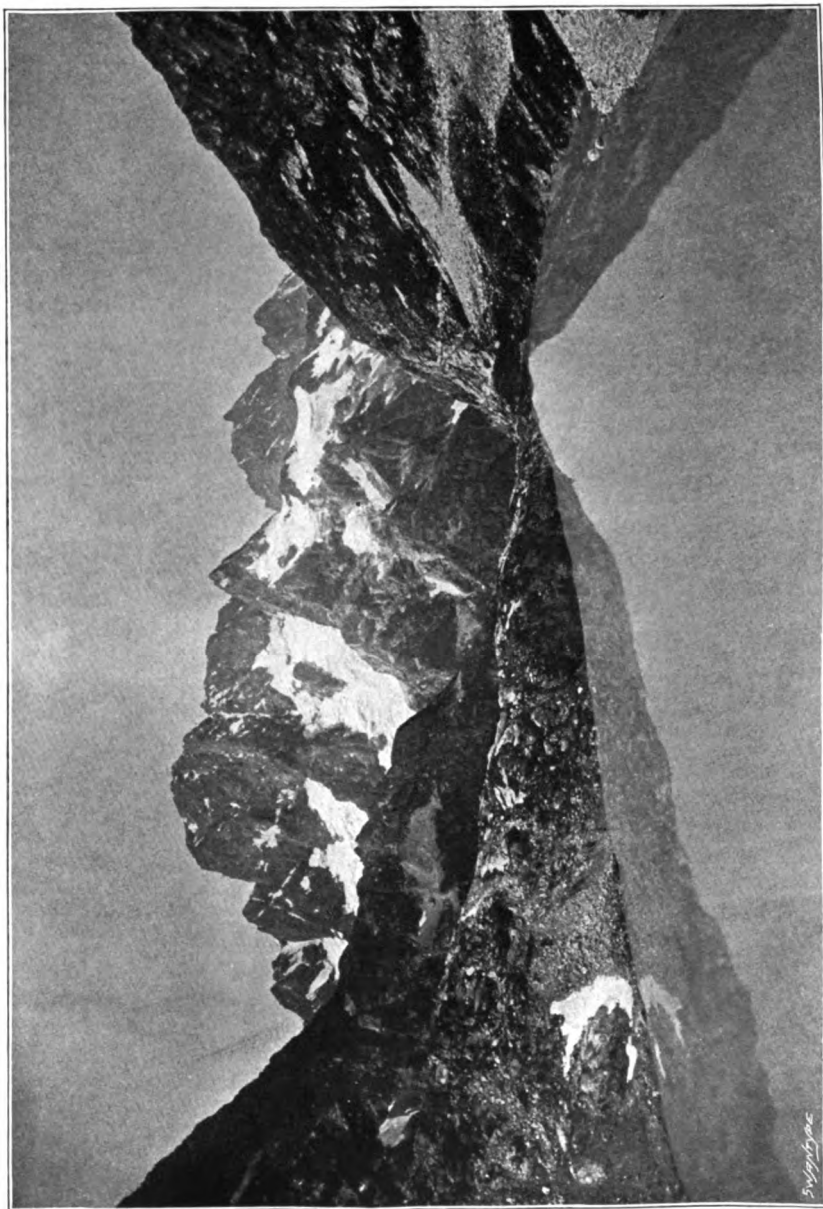
MR. DOUGLAS FRESHFIELD in his classical book 'The Exploration of the Caucasus' has given a map of the Klukhor group, and made the remark that a visit to this region would well repay a climber. The combination of glacier, snow and high rock peaks with beautiful pine woods and rushing torrents affords such luxuriant landscapes, that when I crossed the Klukhor pass in 1901 I became so enthusiastic with regard to the scenery that I firmly resolved to pay a longer visit to these enchanting mountain glens. A detailed account of our travels, with full description of the few results of our scientific observations, mainly topographical, must perforce be reserved for the Annual of the Russian Mountaineering Society, and I shall here confine myself to a brief sketch of our route and the few first ascents that we made.

My companions for the summer were Dr. A. Fischer, now of Basel, the brother of Mr. Donkin's companion, who had already been to the Caucasus on the search expedition in 1889, and Ch. Jossi (junior) of Grindelwald. I also took one of our Russian Club guides, Jani Bezurtanoff, of Gwilyty, who proved a most useful camp superintendent, and an able mountaineer, and who is fast becoming versed in the use of rope and axe, and not less acquainted with the dangers of mountaineering. We four left the railway station Nevino-mysskaya on July 29, stayed the night in Batalpashinsk, and arrived late the second night in Aul Teberda. We did not escape the usual delay in hiring horses, but managed to make a start a little after ten along the Klukhor path. At the junction of the rivers Gonatchkhir and Amanauz we crossed the former and rode for some time on its right bank, and then forded the Amanauz to its left bank. The fording was rather unpleasant, but we managed it without a hitch, and towards sunset reached the Amanauz glade at the junction of the Alibek (left affluent) and the Dombai-Ulgen (right affluent) with the Amanauz. Our horsemen refused to move any further, so we pitched our camp. Rain then began, and we soon sought shelter under our tents.

The next day we reached the Alibek glacier (a distance of about 7 kilos) early in the afternoon. The sky was cloudy, mists raced in every direction, and we occupied ourselves in arranging our camp. The place was chosen at the foot of the

left moraine in an old lake bed. The Alibek river has its sources on the eastern slopes of the Alibek pass, which connects the valley of the Alibek (E.) with the valley of Aksaut (in the W.). Naturally, the principal volume of water is supplied by the glacier, and this volume is so great that the Alibek river is unfordable even at the mouth of the glacier, which was rather an inconvenience for us, as we had to tramp for two hours on the grand but uncomfortable moraine, and cross the glacier every time we wanted to get to its eastern bank. The next few days it rained during every night. On August 2 we started for a first reconnoitring tour up the glacier. Along the left moraine we reached a spot where a secondary glacier (named by us the 'Double-tongued'* glacier) descends towards the Alibek. In a recess between two perpendicular moraines we found a nice little tarn, peacefully lying at the foot of a snow slope. We much admired the beautiful ice-fall of the Alibek glacier, and then crossed it to an eastern glacier descending from the crest of the right bank of the Alibek with the intention of reaching some summit on the watershed between the Alibek glacier and its eastern neighbour the Belalakaya glacier (wrongly named on the map Amanauz glacier). The ascent of this eastern glacier's ice-fall took us some time. From the upper plateau we forced our way through a chimney to polished rocks at the foot of the crest, but could not ascend directly, and were forced to go round to the N. and only at 2 p.m. reached a spur running S.E. to N.W. For a very short time we had a splendid view of the surrounding mountains, but clouds very soon obscured the panorama, and a thick fog followed. We made the descent (to the N.E.) on very steep rocks, and the fog made it rather difficult, as we had not the faintest idea where we were going to nor what ground we might find in front of us. We crossed some snow, then came to rhododendron bushes, then reached the top of the wall above the Alibek glacier, found a way along the bed of a waterfall and safely reached our tents. On August 4 we all four left camp at 8 a.m. to pay a visit to a high rocky summit, well seen from every surrounding height and which has no name, but bears the topographical mark of 1,697 sajenes (Russian fathom equals 7 ft.). Along easy grass slopes, over a stony desert, we reached the arête at 1.10 p.m. and the highest summit at 3.15 p.m. I named this summit Semenoff-bashi in honour of the Vice-President of the Imperial Russian

* I always use the orographical terms.



A. von Meck, photo.

TEBERDA LAKE, & MOUNT BUULGEN.

Swan Electric Engraving Co.

Geographical Society. We enjoyed a good view both on the main chain and on the glacier basin of the Khutyi, which lay to the N. and at the foot of our summit.

I mentioned above the tarn on the left bank of the Alibek glacier; it lies at the foot of a lateral valley which is occupied by a good-sized glacier, the end of which at present is less than one kilometre distant from the edge of the Alibek glacier. This glacier runs from S. to N., and makes a turn towards the E.; we named it the 'Double-tongued' glacier. The two ridges forming the banks of this glacier are represented as culminating in a high summit of 1,813½ sajenes (12,694 ft.). This is not quite correct, as the said summit lies a little to the W., and is connected with the western ridge by a sharp snowy arête. This summit was the object of our excursion on August 6. We left camp at 4.30 A.M., and reached the left bank of the Double-tongued glacier at 7.25 A.M. We found some difficulty in forcing our way through the séracs of the icefall, but safely reached the upper plateau, and at 8.55 A.M. we were on the watershed between the Double-tongued and the Djalovtchat glacier (Djalovtchat pass 10,171 ft.), scrambled along the arête to the S. upon easy rocks, and at 12.45 P.M. reached a summit marked on the map as being 1,687 sajenes (11,809 ft.) in height. As it had no name we christened it with the high-sounding name of 'Sunakhet,' which in the Ingoosh language is equivalent to 'hope.' But from this summit we saw that the highest point at which we were aiming was a long distance away from us, and had an imposing snowy arête to defend itself from unnecessary intrusion. We were somewhat disappointed in not attaining our goal at the first attempt, but had to console ourselves with the idea that first ascents materially differ from subsequent ascents. We had more proof of it the very same day. Not wishing to expose ourselves to the risks of passing through the lower icefall of the Double-tongued glacier with its very insecure séracs, we tried to find a way along and over its left bank, and from the Djalovtchat pass climbed over some loose stones into a 'rectangle' glacier lying to the N. of the pass, crossing it lengthways to a saddle between two rocky ridges (the one forming the bank of the glacier and a parallel ridge with a summit marked 1,612 s. on the map). A jolly glissade over two patches of snow soon brought us to a rivulet, and thence to a glen along which our Alibek torrent was rushing down to our camp. We even found a path on its bank, and sent our Caucasian follower (Jani Bezurtanoff) in front to prepare some food. But alas!

this path very soon disappeared. We searched high and low for a continuation, each of us in his own way. Jossi very soon disappeared in the woods, Dr. Fischer and I kept together. The continuation of the path was lost, and we decided to force our way through the forest, which we knew extended to the moraine. We were certainly not more than an hour's walk from our camp, and I shall not relate all our troubles, as we were nearly lost in the dense undergrowth. Darkness came on, the slope increased, we stumbled and rolled over hidden stones. In a word, it took us nearly three hours to get to the camp, and I do not know whether we should not have spent the night in the forest had our man Bezurtanoff not sent one of our followers with a lantern, who followed our shouts and led us back to the path, faintly traced through this primeval forest. The weather on the 7th was threatening, but on creeping into our tents at night it was decided that if it looked fine we would make another attempt on our summit; otherwise it was our intention to pay a visit to a pass on the neighbouring Belalakaya glacier (wrongly called Amanauz on the map). The weather, however, looked promising, and we left camp at 3.20 A.M. (August 8), followed the moraine to the Double-tongued glacier, and ascended its *right* bank, which was reconnoitred the day before by Jossi and proved easy. From the plateau we turned south, aiming at the corner summit, from which ran the arête to our summit. It was useless to follow the ridge we had used on our ascent of Sunakhet, because between the summit and the 'corner' summit lay a nasty gap with perpendicular walls. The glacier in the upper parts proved rather troublesome, and the bergschrund seemed to run along the whole base of the rocks in front of us, and great credit is due to my Swiss companions for finding a way.

The slope of the 'corner' summit was ice. The sharp arête, however, proved to be snow, and at 12.15 we reached the summit, to which I propose to attach the name Djalovtchat ($1813\frac{1}{2}$ s. = 3869 m. = 12,694 $\frac{1}{2}$ ft.). We returned to camp by the same way, but had rather an exciting afternoon 'breakfast' on polished rocks below the glacier. We were sitting comfortably near a pool of crystal water when we heard a crash, and a block of melting ice above our heads came tumbling down a few yards in front of us. Our siesta was brought to a hasty conclusion, and we rushed precipitately to a safer place. We reached camp before dark.

The next day was a day of rest; we marked the glacier, repaired our shoes, took photographs, &c.

On the 10th we started for the neighbouring Belalakaya glacier and made the ascent of a pass at its head, which I propose to name Djessarà pass (1,764 s.=12,368 ft.=3,763 m.), as a glacier of this name reaches on the south side to this pass. J. Bezurtanoff and I returned to camp, and Dr. Fischer with Jossi camped at the foot of Belalakaya, and made on the following day the successful first ascent of this very steep granitic summit. This was our last day in the Alibek region. On the 12th we left our camp and followed the same path down the Alibek river to its junction with the Amanauz, then forded this torrent and ascended the valley of the Dombai Ulgen, and entered the valley of Ptysh.

Here our good luck failed us. We made the ascent of the Dombai Ulgen pass; and turned our faces to the Ptysh, but thanks to my personal inexperience turned back within 25 to 50 yards from the summit. The following day it rained hard, the day after we made an excursion to reconnoitre an approach to the Dombai Ulgen summit, and on the 16th made an unsuccessful attempt to reach the highest point of this mountain. Our failure was but natural since the only approach, the northern arête, proved to be a steep, broken rock ridge with powerful gendarmes, and all the rocks were glazed, while a cold wind was hampering our progress. Our next movements were over a low pass (Chuchkhur pass) into the Bulgen glen, down it to the foot of the Klukhor pass (2,816 m.), and over it to the foot of the Nakhar pass (2,869 m.). On the top of this pass we separated; Dr. Fischer and Jossi went to the summit of the Nakhar peak, and I followed with the caravan to a kosh some three hours down the valley, where they joined me late at night. Next day (August 21), we reached the village of Utchkulan. Here we again separated. I rode to Kislovodsk, and Dr. Fischer with Jossi went to the Buruntash pass, and from there reached the top of Elbruz (5,630 m.), and descended to the Azau Kosh, making the complete traverse from north to south. On arriving in Kislovodsk I found bad news from home and had to shorten my visit to the Caucasus.

Dr. Fischer, however, went to Vladikavkaz, and from the Kistinka glen made the first ascents of Kuru-Tau (4,091 m.), Schino-Tau (3,928 m.), and two nameless snowy summits above the Kibischa glacier (3,668 and 3,713 m.). Thus ended our Caucasian trip of 1904.

CLIMBS IN THE CAUCASUS.

[Herr von Meck's companion, Dr. Andreas Fischer, kindly sends us the following account of his Caucasian climbs. Dr. Fischer, it will be remembered, was one of the Search Party that visited the Caucasus in 1889 after the loss of his brother with Messrs. Donkin and Fox in the previous year.]

Belalakaya.

WHEN, on August 1, 1904, our caravan emerged from the woods of the Alibek valley and, as by magic, one of the finest mountain landscapes revealed its charms to us, there was among all the grand and beautiful peaks none that had, for my mind, so much fascinating power as the dark and formidable-looking Belalakaya.* Seen from its base this peak is the 'lion' of the whole Alibek group. From the beginning of our excursions I considered it, from the *climber's* point of view, the 'best' mountain of the district, and determined not to leave the country without making at least one serious attempt on it. From the valley as well as from our camp on the left bank of the Alibek Glacier we obtained no view of the whole mountain, but only saw the Matterhorn-like obelisk, towering over the shoulders of the jagged ridges east of the Alibek Glacier, and on this huge tower we hardly discovered any weak points by which it might successfully be attacked.

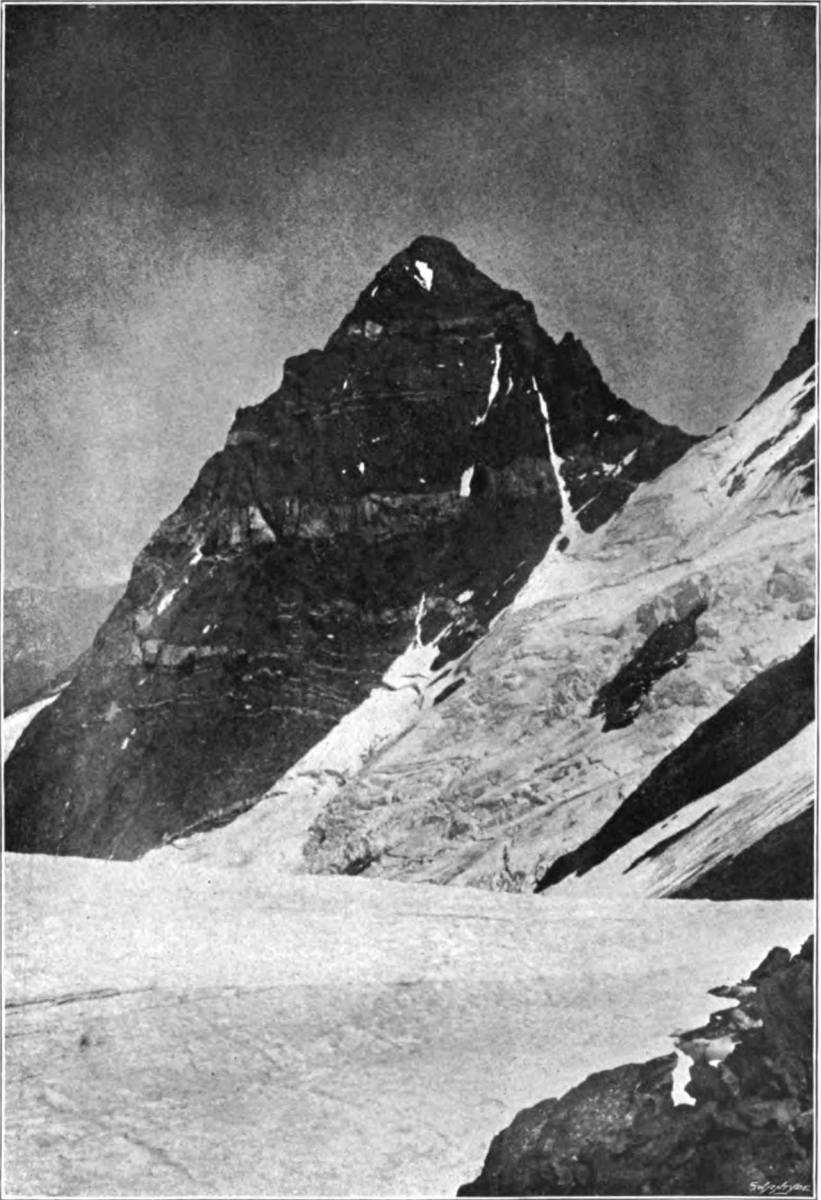
On August 10 we ascended the Dchessara Pass, and now for the first time Belalakaya came into view from top to base. The mountain rises, with extraordinarily steep and unbroken walls, on the right (E.) bank of the Belalakaya Glacier ('Amanauz Gl.' in the Russian 1-verst map) and forms the culminating point of a high spur running S.N. from the main chain and watershed. S. of the peak there is a sharply marked gap from which one of the principal branches of the Belalakaya Glacier falls down in steep and broken masses. We did not see any other line of attack and decided to try the mountain by the gap and the southern ridge, the rock towers of the latter looking, not exactly easy, but possible.

Coming down from the Dchessara Pass Herr von Meck, accompanied by Jani Besurtanoff, returned to our camp at the Alibek Glacier, whilst Jossi and I went to the foot of the Belalakaya, where we found some sort of sleeping-place.

* The name is said to signify 'steep striped wall,' several broad strata of quartz running from end to end. *Vide* illustration of Belalakaya from Dchessara Pass.

The night was cold, the weather perfect. At 4.40 A.M. (Moscow time) on August 11 we started, and, first over avalanche snow, then by the steep and crevassed branch of the glacier, we made our way up towards the gap or col. About 400 ft. below it we passed a long and steep snow couloir, the only one that is visible on the whole western face of the mountain. At the foot of this gully we stopped awhile, earnestly considering if we ought to try there. We did not like it much. It was not the necessity of cutting some hundred steps which we thought to be the worst; the couloir did not quite reach the ridge, but ended a little below it in steep and icy rocks, and this was the place we distrusted; if we failed there the day would be lost—the last one that was left for the Belalakaya! Consequently we turned to the gap, though the 'gendarmes' of the southern ridge looked much more formidable now than they did yesterday at a distance. The south-eastern side, perhaps, might prove to be easier. At seven o'clock in the morning we stood in the gap and eagerly looked round. At first sight we pronounced the nearest towers to be inaccessible; they looked so high and so hopelessly steep that only better men will be tempted to try them. Opposite a broad slope of névé ran up to the base of the south-eastern wall of our mountain. This looked very different from the N.W. side; it is much broken, *i.e.* a series of jagged rock-ribs emerge from it as huge buttresses, standing one behind the other like the side scenes on a stage. By one of these ribs, or through one of the steep and snowless gullies between them, we hoped to find a way. Whilst I quickly sketched the magnificent Dombai, of which it would be impossible to find a more advantageous view, Jossi went on reconnoitring, crossing the snow-slope in a diagonal direction. After a while he reluctantly shouted that 'perhaps here' it might be possible. Over the ribs, and when these were impracticable through some of the couloirs, we made good progress for the next two hours, being constantly forced more to the E., *i.e.* away from the southern ridge of the mountain. Overhead a series of wild, strange-shaped towers lifted their heads against the blue sky, but the summit itself remained invisible. And now to the right hand some huge pinnacles towered up, fully justifying my companion's statement that 'the whole Belalakaya consists of gendarmes,' and it seemed hardly possible to go on, in such a spiral line, round the whole mountain. All the principal 'ribs' ended at about the same height, *i.e.* at the base of a low but nearly perpendicular wall. There we now stood, at

the foot of this wall, and saw that only the next 20 to 30 ft. would be difficult, and though at several places we came quite near the edge of what we believed must be the gentle roof of the summit, nowhere could we find any sure handholds to conquer the last bit of the wall. Several times we had to descend again, once by the aid of our fixed spare rope. Jossi was unwilling to give in, but I insisted on traversing another rib to the E., the last accessible one, as it seemed, and once more we reached the base of the steep terrace. Here it proved more broken, and a salient edge of light grey stone looked rather encouraging. But the next step proved to be very hard. We stood on a narrow sloping ledge and the wall above was somewhat overhanging. It was quite impossible to get on to the next ledge above without at least one good handhold. Standing on Jossi's shoulders I grasped at something that might hold, but in vain; I had to come down again. We then exchanged parts, but Jossi's hard labours too were lost. Our hopes of success were nearly gone, for the hour was too far advanced to allow of any considerable variation of route. Besides we could think of none with the exception, perhaps, of the snow couloir on the W. face of the mountain. Once more we examined the wall in detail and discovered a prominent block. 'If we throw the spare rope over it?' We both tried and at last my comrade succeeded. 'Will it hold?' We pulled vigorously. Yes; the block did not move in the least. Again I mounted on Jossi's solid shoulder, and, with no more help from the fixed rope than was absolutely necessary, got up to the next small ledge. Higher up the handholds were no longer so scarce, but many of them were loose and I took a long time to find the good ones. These, however, still proved to be numerous enough for safe climbing, and with a feeling of happiness hardly to be described I reached the top of the wall. Jossi followed with rucksack and axes, the latter proving to be very inconvenient companions. The victory was not yet quite certain, as we were standing only on a large terrace at the foot of another rock wall which had not been visible from below. But being much more broken and less steep than the first one, this second wall offered difficulties of no unusual quality. Climbing up a most romantic chimney just behind the last and highest tower to our right (E.) we gained the middle of the wall, then turned to the left (W.) and by some narrow ledges, covered with rubble, at last reached the edge of the true roof of the summit. There for the first time since we left the col we had a good halt; the Belalakaya



A. von Meck, photo.

Swan Electric Engraving Co.

BELALAKAYA, (12,636 ft.)

was won, and we were tired with five hours of hard and exciting climbing. On the gently rising roof (slabs of considerable size, quite free from snow and ice) we met with no difficulty whatever, and in the best of spirits walked up to the top, which was reached at 12.40 P.M. A small patch of snow on the N. side furnished the water so much longed for.

The sky was cloudless, the view wonderful. From the Aksaut and the black 'aiguilles' in the west to the snow giants of the Central Caucasus what an army of noble and defiant peaks! Again—and even more than on the Djalovtchat—I was struck by the *number of valleys* and *ranges* (spurs), the *variety of forms* (snow pyramids and impossible-looking aiguilles), and by the beauty and extension of the numerous glaciers of the *Western Caucasus*. In its structure and the number of its peaks this district reminds me very much of the Dauphiné Alps, but it surpasses them greatly in the beauty of its ice-streams, whilst the luxuriance of the vegetation, the abundance of forests in the valleys both north and south of the main chain, exceeds anything to be found in the Alps. The best features of the panorama are a group of aiguilles between the Amanauz and the Ptysh glaciers (the highest of these, a fine snow pyramid, is probably the wrongly so called 'Belalakaya' of the new Russian map), the double-headed *Dombai* and *Elbruz*, which, in spite of the distance, looks quite what it is, the monarch of the Caucasus. Towards the N. the eye looks down on the dark blue forests of the nearer valleys and follows the line of the Teberda River to the northern Steppe. The sun was warm and we stopped an hour and a half on the top. Jossi is an excellent mason, and, as the materials were at hand, he built a stone-man, such as probably no other Caucasian summit can yet boast of. Some critic, indeed, may possibly consider it too pretentious for the Belalakaya.

For the descent we agreed to follow the southern ridge as far as the first big 'gendarme,' and to examine the long snow couloir from above. If the latter proved impracticable we proposed to descend the steepest part of the 'muraille' with the aid of our spare rope. The true path-finder interest got hold of us again, and a most pleasant climb brought us to the first considerable gap in the ridge, whence the couloir is visible. We saw that in its highest part it is bifurcated; the nearer branch lay now directly below us, but neither of us felt disposed to go down the steep and iced rocks to the safe snow. The other branch was hidden by the first high tower of the ridge. Climbing round (on the E. side) we got to

another gap, and found that *this* part of the couloir was better. However the descent from the ridge was the most careful piece of work we did that day, as the rocks were far from being safe. We had not yet quite done with them when two very stately 'turs' (capricorns) appeared at our feet, and, with enormous bounds, leapt from ledge to ledge up to the jagged ridge. No doubt these animals knew and managed the Belalakaya much better than we did. Once safely landed in the couloir all difficulties ended; we soon got to the snow, and this was deep, and by this time soft enough to allow pretty quick going without much step-cutting. But falling stones might be very dangerous at any time when there is not such a quantity of soft snow in the gully. The lowest part was done by glissade, and about five o'clock we were down on the glacier. Hark, a piercing whistle—and again! This time, however, it was not a 'tur,' but Jani Besurtanoff, who, though heavily laden, came very quickly across the Belalakaya Glacier. At the same time we arrived at the sleeping place. Herr von Meck, having observed that we reached the top some hours later than was expected, and thinking the descent must be difficult too, so as to make a second bivouac indispensable, had sent the ever willing Ingush to meet us with a most amiable letter and a lot of other good things to comfort the tired and hungry wanderers. But, preferring the camp fire to the 'belle étoile,' we only rested an hour, and then started for 'home.' Jani had discovered another route to the Alibek Glacier, 'less dangerous,' as he thought; unfortunately it proved to be much longer than mine (found some days previously), and night overtook us on the terrace of the Alibek Glacier. Neither Jossi nor I will easily forget that descent over rocks, across brooks, through rhododendrons, and over 'Geröllhalden,' following our Ingush porter, who seemed to have lynx eyes and bones of steel! By lantern-light we crossed the Alibek Glacier, for the last time stumbled down the side moraine, so fatal to shins and boot-nails, and about 9.30 P.M. arrived at camp. Herr von Meck rejoiced heartily at our success. It had been a 'well spent day,' our best climb in the Western Caucasus, and now, seen from our cheerful camp fire, the outline of Belalakaya had gained a new and particular charm.

Mount Nakhar.

After a pleasant day's walk over the Klukhor Pass (the finest mountain road I ever saw) and a night spent in a 'sea

of flowers' at the S. foot of the Nakhar Pass, our caravan reached the top of the latter at 10 A.M. on August 20. The view is very disappointing. The Abkhasian Alps, though close at hand, are hidden by the spurs running S. from the Klukhor Pass, and to the E. there seems to be neither Minghitau (Elbruz) nor Central Caucasus. But there is to the N.E. a striking group of red-coloured 'aiguilles,' the highest of which—a double-headed peak it looks from the pass—we take for 'Mount Nakhar,' and this certainly must be a 'belvedere' of rare quality. Jossi agreed to accompany me, whilst Herr von Meck with the Caucasian train continued his way down to the stony wilderness of the Nakhar valley. We left the pass at 10.40, and quickly traversing the nearest slopes of névé and some small branches of glacier to the E., reached a conspicuous spur of shattered crags running N. from the watershed. On climbing it we discovered a big glacier at our feet (E.), and opposite, on its right bank, rose the steep rock walls of our mountain. We had to descend, and lost all the height already gained (about 600 ft.). The ice stream (not, or very badly, marked on the 5-verst map, and visible neither from the pass nor from the path in the main valley) is nearly level, but covered with numerous boulders which find their way through a broad and very steep ice couloir between two of the principal towers of the mountain in front. This couloir would be the most direct line of attack, but looks unsafe enough to be avoided by every man who holds that falling stones are no more pleasant in the Caucasus than elsewhere. We crossed the glacier from W. to N.E., partly by running, and in 20 minutes arrived at its right bank. We then ascended a considerable moraine, and by a brook and a steep grass slope got round to the N. foot of the peak. The N.E. face proved to be less steep and snow-covered as far as to the base of the final summit, and as the snow was in excellent condition and some rock ribs in the midst of the slopes all that could be desired, we made rapid progress for the next hour and a half. But now the mountain began to develop: the two aiguilles seen from the pass are only the western buttresses of the main building, separated from the principal summit by a gap, from which one of the upper branches of the great couloir falls to the glacier. More to the S.E., and considerably higher, towered a fine and sharp pinnacle, but the rocks looked very tempting, and the climb could not be a long one. At the south-eastern end of the summit ridge there appeared a white, snowy line—the highest point, as we thought, although we had some doubts as to the further development

of the mountain. The slopes got steeper, the snow disappeared, and we had to cut a hundred steps in hard ice (on our left, E., there was a huge cornice); then we stood at the foot of the pinnacle. It rises as steeply as any *aiguille* enthusiast might wish for, but there were staircases and chimneys, and scanty but excellent handholds where most wanted, *i.e.* at some places where we had to traverse to the right or left. The 'turs' seem to be very fond of this peak. We found their tracks (and their smell!) everywhere. In short, it was a charming, at no place difficult, climb. At 3.10 P.M. we reached the top, to find that the snowy crest to the S. was another and distinctly higher summit than that on which we were standing. A gap of about 80 ft. separated the two. The opposite snow slopes of the higher one are no doubt easy enough, but the southern 'face' of *our* needle looked most serious, and the 'landing-place' was a sharp *arête* covered with ice. It was too late to spend some hours in going back and making a (perhaps useless) circuit, so we tried the face. The descent (20 min.) proved not nearly so bad as we had expected, but two corners may perhaps be noticed as rather uncomfortable ones. Then turning to the S.W. we cut some steps in the ice wall (N.) of the gap, and by a short and easy snow-slope and some broken rocks gained the second summit at 3.50, and this time there was nothing but air and blue sky behind it. The top, formed by an *arête* of big, broken granite boulders, is about 150 ft. long and runs due E.W. The S. face, a formidably steep and broken wall, bears hardly any snow, and seems to rise immediately out of a considerable ice stream that, like a second one almost parallel to it, flows W.E., then a little to the N. The view was one of the grandest and most varied I have ever enjoyed, and Jossi's admiring exclamation, 'Eh, was Bärge!' (What a lot of mountains!), was fully justified. Central Caucasus and Western Caucasus—it was no easy matter to decide which, as a whole, was the more striking and wonderful. To the E. the form of Elbruz had grown up to overwhelming grandeur; S. of it appeared the snowy giants of the main chain and of Suanetia, somewhat isolated in their quiet and majestic serenity, and contrasting strangely with the dark masses in the W., where jagged ridges, one behind the other, looked like a storm-beaten forest of numberless wild and threatening *aiguilles* and towers. Of course the light contributed to this contrast. The E. appeared to us in the full glory of the sinking sun, whilst to the W. we now beheld the shadows on the sun-abandoned sides of the Abkhasian mountains; but the hour

only accentuated differences which nature had made. I do not know if the terms 'classical' and 'romantic' are appropriate, but if I say 'Bernese Oberland style in the E. and Dauphiné style in the W.' the characteristic qualities will at least be shortly expressed, although the comparisons will do no justice to either portion of the Caucasus in view.

But we saw other things, and *one* observation we made perhaps may, for the climber, be of no less interest than the panorama. About two miles (as the crow flies) to the E.N.E. we observed another mountain, a dark, isolated obelisk (quite snowless from this side). Several times during the ascent we had looked at it—more with distrust than admiration. First we felt quite sure that *our* peak was the higher (as well as that it was the finer), but the more we advanced the more imposingly did this strange rival lift its head, and when we stood on the top and tried to examine more closely we could not help acknowledging that the 'dark one' was the higher. The difference is very slight, but there it is, and if by the name of 'Nakhar' the Russian topographers meant to denote the *highest* peak of the 'district,' this name would be due to the unclimbed mountain in the N.E., although this one is further away from and has nothing to do with the Nakhar Pass. 'Mais à quelque chose malheur est bon;' and, as for the view *our* peak was undoubtedly the much better of the two, we did not feel so very unhappy as an ambitious climber may imagine.

We left the top at 4.30, and descended by the same route as far as the glacier we had crossed some hours before. Two good glissades allowed quick going. From above we had every reason to believe that the glacier would lead us, without any difficulty, down to the side glen, through which we hoped to reach the main valley of the Nakhar. But the tongue of the ice stream proved to be very steep and much broken, and there was no other issue than by a most interesting gorge, filled with melting séracs and water and stones of every size, between an indescribable moraine on the right and a steep rock wall to the left. Then we descended with a stone avalanche to the first terrace of the glen, and after some step-cutting across the huge moraine got to the easy grass slopes on the right bank of the river. Night was falling when we came down to the Nakhar valley, but Herr von Meck had sent Nanu (one of our Tatars from Teberdinsk) to meet us, and thus we lost no time in path-hunting, as otherwise might have been the case, for the five-verst map (and there is no other issued for *this* part of the chain) is wrong here, and

marks the path (if 'path' it may be called) where it is *not*, i.e. on the left bank of the Nakhar River. A two hours' march through a most desolate stone wilderness brought us to a bridge and a sort of oasis on the left of the torrent, where Herr v. Meck had pitched his tent. Opposite (S.W.), in the background of another short side glen, we again discovered our enemy, the dark obelisk. A very bold and threatening mountain it looks from here, and when we saw it again next morning we all thought the climb would be very difficult. The (invisible) S.E. face, perhaps, may offer better chances. From a shepherd who came to the camp fire we learnt that by the natives this mountain is called *Tschidägolu-Mingen*; he told us that a man (as I understood, a hunter) had been killed there, and that they all were very much afraid of dark *Tschidägolu*. When staying on the Nakhar Pass Nanu (who had been there before) had told us similar stories, but he connected them with the mountain we were just going to climb, which, in his opinion, was the 'lion' of the country. I think the shepherd was right; *Tschidägolu* really looks a forbidding mountain. What *our* peak is to be called I do not know; but this seems certain: there is *no* 'Mt. Nakhar' * in this district. And if, *quand même*, that name is to prevail, it ought to be given to the mountain which towers over the Nakhar Pass, and is nearer it than *Tschidägolu*.

(To be continued.)

A DAY ON THE GRAND COMBIN.

By J. J. WITHERS.

ON August 22, 1904, the weather at the Concordia Inn was bad. At 2 P.M. it had been snowing heavily for some 18 hours, and showed no sign of ceasing. The guides, Adolf Andenmatten and Andreas Anthamatten, were sleeping their almost everlasting sleep in the mysterious recesses behind the kitchen. Robert Mayor and I had discussed numerous possible and impossible expeditions for the morrow. He was at length driven back to the visitors' book, and I began to

* No native (shepherd) in the valley knows 'Mt. Nakhar'; when the name was pronounced they all would point in the direction of the *pass* and the peak we had climbed, but I doubt if they meant to denote also the latter. The case may be compared with those of Mount St. Gothard and Mount Simplon (or St. Plomb!), found in old maps.

feel as on a foggy November day in London, when it occurs to one that a future life may possibly resemble this one, and one doubts whether, under the circumstances, immortality is to be desired or hoped for. I had mentioned this view on previous occasions to Mayor; not very successfully, perhaps, and I now commenced to put the case to him again. I regret to say he did not seem to pay much attention; he looked up from the visitors' book and said irrelevantly and somewhat decisively, 'Tea!' As it turned out it was a good idea, for under the influence of that cheering beverage we began to talk of brighter climes. I waxed particularly enthusiastic over a grassy hillside above Mauvoisin and a forgotten little glacier lying in a deep recess by the Grand Combin, which memory clothed in everlasting sunshine. I had always thought the great mountain might yield on this side by a way —

That was decisive. It was only 3 P.M., and there was still time to act. Adolf was summoned and the idea mooted. He was not enthusiastic. He did not believe the sun always shone in the Val de Bagnes, but it couldn't be worse there than here. So after a hurried packing up, and paying of bills, Andreas, the strong man, was laden, and we started. Dinner at the Eggishorn proved such an attraction that 2 hrs. 40 min. sufficed to take us from the hut to its hospitable doors. In due course the feminine contingent was coaxed from games of cricket, and, after much bad weather and consequent delay, the whole party arrived at Fionnay.

Next day, Sunday, August 27, was fine, and although the guides had to go down the valley to mass, Mayor and I determined to prospect. We followed the valley path for 20 min. beyond Mauvoisin, and then turned off to the right by a path which mounted the hillside to the chalets of La Liaz in 1 hr. from the valley. On the way we saw some fine ice blocks fall from the Glacier de Giétroz. From the chalets the path is not very easy to find. We shaped a course S.W., mounting the hillside gradually till we struck a track leading due S., which was carried away in one place by an ice avalanche from the cliffs of the Tournelon Blanc, the ice blocks lying about in considerable heaps. Once found the track was an excellent one, and took us along at a high level. In 1½ hr. from the chalets a sudden turn showed us the Zessetta glacier, and between us and it a beautiful little green plateau. A large marmot scampered into its hole followed by a little one. Below a rock there was a rough and dirty shelter, and under another a low wall showed the place had been used for herds-

men's night quarters. It was a splendid camping ground, the grass was soft, water was abundant, and in front rose the Tour de Boussine, joined by a long ridge of ice and snow to the main mass of the Combin. Half an hour took us up to the glacier to investigate, and, if possible, to solve, the problem which we had in our minds, and which must be briefly stated.

From the direction of Chanrion the Combin de Zessetta (near point 4,078 m.), which was reached by Messrs. Benecke and Cohen on July 21, 1894, from the N.W., and so the Grand Combin itself, appears accessible by the great N. ridge, running up from the Mulets de la Liaz. When, however, this ridge is seen from the N., say from the Grand Tavé, it is clear that one of the series of great ice cliffs which run across the N. face of the Grand Combin cuts this ridge and forms a huge ice step in it, apparently quite impassable. The step cannot be passed on the W., for the ice cliff is for a long way continuous on that side. I had always thought it might be passed on the E. by the slopes above the Glacier de Zessetta, and I hoped to put the theory to the test.

From the Glacier de Zessetta I knew a broad snow couloir ran up to the foot of the north ridge above mentioned. The couloir itself was hidden, but the stones at its foot showed us that it was unsafe. The rocks forming the E. face of the Mulets de la Liaz are steep, but we saw they could be scaled to the N. of the Great Couloir, or, as an alternative, at the N. end of the Mulets de la Liaz a subsidiary glacier evidently gave access to the ridge. When once on the ridge it seemed that we ought to be able to turn the great step by the snow and rocks on the E.

The weather was perfect, and as we hastened home Mayor wisely pressed for a start the next day, before the weather changed. Adolf agreed, and we determined to camp out on the green plateau near the glacier.

Accordingly next morning, August 28, taking a mule to carry the blankets, we followed our previous route to the camping-ground. We explained the points to Adolf, and he went with Mayor to examine the route. On their return Adolf agreed that our proposed route up the rocks of the Mulets de la Liaz was the only feasible one, but he thought we should save time by gaining the ridge by the subsidiary glacier on the N. end of the Mulets. So we agreed to this course.

It was a cloudless evening, and the view to the E. of the Serpentine and the peaks around it was superb. The guides chose the dirty shelter, but Mayor and I preferred the open

air. We spread our blankets between a great rock and a low wall of stones, and after putting things in order for the morning, lay down to watch the light gradually die from the sky. We could hear, deep down below us in the valley on the Chermontane pastures, the tinkling of the cow-bells, but all else was still.

Oblivion was broken by the sound of my alarum watch, and we woke to find a beautiful morning. Adolf complained that the mule had kept him awake by kicking against the dirty shelter, and he grumbled a good deal to the owner of the beast about its bringing up. However, at last we got under way at 3.30 A.M. Going down a few yards we came to a little hollow which lies between the moraine of the Zessetta glacier and the slopes to the N. This hollow bore round N.W., and by it and the slopes on its N. we reached the moraine on the left bank of the little nameless glacier which lies to the S. and just below the S.E. arête of the Tournelon Blanc. We followed the moraine to its head, and then took to slopes of stones, continuing in the same direction to the base of a barrier of rock, which we climbed in a few minutes, and found ourselves on the little nameless glacier itself. This was fairly level at first, and as we waited to put on the rope we thought our passage to the ridge would be easy. The sun rose and the slope steepened. Suddenly we found our way barred by a large bergschrund. In ordinary years possibly this may be easy to cross, but last year was an exceptional one, and on neither side, to the right or left, could we see a bridge. At length, after a good deal of hunting about, Adolf stopped opposite what appeared to me a most desperate place. Deep in the crevasse there was certainly a bridge, but it was perilously slight. It simply joined the ice-wall on which we stood to a projecting slice of ice almost as perpendicular which came out from the other side into the void. Once the slice of ice was gained it was so steep and thin that to cut up and over it seemed hopeless. However, as Adolf said, if we didn't cross here we must go back, and as we had no intention of doing this, we did not waste time, but went straight at it. Adolf cut down the ice-wall held by the rope, and while we waited breathlessly tried the bridge. It held, and he quickly cut up and over the narrow strip of ice on the other side. We followed cautiously and soon stood on the further side. Bearing round to our left over easy slopes we reached the ridge at the depression between the Tournelon Blanc and point 3,632 m. of the Mulets de la Liaz, and keeping S. along the ridge we walked on to

point 3,632 m. above-mentioned (6.50 A.M.). It was a beautiful day. Away to the E. rose the cloudless Zermatt peaks. Below on the W. was the great Corbassière glacier, while to the S.W. rose the magnificent N. face of the Combin with its 4,000 ft. of glittering ice and snow.*

We sat down and scanned eagerly the ridge which ran up to point 4,078 m. It was plain sailing as far as the great ice step. That was the crux. On the actual ridge itself the top of the ice cliff which forms the step overhung in a formidable way. Just to the W. of the ridge the cliff had broken, leaving a blue gully in the ice which looked possible. A glance through the binocular convinced us that the ice gully was too long, too shallow and too steep to prove practicable, and we turned our eyes to the E. side of the ridge. Here it was clear that, this year at least, it would be impossible to turn the step on that side, for the ice bulged out in a curious way which would prevent one reaching the slopes on the E., and moreover these slopes were crowned by an enormous cornice which was already in full sunlight. Adolf's view was emphatic. It was absurd.

What was to be done? In a year of horrible weather it was a splendid day and must not be lost. Above us towered the peaks of the Grand Combin, and as we sat silent for a minute or two we one and all tried to pierce the maze of broken ice and snow and trace a route to the upper slopes. There had been a heavy fall of new snow, and a good deal depended on its state. Any route would have to traverse the greater part of the face of the mountain, which consisted of terraces below huge ice cliffs, often blue and broken, with masses of fallen ice below them.

In a few minutes we all agreed on three points. (1) That we must go to the top; (2) that the only way was to traverse under the lower of the two cliffs facing us, and trust to luck to find a way up to the usual corridor route, and (3) that no time was to be lost as the sun was rapidly getting on to the face.

Andreas Anthamatten the strong man was sent to the front to tread down the snow crust and Adolf brought up the rear. We descended into the depression between point 3,632m. and point 3,695m., and started at a good pace to gain the great snow terrace which at about this level bears S.W. across the

* For the accompanying illustration we are indebted to the kindness of Signor Vittorio Sella.

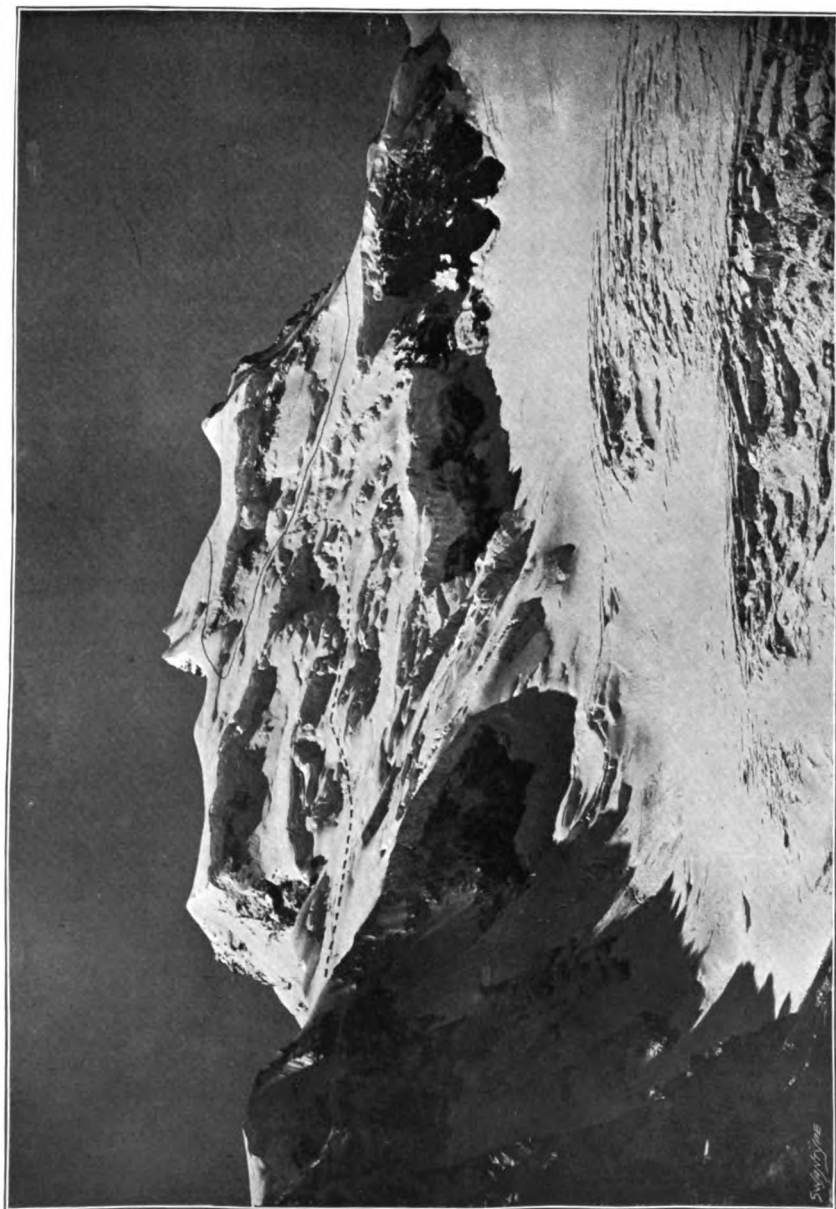


Photo by V. Scilla.

THE GRAND COMBIN, FROM THE NORTH.

Mr. Withers's route shown by dotted line; the ordinary "corridor" route by a continuous line.

Suwan Electric Engineering Co.

face of the Combin. The snow was luckily still hard and we made good progress.

How long we took to pass under those ice cliffs I cannot say, for I never looked at my watch. For a little the overhanging mass above would seem stable and secure; suddenly we would be passing under a sort of gap, our way being among and over blocks of fallen ice varying in size from footballs to chalets. A glance upwards to our left showed high above us other great blue blocks poised and ready to fall. No one spoke. Nothing one could do could prevent a block as big as a church falling on us. As nothing could be done it was no use worrying or trying to do anything. The only thing to do was to go on quietly and see. We went on quietly. Nothing did fall, and by degrees we were approaching the line of the usual 'corridor' route. As we came nearer we saw we were cut off from this by broken ice and rocks. Accordingly the only thing to do was to go straight up the face, directly the ice cliffs merged into the general slope of the mountain, in the hope of cutting the route at a higher point. The slopes were very steep and the snow was beginning to get treacherous, but we gained height rapidly. Suddenly we were stopped by a long deep crevasse, the further side of which rose in a sheer wall of ice, slightly overhanging, for about 20 feet. There was no bridge, but luckily the crevasse narrowed at one point to about 8 feet. Opposite this point, the ice wall on the further side of the crevasse was pierced by a long thin crack rising upwards from right to left, and about 9 inches wide and a foot deep. Andreas made a long stride across the crevasse and sidled into the crack. He then proceeded in the confined space to try to cut foot and hand holds, but after getting up a little way he said it was not practicable and tried to come down, which he did with difficulty. I turned to Adolf and asked whether in the event of this proving insuperable it would be possible to return the way we came. He simply said 'No,' and pointed to the sun. The new snow had under its influence become dangerous. We had to get up somehow.

We divested Andreas of all superfluous articles of clothing, gave him a pull at the flask and urged him to make a final effort. How he got up that crack is still a mystery, but he did it, and we followed by his help. A few minutes' rest followed, and then a short traverse over easy slopes to the right brought us to the tracks of the parties who had made the ascent by the 'corridor' route. The point where we joined this route was just above the place which is so dangerous from falling ice. It was now 10 A.M., we had been 8 hours in

coming from the Mulets de la Liaz. I have on the accompanying photograph marked our approximate route by a dotted line, but as the position of the ice varies much every year the photograph taken some years ago does not represent the state of the face in the year 1904. Henceforward the way was simple in the extreme. Broad tracks led us leisurely to the summit at 12 noon. The view was fine and the atmosphere clear, and I could distinctly make out the railway line in the Rhone Valley between Martigny and St. Maurice. However dark clouds gathering on the Italian side warned us not to delay. We descended by the corridor route to the Panossière hut (4 P.M.), where we luckily found some tea left behind by former visitors and reached Fionnay after many halts in a thunderstorm at 7.30 P.M.

Perhaps after all a future life may be spent in making ascents of glittering snow peaks under cloudless skies. If there is any chance of that being the case I would not vote for extinction, but there does not seem much evidence on the point.

IN MEMORIAM.

FRANK JEROME STEVENS.

ON April 4, 1905, Frank Jerome Stevens, of this Club, succumbed at Ezé, in the South of France, to injuries received on the 2nd near that place in an automobile accident. Mr. Stevens was born at Liverpool on May 13, 1863, and divided his time between this country and the United States, of which he was a citizen. A graduate of the Yale Scientific School, it was not until 1886 that he became interested in the mountains and in climbing, and since that time hardly a summer has passed that he did not find his way to the mountains of Switzerland, where he had climbed most of the principal summits. Very sure of foot, cautious and prudent, and equally at home on rock and ice, an indefatigable enthusiast, he found greater pleasure in this than in any other sport. He knew the Bernese Oberland and the Valaisan Alps well, and was also acquainted with the Ortler district and the Dolomites of the Ampezzo region.

Few who came in contact with him but were impressed with the charm of his personality, his geniality and happy disposition, while to him who enjoyed the rare privilege of his companionship for over twenty-five years—in and out of the mountains—his loss is entirely irreparable.

Mr. Stevens's most untimely death was due to a collision with an electric tram on the lower Corniche road while motoring, he being shot down an embankment leading to a railroad cutting, at the foot

of which he struck his head against the masonry of the line, fractured his skull, and never regained consciousness to the moment of his death, forty-eight hours later.

Mr. Stevens leaves a very large circle of friends on both sides of the Atlantic to mourn his loss.

C. E. T.

LIONEL H. T. MARTIN.

Since the last issue of the Journal the Club has lost one of its youngest members by the death on May 6 of Lieutenant L. H. T. Martin, late of the 3rd Battalion Irish Fusiliers and 1st Gold Coast Regiment. Mr. Martin's untimely death occurred at Sikassiko, an advanced outpost in West Africa, of which he was in command. Mr. Martin, though only recently elected to the Club, was a climber of exceptional promise; he was too a very bright and pleasant companion. His loss will be greatly felt by his many friends.

E. A. A.

FRANÇOIS JOSEPH DÉVOUASSOUD.

On July 20 François Dévouassoud died, at the age of 78, at his home at Les Baretts, near Chamonix, after a week's severe illness.

In the few hours that remain to me before I sail for South Africa I cannot attempt to write fully or worthily of my lifelong companion. I tried to do so some years ago in a volume entitled 'The Pioneers of the Alps,' to which I would ask those who care to learn something more of what sort of man François was to turn.

As a guide François Dévouassoud was excellent all round, but it was in snow and ice craft that he seemed pre-eminent. He was a pathfinder by nature. I never saw his better in discovering the best way over a broken glacier or in cutting good steps across a bad ice slope. His skill in avoiding danger, and his resource in meeting it when unavoidable, were equally conspicuous. He looked, as a good mountaineer should, on securing the safe return of his employers as his first duty, and he never ran a needless risk. He had great strength and holding power, and to this more than one member of the Alpine Club has owed his life. Other and younger guides have doubtless had more dash, have been more agile rock-climbers. François represented—he was perhaps the best representative of—the old school, the Chamonix school of glacier guides, men who were never so much at home as on snow and ice, and took to them, whenever there was a choice, by preference.

François began his climbing career about 1860. He first acted as my guide in 1863 in an ascent of Mont Blanc. In 1864 he accompanied me in a cross-country journey from Thonon to Trent. In 1865 he was with Mr. Tuckett and myself in a long and fruitful journey in Tyrol and Graubünden. He was with me again in 1866-67. In 1868 he came with Moore, Tucker, and myself to the

Caucasus. He came with me there again in 1887. He led in the first ascents of Elbruz, Kasbek, and Tetnuld. From 1868 to 1892 he was constantly with me in the Alps, Corsica, the Pyrenees, Spain, the Abruzzi, the Algerian Atlas, Egypt, Syria, Armenia. He made a journey of several months in Spain with a French gentleman, M. Astma. François was the traveller among guides. His employers were mostly Englishmen. I may mention a few—the Rev. H. B. George, Mr. J. H. Wainwright, Messrs. A. and W. Sidgwick, Sir M. Beachcroft, Mr. T. H. Carson, and Mr. J. H. Fox. He had visited almost every Alpine district from the Gross Glockner to the Maritime Alps, and had taken part in dozens of first ascents and passages of peaks and passes. These were mostly E. of the St. Gotthard. He had also climbed many of the best known Swiss peaks.

But at this moment I think of my old guide first as a friend, my oldest and most devoted friend. François had a talent for friendship. His natural intelligence, his varied reading, his many experiences made him always a delightful companion. His sympathy and tact, the outcome of a singularly modest and charming nature, the solidity and simple nobility of a character which seemed to throw off all the pettinesses of life, won him the liking and esteem of all with whom he came into contact. By his more intimate associates he was beloved; and he numbered among them many of the wives and children of his employers. For he was as much at home on an off day's stroll with a party of ladies and children as on a glacier. He would talk of Athens and Constantinople, Dumas and Victor Hugo, even more readily than of his climbing adventures.

He has gone over the Great Pass; but he will not be forgotten by those he leaves behind. Without him the Alps, to me at least, can never be the same; I shall never see or think of them without missing the familiar presence of one who seemed to embody something of their strength, loftiness, and serenity.

François Dévouassoud was presented a few years ago with a medal by the French Alpine Club for his services as an explorer. His portrait was painted recently by Mr. McCormick and is reproduced in colours in Sir Martin Conway's recent book.

D. W. F.

There are others (Freshfield of course for one) who can speak with more authority of François, both as a guide and as a man, than I can, but I should not for all that wish that he should pass from us without a word of tribute from me.

As *guide* it always seemed to me that he was at his *best* when there was an emergency to be faced, or a sudden responsibility thrown upon him which he thought it was his duty to accept. Such circumstances brought forth all his splendid powers, and it was rarely indeed that he failed to 'save the situation.' Two such instances occur to me—one the Karagam icefall in the Caucasian chain, in which he led the party with consummate skill and without

a mistake for 6 hrs. of the most delicate and exacting work ; the other a forced descent from the upper snow-fields of the Tödi to the Sand Alp in bad weather. Foiled in the ascent of the peak, there was nothing left for our party but to cross the southern ridge by one of the known passes. In the dense mist and furious thunder storm raging, however, it proved impossible to hit off either of them, and finally we found ourselves on an unknown notch in the ridge and looking down upon what even at this distance of time (the year was 1866) looms in my recollection as the most forbidding snow gully I ever met with in the mountains. I thought, and but for the result should think still, that its descent was impossible. Not so François. With his wonderful knowledge of snow conditions he had detected that the slope was in the state in which, and in which only, it could be negotiated, and he did not hesitate for a moment. Face to slope, and each man placing his feet in the exact pigeon-holes made by his predecessor and his axe in the same snow sockets, the Jacob's ladder from heaven to earth was accomplished, and 4 or 5 hours afterwards we were safely landed on the lower slopes of the mountain, gazing with wonder at the regular tracks, left and right, leading upward till lost in mist and storm which marked our line of descent. Such instances could be multiplied indefinitely.

And, as a *man*, who was like him among Alpine guides ? Intelligent, with an insatiable thirst for knowledge, serene in temper, refined in every taste, yet full of humour, he was an ideal companion alike in crowded cities and Syrian solitudes. 'Ami des Anglais' he was called, and was proud of his title. And the English are many who are proud too to have been his friend. May his simple belief, expressed more than once in my hearing in one of his favourite speculations on the future of Roman and Protestant, be one day realised : 'Monsieur, sans doute nous nous rencontrons sur l'autre côté.'

C. COMYNS TUCKER.

THE ALPINE CLUB ANNUAL PHOTOGRAPHIC EXHIBITION.

The annual Exhibition of Photographs was held at the Club in May last, and necessitates the usual notice in this number. We were pleased to remark the increased number of contributions by lady exhibitors. Among these, Miss Longstaff's photographs were pre-eminent for cleverness in choice of subject and effect. 'The Col de Collon from near Arolla' and 'Forty Mile Creek' were particularly noticeable in these respects. Miss Dorothy Pickford in her view of the Col des Hirondelles from above Montanvert, exhibited a very interesting effect of sunshine and storm, carefully executed. We must also mention the charming studies of crevasses exhibited by Miss C. Ellis. Miss Arkle showed the usual view of Mount Collon from Arolla. Miss Venables appears to be a member of the impressionist school. Her view of a sunset over the Brévent from Montanvert was distinctly pictorial, and her other exhibit showed

good composition and pleasing softness of treatment. Mr. Wyatt sent two impressive photographs of Loch Fyne, which were remarkable for depth and dramatic cloud effect.

Dr. O. K. Williamson contributed a number of interesting exhibits. 'The Grand Combin from the Tournelon Blanc' displayed a genuine feeling for tone, while the view from the Dufourspitze showed no small technical ability. The Club was very fortunate in being able to hang a series of views of the Antarctic regions, taken by Captain Skelton, of the *Discovery*. All these were very carefully executed prints, of great topographical value, and in a few cases, as, for example, in that of 'Mount Sabine,' showed effects of a really astonishing and extraordinary character. The Rev. Canon Martin is evidently a photographer of unusual enthusiasm, and to some of those who have been to the Grands Mulets his view of a sunset taken from that spot may have proved interesting. Mr. Burchell Rodway's contributions, with the exception of a really pleasing view on the Lake of Thun, were somewhat spoilt by an excessive attention to dull and meaningless foreground. Mr. Lord showed a view of a wild spot in a Tyrolese forest in which the effect of sunshine on trees was remarkable. His 'Day-break from the Riffelberg' had a nice bold sky, full of depth, but the foreground was less interesting. Mr. Wortley's photograph of Lille Molla (Lofoten) was very charming and possessed great technical merit. The exhibitions could do quite well with more work of this kind.

Only Dr. Collie would have had the sense to take a photograph like 'Sunrise in the Lofoten Islands.' This was a charming view, with hardly any land in it, but with a wide sea and a broad expanse of chequered sky, the faint and distant islands seeming to give a remarkable effect of depth to the picture. Another of his contributions, 'The Svartisen Coast,' was a view of rocky ridges with a light sky behind them and a dark band of cloud above, all reflected in a calm sea. There was a delightful atmosphere of stillness and peace about this picture. We must also not forget to mention the very interesting coloured photograph of Fuji San, which Dr. Collie lent, and which was, we understand, the work of a Japanese photographer.

Mr. Howard Priestman's photograph of the Tysfjord was eminently creditable, but we think a little more care in the enlargement would have done no harm. His view of the Lofoten Peaks at sunset was still more attractive, its great charm being the nice light sky framed with dark clouds.

Mr. Ouston showed a capacity for composition in his view of the Stedfjord, but the sky lacked gradation. On the other hand, in his view of the Aalesund the sky was admirably treated. The lighting of the sea, too, was well conceived, the whole being marred only by the fact that the horizon was not at right angles to the vertical.

Mr. J. P. Somers contributed the usual number of correctly exposed winter views. 'Iceicles at the mouth of a Tunnel' was interesting and peculiar, and 'Monte Rosa' was a particularly

good example of photographic art, being a composition in light and shade, as well as in outlines.

Mr. Broome lent an attractive photograph of Mont Blanc and the Lake of Geneva, by M. Boissonaz. It would be interesting to know by what method M. Boissonaz achieves such excellent detail both in foreground and in distance. Mr. Laurie's telephotographs showed good work. Mr. Tulton sent some clever little views that would have borne enlargement.

Mr. Alfred Holmes, as usual, sent some very good photographs. His views from Lo Besso, both large and small, showed great technical merit. The small view of the 'Aiguille du Dru from Montanvert' was most effective.

Mr. J. N. Wyatt's view of Monte Rosa requires exposure. In other respects it is an excellent piece of work. Dr. Tempest Anderson's eruptions were this year of more than usual interest. We hope he will long continue to furnish the Club with representations of these remarkable phenomena. Mr. Thurston Holland sent a large view of the Matterhorn, which attracted a good deal of notice.

We now come to the contributions for the year of Dr. W. Hunter Workman and Mrs. F. Bullock Workman, all of which were taken among magnificent Himalayan scenery. In the view taken on the Col des Aiguilles, in which a snow cornice (whence the Hoh Lumar glacier has its origin) is shown at an altitude of no less than 18,381 ft., the party is again visible, and this time apparently facing the spectator. This photograph shows the white snow and black sky which are such familiar features in the work of these eminent explorers. Quite a different effect is shown in Mr. Spencer's view of the 'Grandes Jorasses from the Tour Noir.' This showed a powerful treatment of light and shade which reminded us of the work of the late Mr. W. F. Donkin. Attention was cleverly drawn to the centre of the picture by the concentration of light at that point, and this helped, with the charming outline, to complete an excellent piece of composition. His large pictures of the 'Buttlassen,' the Fee Glacier and the Brenta Dolomites, were remarkable for depth and aerial effect, and would be pleasant companions anywhere.

Mr. S. Donkin's contributions were, as usual, marked by excellent clearness and detail, and his power of representing the effect of strong sunlight, which is largely due to correct exposure.

Dr. Swan sent some capital views, among which were some telephotographs, in which the effect of light was remarkably good for this class of work. Mr. A. W. Andrews also contributed some good work, including two interesting pictures of rocks on the Cornish coast.

One unusual feature of this year's exhibition was the kakemonos sent by Mr. Weston. These were really remarkable examples of Japanese art combined with great botanical utility.

On the whole, we think the level of excellence of these exhibitions may be said to have been more than maintained this year. There was a decided increase in the number of really good photographs sent.

THE ALPINE CLUB LIBRARY.

THE following additions have been made since April:—

New Books and New Editions.

- Album recuerdo de la inauguracion de la estatua á Cristo Redentor en la cumbre de la Cordillera de los Andes.** Buenos Aires, Ramirez, 1904
Obl. 4to, pp. 24 of illustrations.
A statue has been erected on the chief pass between Chile and the Argentine Republic, to commemorate the settlement of the boundary question by arbitration.
Presented by H. F. Montagnier, Esq.
- Almásy, Dr György.** Vándor-utam Azsia szivébe.
8vo, pp. 737; plates. Budapest, Természettudományi, 1903
Exploration of the Tian-Shan, with numerous fine plates of the mountains.
- Alpine Gipfelführer.** 8vo. maps ill.
Stuttgart u. Leipzig, Deutsche Verlags-Anstalt, 1905. M. 1 each
1. Die Zugspitze von Peter. pp. 56.
2. Die Elmauer Haltspitze von F. Bohlig. pp. 64.
3. Der Ortler von Dr Niepmann. pp. 73.
4. Der Monte Rosa von Dr F. Hörtnagl. pp. 37.
Very well illustrated little guide-books.
- Baedeker, K.** Switzerland and the adjacent portions of Italy, Savoy, and Tyrol. Handbook for travellers. 21st edition.
8vo, pp. xxxviii, 548; maps. Leipzig, Baedeker; London, Dulau, 1905. 8/-
- Besso, S.** Alpes. Prose et poesie alpine raccolte da Salvatore Besso.
8vo, pp. 305. Milano, Treves, 1905. L. 3.50
A collection of extracts, containing:—
Petrarca, Monte Ventoso.
A. Manzoni, Diacono Martino, dall' 'Adelchi.'
G. Carducci, Poesie.
M. Savi-Lopez, Leggende.
P. Liroy, Condottieri.
F. Pastonchi, Poesie da 'Belfonte.'
G. Saragat, Tipi e figure, ecc.
G. Giacosa, Una strana guida; G. Rhedy.
E. Whymper, Il Cervino.
A. Baccelli, La guida delle Alpi; Poesie.
P. Giacosa, Alpinismo.
F. Novati; Infames frigidibus Alpes.
- Bohlig, F.;** Die Elmauer Haltspitze; see Alpine Gipfelführer.
- Carducci, G.;** Poesie: In Carnia, Courmayeur, Esquie della guida, ecc.; see Besso, S.
- Chamonix et la Vallée de Chamonix.** Guides Joanne.
8vo, pp. 32; map, ill. Paris, Hachette, 1905. 50 c.
- Coolidge, W. A. B., H. Duhamel and F. Perrin.** The central Alps of the Dauphiny. Conway and Coolidge's Climbers' Guides. 2nd edition, thoroughly revised. London, Unwin, 1905. 7/6 nett
Sm. 8vo, pp. xiv, 220.
- Coryat, Thomas.** Coryat's Crudities Hastily gobbled up in five Moneths travells in France, Savoy, Italy, Rhetia commonly called the Grisons country, Helvetia alias Switzerland, some parts of high Germany and the Netherlands; Newly digested in the hungry aire of Odcombe in the County of Somerset, and now dispersed to the nourishment of the travelling Members of this Kingdome. Glasgow, MacLehose, 1905. 25/- nett
2 vols, 8vo; plates.
vol. 1, pp. 215-226; Observations of Savoy.
vol. 2, pp. 63-112, Observations of Rhetia, Chur, Switzerland, Zurich.

- Thomas Coryat lived 1577 ?-1617. "On May 14 1608 he sailed from Dover and passed through Paris, Lyons and other French towns, crossed the Mont Cenis on a *chaise à porteurs* on June 9th, and after visiting Turin, Milan and Padua, arrived at Venice on the 24th. Here he stayed till August 8th, when he commenced his homeward journey on foot. He crossed the Splügen, passed through Coire, Zurich and Bâle, and then sailed down the Rhine and reached London on October 3rd. . . . His book was the first, and for a long time remained the only, handbook for continental travel. Of the first edition, published in 1611, there is only one perfect copy, in the Chetham Library." Dr. Jessopp in Dict. Nat. Biography.
- Descombes, Paul.** Etude sur l'aménagement des montagnes dans la chaîne des Pyrénées. 2de édition. Extrait de la Rev. Philom. de Bordeaux. Bordeaux, Feret, 1905
8vo, pp. v. 42.
This has been presented by the author. In connexion with it see 'L'association pour l'aménagement d. montagnes.'
- Aus den Dolomiten.** Rosenargarten und Schlern. München, Verlag d. "Alpine Majestäten"; Bozen, Loeb[1904]. Kr. 2
Obl. 4to; 12 plates, without letterpress.
- Downer, Rev. A. C.** Mountaineering Ballads. London, C. Murray [1905]. 1/- nett
Obl. 8vo, pp. 47.
Some, if not all, of these have already appeared in 'The Fireside Magazine.' These ballads are not, as a whole, of an ambitious order, but they breathe in the right spirit the attraction of the mountains, and pleasantly recall days and nights spent in good company amid the mighty peaks. Mr. Downer's verses will find an echo in the mind of many mountaineers.
- von Ebner, C. August.** Der Bergfahrt Freuden und Leiden. Nürnberg, Sebald [1905]
8vo. pp. 42.
Poems.
- Eichhorn, Karl.** Die Rigi und ihre nächste Umgebung. Führer für Kurgäste und Touristen. Luzern, Bucher [1905]
Sm. 8vo. pp. 122; map, ill.
A well-illustrated guide to the district round the Rigi.
- Giacosa, G.** Variazioni sull' Alpinismo, dalla 'Lettura,' agosto 1901; see Besso, S.
— Novelle e Paesi valdostani; see Besso, S.
- Holdich, Col. Sir Thos. H.** The countries of the King's award. London, Hurst and Blackett, 1904
8vo, pp. xv, 420; map, ill.
Chile and the Argentine Republic.
Presented by H. F. Montagnier, Esq.
- Hörtnagl, F.**; Der Monte Rosa; see Alpine Gipfführer.
- Makowsky, A., and A. Rzehak.** Führer in das Höhlengebiet von Brünn. Brünn, Winniker, 1903. M. 1.20
8vo, pp. 48; ill.
This belongs to speleology, a science that has forced its way under the protection of 'alpinism.' The book forms a well illustrated guide to the many caves near Brünn.
- Mittenwald a. Isar.** Straubing, Attenkofer [? 1905]
Obl. 8vo, pp. 23.
- Müller, Johannes**; Hohe Tatra; see Karpatenverein.
- Niepmann, Dr.**; Der Ortler; see Alpine Gipfführer.
- Novati, F.**; Infames frigidibus Alpes, da 'Lettura,' agosto 1901; see Besso, S.
- Oakley, E. S.** Holy Himalaya. The Religion, Traditions, and Scenery of a Himalayan Province, Kumaon and Garhwal. Edinburgh and London, Oliphant, 1905. 5/-
8vo, pp. 319; plates.
What is specially interesting in this book is the portion dealing with the relations between the Himalayas and the religious ideas of the peoples.
- Onelli, Clemente.** Trepando los Andes. Buenos Aires, etc., 1904
8vo, pp. 297; map, ill.
Presented by H. F. Montagnier, Esq. A richly illustrated work on Andean exploration.

- Pastonchi, F.**; Poesie da 'Belfonte'; see Besso, S.
Petar, E.; Die Zugspitze; see Alpine Gipfführer.
Das Pusterthal und Ampezzaner Dolomiten.
 München, Verlag d. "Alpine Majestäten"; Bozen, Loebli [1904]. Kr. 2
 Obl. 4to; 25 plates, without letterpress.
Rabl, J. Illustrierter Führer auf der Tauerbahn und ihren Zugangslinien.
 Ein Führer auf den neuen Alpenbahnen.
 Wien u. Leipzig, Hartleben, 1906 [i.e. 1905]. M. 5.40
 8vo, pp. xiv, 280; maps, ill.
Rey, Guido. Le Mont Cervin . . . traduit de l'italien par Mme L. Espinasse-
 Mongenet. Paris, Hachette, 1905. Fr. 3.50
 8vo, pp. xvi, 410; ill.
 This has only reductions of a few of the fine plates of the original,
 noticed in the Journal already.
Riso Patron, Luis. La Cordillera de los Andes entre las latitudes 30° 40'
 i 35° S. Trabajos i estudios de la segunda sub-comision chilena de
 Santiago de Chile, Cervantes, 1903
 Roy. 8vo, pp. xvi, 256; maps, plates.
 — La Cordillera de los Andes entre las latitudes 46° i 50° S.
 Santiago de Chile, Cervantes, 1905
 Roy. 8vo, pp. x, 233; maps, plates.
 Both volumes are issued by the Oficina de Límites, República de Chile.
Scheibert, J., W. und Fr. Der Wintersport. Bibliothek für Sport und Spiel.
 Leipzig, Grethlein & Co [? 1904]. M. 3
 A handbook of skating, ski-ing, and other winter sports.
Swayne, Major H. G. C. Through the highlands of Siberia.
 8vo, pp. xiv, 259; plates, map. London, Rowland Ward, 1904
 A hunting trip.
Terschak, Emil. Die Photographie im Hochgebirg. Praktische Winke in
 Wort und Bild. 2. Auf. Berlin, Schmidt, 1905
 8vo, pp. 60; ill.
 A well-illustrated handbook.
Touristen-Ausrüstung. Wien, Mizzi Langer, 1905
 4to, pp. 64; ill.
 A well-illustrated trade list.
Townsend, Rev. J. H. The two climbers or a Cry from the Alps. A true
 story. London, Partridge [1904]. 2d
 32mo, pp. 32; frontispiece.
 An accident to the author's brother on the Dent de Jaman in 1864.
Wheeler, O. D. The Trail of Lewis and Clark 1804-1904. A story of the
 great exploration across the continent in 1804-6; . . .
 2 vols, 8vo, plates. New York and London, Putnam, 1904
Whymper, E. The valley of Zermatt and the Matterhorn. Ninth edition.
 London, Murray; Geneva, Kündig; Chamonix, Payot, 1905. 3/- nett.
 8vo, pp. xiv, 224; map, ill.
 — Chamonix and the range of Mont Blanc. Tenth edition.
 London, Murray; Geneva, Kündig; Chamonix, Payot, 1905. 3/- nett.
 8vo, pp. xiv, 206; maps, ill.
Wieland, Hans. Wie baut und wie bepflanzt man ein Alpinum.
 8vo, pp. 24; ill. Erfurt, Schmidt [? 1905]. Pfg. 50
 This shows how and where an alpine rocky may be formed, with
 illustrations of plants and their arrangement.

Older Books.

- Anderson, Sir C.** An eight weeks' journal in Norway, &c. in 1852, with rough
 outlines. London, Rivingtons, 1853
 8vo, pp. viii, 124; plates.
Anderson, William; Edited by. Treasury of nature, science and art for the
 young. Edinburgh, Paton, n.d.
 8vo, ill.
 Contains quotations on snow, avalanches, glaciers, caves, etc.

- Bailey, Solon I.** The volcano El Misti. 4to, pp. 49; plates.
Cambridge, U.S.A., Astronomical Observatory of Harvard College, 1899
Extracted from the Annals of the Observatory, vol. 39, chap. 1.
- The volcano El Misti lies some 11 miles to the north-east of Arequipa. It rises to over 19,000 feet, but has no glaciers and in some years very little snow, for the level of permanent snow in its latitude is nearly 20,000 feet. It can be ascended by mules. Yet this paper on the volcano contains much that is interesting to the mountaineer. Since the foundation of Arequipa in 1549 El Misti has been an object of deep regard. It is represented on the seal of the city, and the people speak of themselves as sons and daughters of El Misti. It appears, from remains found, that the Indians used to ascend to the summit, for some religious purposes: the highest early ascents known. The Spaniards have made many ascents. Towards the end of the eighteenth century a cross was placed on the summit as a protection to the town below. Portions of the accounts of various ascents are reproduced in this paper. "Without doubt several hundred people have attempted to reach the summit within the last two centuries. With the exception of the Indians the number who have climbed to the highest point where the Station stands"—the meteorological station with which Professor Bailey was connected—"does not probably exceed a score."
- In relation to mountain sickness, from which most of the climbers who have left records appear to have suffered, the author's experience is of interest:—"During the establishment of the station, eight days were passed between 13,000 and 19,000 feet. During this time no real illness was experienced, although exercise was freely taken between 13,000 and 14,000 feet; and at different times I passed several busy hours at 19,000 feet without serious discomfort. . . . Our experience proves that a moderate acclimatisation is of great value."
- The work has been presented by H. F. Montagnier, Esq.
- à **Beckett, Arthur, and Linley Sambourne.** Our holidays in the Scottish Highlands.
Obl. fol., pp. 144; plates. London, Bradbury, Agnew, 1876
A humorous work including climbing in Skye.
- Black's picturesque guide to the English Lakes.** Including the geology of the district by John Phillips. . . . Outline mountain views by Mr Flintoft. Illustrations by Birket Foster. Sixteenth edition.
8vo, pp. xxx, 285; plates, maps. Edinburgh, Black, 1872
- British Traveller.** The modern Universal British Traveller; or, A new, complete and accurate Tour through England, Wales, Scotland, . . . Being calculated equally to please the Polite,—entertain the Curious,—instruct the Uninformed,—and direct the Traveller. . . . The Articles respecting England, by Charles Burlington, Esq. Such as relate to Wales, by David Llewellyn Rees, Gent. And those Descriptive of Scotland, by Alexander Murray, M.A.
Folio, pp. iv, 836; map, plates. London, Cooke (1779)
- Brooke, Sir Victor;** *see* Stephen, O. L.
- Clarke, Rev. C. C.** The hundred wonders of the world, . . . described according to the best and latest authorities. Eighteenth edition.
12mo, pp. xii, 661; ill. London, Whittaker, 1835
pp. 1-96, Mountains: with illustrations of Chimborazo, Mont Blanc, Etna, etc.
- Dates and distances,** showing what may be done in a tour of sixteen months through various parts of Europe, as performed in the Years 1829 and 1830.
8vo, pp. 358; map. London, Murray, 1831
Includes Switzerland and Tyrol.
- Green, William.** A description of sixty Studies from Nature; etched in the soft ground, by William Green of Ambleside; after drawings made by himself in Cumberland, Westmorland, and Lancashire. Comprising, a general guide to the beauties of the north of England.

London, Printed for the Author, by J. Barfield, . . . and published by Longmans. . . 1810

12mo, pp. xii, 122.

The prints were published at 10 guineas, 1808-1810; also 78 smaller plates at 5 guineas. The handbook is priced at 2/6.

Hall, A. V. "Table Mountain": Pictures with Pen and Camera.
8vo, pp. 23; plates. Cape Town, London, etc., Juta [1897?]
A poetical description, with excellent plates of Table Mountain.

Heim, Albert. Die Gebirge. 8vo, pp. 28; panorama. Basel, Richter, 1881
No. 7 of vol. 6 of Oeffentliche Vorträge gehalten in der Schweiz.

Hemingway, J. Panorama of the beauties, curiosities, and antiquities of North Wales, exhibited in its mountains, valleys, waterfalls, lakes, . . . Intended as a pocket companion to the tourist and traveller. Third edition, corrected and improved. London, Groombridge, etc.: Dublin, etc., 1842
Sm. 8vo, pp. viii, 327; plates.

In connexion with this, see notes under Hicklin, J., on p. 465 of last no. of the Journal.

Hicklin, John. Excursions in North Wales: complete guide to the tourist through that romantic country; . . .
Sm. 8vo, pp. ix, 208. London, Whittaker, etc; Chester, Prichard, 1847

Humboldt's travels and discoveries in South America. Second edition.
Sm. 8vo, pp. viii, 276; ill. London, Parker, 1846

Knowles, J. Sheridan. William Tell: a play, in Five Acts . . .
Sm. 8vo, pp. 86. London, Cumberland (? 1828)

Lüddecke, Dr Richard. Ueber Moränenseen. Ein Beitrag zur allgemeinen Erdkunde.
Halle, Niemeyer, 1881
8vo, pp. 67.

Matthisson, Friedrich. Briefe. 2 vols, 8vo. Zürich, Orell Füssli, 1795
Chamonix in 1788; Great St Bernard, 1791; Grisons, 1793.

From Chamonix, the poet writes;—"Wir besuchten den Doktor Paccard, der uns seine Reise nach dem Montblanc selbst bescheiden und einfach erzählte. Er scheint weiter gar keinen Werth auf dies kühne Unternehmen zu legen, und behauptete, dass jeder andre, mit gleichen physischen Kräften, eben so gut als er den Gipfel dieses Berges hätte ersteigen können. Jetzt arbeitet er an einem Werke über die Gletscher, welches die Resultate seiner vieljährigen Untersuchung über die Entstehung derselben enthalten wird."

Where is that work?

(**Mawman, J.**) An excursion to the Highlands of Scotland and the English Lakes, with recollections, descriptions, and references to historical facts.

8vo, pp. xvi, 291; map, plates. London, Printed for J. Mawman, 1805

Mont Blanc. An ascent to the summit of Mount Blank. In Thos. Hood's Comic Annual, vol. 3. London, Tilt, 1832

8vo, pp. 49-55; ill.

This is a parody of Wilbraham's Ascent, in the Keepsake.

At the end of this volume occurs the following advertisement:—

Mont Blanc. The Jung Frau. Two large picturesque views for Pole Screen, Work Tables, &c. 2s. each plain; 3s. 6d. highly coloured Lithographic prints . . . for the newly-invented and fashionable art of transferring.

Does any reader know of the existence of copies of these transfer pictures?

— A boy's ascent; see [Smith, Albert].

Otley, Jonathan. A concise description of the English Lakes, and adjacent mountains: with general directions to tourists; . . . Fifth edition.

Keswick, published by the author; London, Simpkin and Marshall; etc.,
8vo, pp. 184; map, ill. 1834

1st edition ? 1823; 8th edition, 1849.

Savi-Lopez, Maria. Leggende delle Alpi. Torino, Loescher, 1889
8vo, pp. 358; ill.

- [Smith, Albert]. The boy's birthday book . . . by G. A. Sala.
8vo, ill. London, Maxwell [c. 1870]
pp. 5-105; A boy's ascent of Mont Blanc.
This was published by Houlston in 'The Boy's Birthday book' in 1859.
It is an altered version of Albert Smith's 'Mont Blanc,' 1860. It is to be noted that the *unaltered* reprint in 1870 of 'Mont Blanc' 1860, has the title 'A Boy's Ascent of Mont Blanc.'
- Stephen, Oscar Leslie. Sir Victor Brooke, sportsman & naturalist. A memoir of his life and extracts from his letters and journals.
8vo, pp. x, 266, plates. London, Murray, 1894
This includes:—Norway and Sweden, including ascent of Sneehåtten and perilous attempt to climb the virgin peak of Vaugacullen: Moufflon-hunting in Sardinia: The Pyrenees, lizards, bears and bouquetin.
- De Tarbes à travers les Pyrénées centrales. Basses-Pyrénées—Hautes-Pyrénées—Ariège—Haute Garonne. Par un groupe d'Excursionnistes bigourdans. Tarbes, E. Vimard, 1893
8vo, pp. 294.
This is a very pleasantly written series of articles descriptive of touring among the beauties of the Pyrénées, evidently written by those who have an enthusiastic love for the scenery described.
Mr L. Vimard, one of the authors, has very kindly presented this copy to the Club library.

- Whitaker, Rev. John. The course of Hannibal over the Alps ascertained.
2 vols, 8vo. London, Stockdale, 1794
The author, after two volumes of argument and of scorn expressed of other writers, is very certain that the truth is revealed by him. He ends his work thus;—"I have thus thrown a new and strong light, I presume, upon this important portion of history. . . Evidence has been successively added to evidence, like hill piled upon hill, till the whole (I think) has risen into a mountain like its own St Bernard; towering with its head over the history, as that goes over the globe; leaving all the clouds at its feet, and showing the sunshine in a burst of radiance on its side."

Club Publications.

- Appalachian Mountain Club. Register for 1905. Sm. 8vo. pp. 81. 1905
- C.A.F. Concours universel de photographies de montagnes. 8vo, pp. 2. 1905
The French Alpine Club invite photographers, amateur and professional, to send them mountain photographs for exhibition in their Club rooms, at any time up to November 30. After that date a selection will be made for public exhibition. Rules may be had from Monsieur H. Cuénot, 32 rue du Bac, Paris.
- Alpes Maritimes. Chalet-refuge de Rabuons. Tarif. Folio, p. 1. 1905
- Inauguration. 4to, pp. 4. 1905
- Provence. Bulletin. 8vo. pp. 77. 1905
The articles are;
A. Callot, La Pointe de Malvallon. M. Bourgogne, Castel-Vieil.
V. Gros, La Meije Centrale, etc. E. Burnand, Chanrion.
R. Gombault, Nocturne. L. Nardin, Riou et ses arêtes.
- Côte-d'Or et du Morvan (Dijon, 1876). Bulletin. Nos. 1-18. 8vo. 1878-1900
- C.A.I. Milan. Annuario. Sm. 8vo. pp. 70. 1905
Cariche sociale; gite sezionali; Elenco guide et portatori Alpi Lombarde; rifugi della Sezione; Elenco Soci; Ski-Club.
- Caucasus Club. Circular III. 8vo, pp. 16. Mai 1905
- D.u.Oe. A.-V. Zeitschrift: Wissenschaftliche Ergänzungshefte. ii. Band—i. Heft. Über den Gibirgsbau der Tiroler Zentralalpen mit besonderer Rücksicht auf den Brenner. Von Fritz Frech. Innsbruck, 1905
4to, pp. 98; map, plates.

- D.u.Oe. Amberg.** Statuten. Sm. 8vo, pp. 6. 1900
 --- **Anhalt.** Bericht über das zehnte Vereinsjahr 1904. Dessau, 1905
 8vo, pp. 30.
 --- --- Satzungen. 8vo, pp. 4. n.d.
 --- **Bamberg.** Statuten. 8vo, pp. 8. 1905
 --- --- XVIII. Jahres-Bericht, pro 1904. 8vo, pp. 51. 1905
 --- --- XXXVI. Generalversammlung des D. u. Oe. A.-V. in Bamberg. 4to,
 pp. 4. 1905
 --- **Bludenz.** Satzungen. 8vo, pp. 8. 1896
 --- --- 9. Jahresbericht. 8vo, pp. 19. 1904
 --- --- Führer durch Bludenz und Umgebung. 1903
 8vo, pp. 40; maps, ill.
 --- **Dantzig.** Verzeichniss der vorhandenen Bücher. . . . 8vo, pp. 11. 1904
 --- --- Statuten. 8vo, pp. 4. 1904
 --- **Darmstadt.** Section Darmstadt 1870-1895. 8vo, pp. 20. 1895
 --- --- Bericht z. 35. Stiftungsfeste ü. d. Jahre 1895-1905. 8vo, pp. 20. 1905
 --- --- Satzungen. 8vo, pp. 7. 1904
 --- **Döbeln.** 1. Jahres-Bericht, 1903-4. 8vo, pp. 24. 1904
 --- --- Satzung. 8vo, pp. 9. 1903
 --- **Dortmund.** Jahresbericht für 1904. 8vo, pp. 11. 1904
 --- --- Satzungen. 8vo, pp. 8. 1904
 --- **Fürth.** Statuten. 8vo, pp. 4. 1899
 --- --- 21. Bericht, für das Jahr 1903. 8vo, pp. 31. 1904
 --- --- 22. Bericht, für das Jahr 1904. 8vo, pp. 30. 1905
 Contains Library Catalogue, pp. 22-29.
 --- **Garmisch-Partenkirchen.** Jahresberichte für 1902, 1903, 1904.
 8vo, each about 20 pp.
 --- **Gera** (1879). Jahresberichte, 22-25. 1901-4
 --- --- Beilage z. Jahresberichte 1902. Führertarif f. d. Gerichtsbezirk
 Steinach u. f. d. Zillertal. 8vo, pp. 15. 1902
 The first portion is taken from the Führer-Tarif of the Section Wipptal
 and second portion from the Führerverzeichniss der Berlin Section.
 --- --- Die Sektion in den 25 Jahren ihres Bestehens 1879-1904. 1905
 8vo, pp. 10.
 --- --- G'schmalzenes und G'selchtes der Sektion zum 25-jährigen Stiftungs-
 feste am 3. März 1905. 8vo, pp. 16; ill. 1905
 --- **Hagen i. W.** Satzungen. 8vo, pp. 7. 1903
 --- --- Jahres-Bericht für 1903 und 1904. 8vo, pp. 16. 1904
 --- **Hanau** (1894). Statuten. 8vo, pp. 4. ? 1897
 --- --- Bericht 1897-1902. 8vo, pp. 42. 1902
 A good idea of the Club activity and the social life of a Section can be
 gained from a study of a Report such as this. First come the titles of
 papers on climbing read at meetings. Then follows a list of the
 various social parties held, at which costume dances, one-act plays,
 music, choral singing, etc., were the features. Next comes the account
 of the opening of the Hanauer hut in the Parsinn—this occupies
 pp. 13-34. The accounts and the list of members, 279, complete the
 Report.
 --- **Hof.** Statuten. 8vo, pp. 4. 1897
 --- **Jena.** Statuten. 8vo, pp. 4. 1882
 --- **Kaiserslautern.** Satzungen. 8vo, pp. 2. 1903
 --- --- Bücherverzeichniss. 8vo, pp. 2. 1905
 --- **Kiel.** Jahresbericht, 1899-1903. 8vo, pp. 16. 1904
 --- --- Satzungen. 8vo, pp. 4. 1894
 --- **Königsberg.** Statuten. 8vo, pp. 2. 1891
 --- --- Bericht über die Gründung und Thätigkeit der Sektion, 1890-1894.
 8vo, pp. 16. 1894
 --- --- Bericht über Bestand und Thätigkeit . . . 1895-1900. 1901
 8vo, pp. 37.

- D.u.Oe. Kufstein.** Satzungen. 8vo, pp. 4. 1897
 ———— Tätigkeits-Bericht, 1900-2. 8vo, pp. 24; ill. 1903
 ———— Kufstein und das Kaisergebirge. 8vo, pp. 8; col. plates. 1904
Kulmbach (1894). Satzungen. 8vo, pp. 4. 1894
Landau, Pfalz. Satzungen. 8vo, pp. 5. 1903
 ———— Jahresbericht, 1904. 4to, pp. 4. 1905
Landshut. Jubiläums- und Jahresbericht, 1875-1899. 1900
 8vo, pp. 38, frontispiece.
Langenfeld i. V. Bücherverzeichnis. 8vo, pp. 16. 1905
Liegnitz. Satzungen. 8vo, pp. 4. 1894
 ———— Katalog. Folio, pp. 4. n.d.
Linz. Satzungen. 8vo, pp. 7. 1897
 ———— Post-card of Hopfürgl-Hütte.
 ———— Sketch-map of district, with huts.
 ———— Bücher-Verzeichnis. 8vo, pp. 57. 1905
Mittenwald a. Isar. Mittenwald und Umgebung. 8vo, pp. 31; ill. n.d.
 ———— Führertarif. 8vo, pp. 15. 1905
Münster-Westfalen. Satzungen. 8vo, pp. 6. 1904
Neu-Ulm a. D. Statuten. 8vo, pp. 7. 1901
Noris in Nürnberg. Statuten. 8vo, pp. 4. 1904
Pfalzgau. 16. Jahres-Bericht. 8vo, pp. 51. 1904
 Contains Library Catalogue, pp. 34-51.
 ———— Statuten. 8vo, pp. 4. 1902
Pforzheim. Zur Pforzheimer Hütte. Bergtouren. 4to, pp. 4. 1905
Radstadt. Statuten. Folio, pp. 6. n.d.
Schärding. Satzungen. 8vo, pp. 4. 1887
Steyr. Statuten. 8vo, pp. 4. 1874
 ———— Bücherei der Sektion. 4to, pp. 18; lithographed. 1904
Zweibrücken. Satzungen. 8vo, pp. 4. 1904
Graz. Turner-Bergsteiger. Notice of death of Dr Wolf v. Glanwell. 1905
Karpatenverein, Sektion Schlesien. Wegweiser für die Hohe Tatra von Johannes Müller. 8vo, pp. 66; map, ill. Breslau, Müller & Leiffert, 1905
Royal Geographical Society. The Geographical Journal, vol. 25. 1905
 8vo, ill. London, January-June, 1905
 This contains the following articles of mountaineering interest;—
 Jan.-Feb. pp. 22-40, 139-157; E. Huntington, The mountains of Turkey.
 March, pp. 245-267; W. H. Workman, From Srinagar to the sources of the Chogo Lungma glacier.
 April, pp. 414-428; Capt C. G. Rawling, Exploration of Western Tibet.
 May, pp. 498-512; Dr. Hoek, Exploration of Bolivia.
 May, pp. 534-547; C. Rabot, Glacial reservoirs and their outbursts.
 June, pp. 620-658; A. J. Sargent, Alpine Railways and international commerce.
S.A.C. Jahrbuch, 40. 8vo, pp. viii, 464; plates. 1905
 Among the articles are;—
 J. E. Kern, Deux escalades dans le massif du Mont-Blanc:—l'Aigu du Dru du sommet oriental au sommet occidental: Traversée des Grépons.
 C. Hermann, Aus dem Saleinagebiet:—Aig. d'Argentièrè ü. d. Nordostgrat: Tour Noire ü. Col de la Gde Luis u. Nordgrat.
 Fr. Eymann, Mont Fallère, ü. d. Col de Sageron, u.s.w.
 C. Täuber, Von Meiringen nach Chamonix.
 P. Montandon, Drei Erstbesteigungen im Grimselgebiet; Klein-Lauteraarhorn, Nördliches Lauteraar-Rothhorn, u. Vorder-Tierberg.
 A. Hürner, Eine winterliche Eigerfahrt.
 N. Hinder, Engelberg u. seine Berge.
 A. Bähler, Die Bieligerlücke.

- L. Lisibaoh, Der Südgrat d. Adulagruppe; Pizzo di Claro, Torrone d'Orza, P. delle Sreghe e P. di Remia, Cima dei Cogni, etc.
 A. Oehler, Streifereien d. d. Ferwall u. Silvrettagruppe.
 A. Fischer, Im westlichen Kaukasus 1904; Belalakaja, Dombai.
 A. Wäber, Walliser Berg- u. Passnamen vor dem XIX. Jahrhundert.
 Beilagen:
 E. Buss, Panorama v. Camoghi.
 Fr. Eymann, Panorama v. Mt Fallère.
 A. Garbald, Panorama v. Piz Bacone.
 N. Hinder, Panorama v. Gross-Spannort.
- S.A.C. Clubfest in Engelberg. Program. 4to, pp. 4. 1905
 — Weissenstein. Bericht von 1886 bis 1896. Solothurn, 1896.
 8vo, pp. 11.
- Soc. des excursionnistes marseillais. Bulletin annuel, 7, 1903. 1904
 8vo, pp. 203; ill.
 The members of this Society are engaged in minor hill and mountain expeditions, educative for more serious work to come. There are many items of interest in the full accounts given of the various individual and collective excursions made. This number of the Bulletin also gives a list of the Society's members who have climbed over 1000 m., which recalls a once trusted superstition that to have climbed 10,000 ft was a qualification for membership of the Alpine Club.
- Société de Géographie, Paris. La Géographie. Bulletin. Tome 10, 2e semestre 1904. Juillet-Décembre, 1904
 The only alpine article in this volume is;—
 pp. 287-294: P. Mougin, Les poches intra-glaciaires du glacier de Tête-Rousse.
- Svenska Turistföreningens Arsskrift för ar 1905. Stockholm, Wahlström, 1905
 8vo, pp. 439; plates.
 Among the articles are the following;—
 O. Sjörgen, Abisko och öfflykterna fran Abiskostugan.
 C. L. Asplund, Till Rautasvuoma lappar och Jukkasjärvi högtfjäll.
- Pamphlets and Magazine Articles.*
- Abraham, A. P. Climbing as a holiday pastime. Two adventurous climbs in the Oberland. In Pearson's Magazine, London, no. 113, vol. 19.
 8vo, pp. 485-495; ill. May, 1905
- Abraham, G. D. The dangers of alpine climbing. In World's work and play, vol. 6, no. 31. 8vo, pp. 64-73; ill. London, Heinemann, June, 1905
- Association pour l'aménagement des montagnes, Bordeaux. Statuts. 1904
 8vo, pp. 8.
 Like the various societies "pro montibus" in the north of Italy, this exists primarily to deal with the question of afforestation and the prevention of excessive denudation.
 — Programme. 4to, pp. 3. 1904
 — L'accueil fait par la presse à l'association. 8vo, pp. 14. 1904
 These have been kindly presented by the President of the Association, M. Descombes.
- Benson, C. E. Climbing English crags. In Fry's Mag. London, vol. 1, no. 4.
 8vo, pp. 430-437; ill. July, 1904
 Presented by the Author, who is also author of 'Crag and Hound in Lakeland,' reviewed in the Journal for August 1903.
 This is an interesting and well-written article.
- Deecke, W. Lässt sich der Büsserschnee (nieve penitente) als vereiste Schneewehen auffassen? In Globus, Braunschweig, 87, no. 15.
 4to, pp. 261-2. 20 April 1905
- Demelius, E.; see v. Wretschko, A. R.
- Enock, C. R. El Huascarán; apuntes sobre su ultima ascension, 1903. In Anales Soc. geogr. Peru. 8vo, pp. 173-178. 1904
 Presented by H. F. Montagnier, Esq.

Ford, S. Y. Mountaineering in Cape Colony.

In the *New Era*, Cape Town, vol. 2, no. 19.

21 September, 1904

Folio, pp. 588-590; ill.

With regard to the opportunities for mountaineering at the Cape, the author writes;—

“If snow-craft finds a very restricted scope among our mountains, the rock-work met with is of a high order; and it is probable that some of the climbing feats of local mountaineers would prove no mean tasks to the leading alpine explorers.” It argues well for the pluck of members of the Cape Mountain Club, that many of these difficult rock ascents have been made without any assistance from guides. The history of some of the chief climbs is given in this article. Toverkopt, 7225 feet, near Ladismith, was first attempted in 1850, and the western pinnacle twice reached by G. Nefdt in 1855, and not again since. Tafelberg, near Clanwilliam, 6,800 feet, was attempted in 1843, but first ascended by G. Mann in 1896. French-Hoek Peak, 4,600 feet, was first ascended in 1900 and again in 1902. On Table Mountain itself forty-five routes, including the bridle-path, have been made out, and others attempted that have as yet proved impossible. Most of the routes have been discovered by members of the Mountain Club, and it is proposed by the Club that a hut should be built on the mountain for climbers.

The illustrations in the article give a good idea of Cape scenery.

We owe this copy of the article to the courtesy of the author.

Fox, F. The boring of the Simplon Tunnel. From the *Proc. of the Roy. Soc.*, vol. A76.

1905

4to, pp. 29-33.

Presented by the Rev. W. Weston.

Freshfield, D. W. The Gates of Tibet. In *Journ. Soc. Arts*, London, vol. 53,

no. 2724. 8vo, pp. 264-273; map.

3 February, 1905

— The Sikhim Himalaya. In *Scottish Geogr. Mag.* vol. 21, no. 4.

8vo, pp. 174-182; ill.

April, 1905

An address delivered before the Society on 22nd February.

Günther, Siegmund. Erdpyramiden und Büsserschnee als gleichartige Erosionsgebilde. Reprinted from *Sitzungsber. d. math.-phys. Kl. d. K. B. Acad. d. Wiss.* 34, no. 3. 8vo, pp. 397-420; ill.

München, Roth, 1904

de la Harpe, C. Zinal, Val d'Anniviers, Valais. *Extrait de l'Echo des Alpes*

1899, avec illustrations de O. Mähly, etc. Vevey, de la Harpe, 1905

8vo, pp. 32, ill.

A corrected reset of the article with added illustrations.

Hotels. Guide des Hôtels et Pensions des stations d'été en Suisse et Haute-Savoie.

Genève, P. Trachsel, 1905

8vo, pp. 32; ill.

Imesch, Pfarrer D. Zur Geschichte des Simplonpasses.

8vo, pp. 16.

Brig, Tscherrig & Tröndle, 1904

Mein Oetzal. Lied und Volkston für Klavier- oder Zitherbegleitung.

Folio.

Nürnberg, Wm Schmidt, 1905

Out West, vol. 22, no. 5. Mountaineering Number.

8vo, pp. 261-360; ill.

Los Angeles, Cal., May, 1905

Contains, *inter alia*;—

W. Rodman, Outing with the Sierra Club.

M. Randall, Social phases of Sierra Club mountaineering.

Post, C. J. Across the Highlands of the World. In *Harper's Monthly Mag.* no. 661.

June, 1905

8vo, pp. 20-26; ill.

From La Paz to the Amazon.

Skeats, E. W. Origin of the Dolomites of southern Tyrol. Reprinted from *Quart. Journ. Geol. Soc.*, vol. 61. 8vo, pp. 97-141; plates. February, 1904

Spont, Henri. Le Canigou. Ascension d'hiver. In *Le tour de France*, no. 17.

Folio, pp. 374-378; ill.

1 Juin 1905

- Tibet.** In *Edinburgh Review*, no. 412. London, Longmans, April, 1905
8vo, pp. 338-360.
A review of Landon, Savage Landor, Candler, Chandra Das and Millington.
- von Wretschko, A. R.** Ernst Demelius, sein Leben und Wirken 1859-1904.
8vo, pp. 29; portrait. Innsbruck, Wagner, 1905
Prof. Demelius was killed by a falling rock near the summit of the Obergabelhorn in July of last year.

Maps.

- Mapa del Peru.** A. Raimondi. Fojas 16 i 29. 1/500,000.
Presented by H. F. Montagnier, Esq.
Sheet 16 has Huaraz near its centre and Sheet 29 has Arequipa.
- Mapa de la República de Bolivia . . .** por el Ingeniero Franz Germann.
Scale 1/2,000,000. Hamburgo, Friederichsen, 1904
Presented by H. F. Montagnier, Esq.
- Mittenwald, Ost u. West,** 1/50,000. 1904. M. 1.50 each.

Item.

- Alpina, das Spiel der Neuzeit.** München, M. Baum, Arnulfstr., 1905. M. 5
The board on which this game is played represents hills, valleys, streams, roads and paths, and in the position of the goal-posts on a football field, two summits. The pieces—tourists, guides, friendly poachers and stage-coaches—are to be moved in accordance with certain rules, with the object of the tourist on one side reaching a summit on the opposite, even though he lose all his companions *en route*. As the moves are very varied, there seems considerable scope for good play in winning a summit or in checking the other tourist in winning his. A chess-player should succeed in this game.

ALPINE NOTES.

‘THE ALPINE GUIDE.’—Copies of Vol. I. of the new edition of this work, price 12s. net, and of ‘Hints and Notes, Practical and Scientific, for Travellers in the Alps’ (being a new edition of the *General Introduction*), price 3s., can be obtained from all booksellers, or from Messrs. Stanford, Charing Cross.

THE LIBRARY CATALOGUE is now printed and may be obtained, bound in cloth, on application to the Assistant Secretary, 23 Savile Row. Price 3s.; postage 4d.

THE ALPINE CLUB OBITUARY IN 1905.—E. W. Ruck (1873), L. H. T. Martin (1905).

A JAPANESE ALPINE CLUB.—Information having been communicated to the authorities of the Alpine Club by the Rev. Walter Weston that some Japanese friends of his were thinking of forming an Alpine Club, and that, ‘as they still look to us for inspiration in everything except military matters,’ he hoped some message of goodwill and encouragement might be sent to them through him, the Committee of the Alpine Club empowered the President to write the subjoined letter, with the sentiments in which we feel sure that all our members will find themselves in thorough accord.

Alpine Club, 23 Savile Row, London, W.: June 7, 1905.

‘Dear Mr. Weston,—The very interesting information which you conveyed to us yesterday respecting the desire of some

Japanese gentlemen to form an Alpine Club for Japan was brought before the Committee of the Alpine Club last night.

'It was unanimously agreed to send you two copies of the Rules of our Club with the list of members, and to ask you to transmit them, as from the Club, to the gentlemen in Japan with whom you are in communication.

'If it is thought that our Club can give any assistance in furthering the purpose which we are so glad to hear is entertained in Japan, we shall hope to hear from the gentlemen concerned, and shall at all times be ready to give careful attention to any such communication.

'We are yours faithfully,

'G. F. BRISTOL, *President.*

'A. L. MUMM, *Hon. Sec.'*

THE CHALET—REFUGE DE RABUONS.—This Refuge, erected by the Alpes Maritimes Section of the French Alpine Club on the shore of the Rabuons Lake at a height of about 2,540 m. (—8,333 ft.), was inaugurated on July 15 last in the presence of a large and enthusiastic gathering, ably presided over by M. Victor de Cessole, President of the Alpes Maritimes Section C. A. F.

REVIEWS AND NOTICES.

Chamonix and the Range of Mont Blanc. By Edward Whymper. Tenth edition. (London: John Murray. 1905.)

Zermatt and the Matterhorn. By the same Author. Ninth edition. Same Publisher.

ONCE again we find in our hands new editions of these well known books, brought, as usual, up to date. From the Chamonix volume we learn that the price for 'logement' at the 'Grands Mulets' has been reduced from 12 to 8 francs per traveller. In 1904 two huts were 'inaugurated'—one, the Refuge Chalet, situated above the moraine of the Charpoua Glacier, opposite to the Montanvert, in July, the other at the Couvercle in August. The railway from Chamonix to Martigny is now actively under construction. The Observatory upon the summit of Mont Blanc is showing a tendency to descend. The first ascent of Mont Blanc in 1904 was made on May 30-31.

From the Zermatt volume we take the following items. A 'cabane' for the use of persons who propose to ascend the Täschhorn or neighbouring peaks is under construction, and will probably be ready for use in 1905. Mr. Whymper records with regret the death of Johann Baptist Jost, who was from 1865 to 1901 so well known a figure at the Monte Rosa Hotel, and who will be affectionately remembered by so many members of our Club. The number of visitors to Zermatt in 1904 was larger than ever. The first ascent of the Matterhorn in 1904 was made on June 7-9.

Mountaineering Ballads. By A. C. Downer (Member of the Alpine Club).
(London: Charles Murray & Co.) 1s. net.

In a brief preface to this unpretentious little book the author says, 'I suppose it is generally allowed that the mountains furnish the best of all good sport. That is, no other sport is anything like so good as mountaineering. It is no less true that they promote the best of all good fellowship. There is none that I know of equal to the comradeship at supper in a Club hut before a great ascent.'

This indicates the spirit in which these ballads have been written. Mr. Downer has known and appreciated the joys of mountaineering.

Crunch through the snow, caring not for wind or weather ;
On through the sunshine and on through the rain.

Nor does he forget the dangers of it.

'Ware stones !' is the cry when the splinters fly,
and the great peak's guns have miss'd.

Mr. Downer is at times realistic, and the following stanza would no doubt be said by a really up to date reviewer to 'palpitate with actuality':—

All upon a sudden, swish ! and then a flop ;
Then a strain upon your waist, fit to cut you through ;
For the snow had gone down to the bottom and
Abraham hung by the rope
And dangled about like a spider, and there
was a how-d'y'e-do !

Mr. Downer is a worshipper of the great goddess Nicotine; and has the sense of fellowship which generally dominates supporters of the cult.

Lunching oft on bread and claret,
Sleeping in an Alpine hut ;
All that's in the sack, we'll share it,
And a pouch of Navy Cut.

But the author can give us in a few words some of those memories which we all so deeply cherish.

Overhead the violet heaven, underfoot the waving grasses,
All around the silent cattle, browsing in a boundless park.

We reciprocate the last stanza of his ballad 'Ad Comitem':—

Life passes on, but, ere it goes,
One other summer may we taste
That bright free life upon the snows
We knew in summers past.

PROCEEDINGS OF THE ALPINE CLUB.

A GENERAL MEETING of the Club was held in the Hall on the evening of Tuesday, May 16, 1905, Mr. Walter Leaf, *Vice-President*, in the chair.

Mr. LEAF informed the Club that two members had recently died, Mr. Ruck and Mr. F. J. Stevens. He also announced that a kakemono by a modern Japanese artist, representing a mountain

scene with Alpine plants in the foreground, had been presented to the Club by the Rev. Walter Weston ; * and further he had great pleasure in stating that the Société de Topographie de France had bestowed a prize medal, offered by the French Minister of Commerce, on Dr. Workman for original topographical research in the Himalayas during his last two expeditions.

Dr. WORKMAN then read a paper on 'Some Obstacles to Himalayan Mountaineering, and the History of a Record Ascent,' which was illustrated by lantern slides.

Sir MARTIN CONWAY was very glad to have an opportunity of expressing his admiration for the work accomplished by Dr. Workman. He only knew from the other side the mountains that had been described. From there they appeared one of the most tangled masses of mountains and twisting glaciers he had ever seen, and he could not therefore realise the exact position of Dr. Workman's peak. He quite agreed with Dr. Workman's remark that any hope of higher ascents being accomplished must be based on the resolution to lay a regular siege to a particular peak. Not much would be done by a party hurrying out from England to organise a commissariat and making a rush for a peak. One of the great giants of the Himalayas would only be climbed by a party who would devote one year to selecting, drilling, and organising a set of coolies. A small regiment of coolies must be trained to reach at least a height of 23,000 ft. for a base camp, and at present no considerable number of natives were willing to go so high. When this had been done it would be time to talk of mountains of 26,000 ft. or over. It was Dr. Workman's two successive years of work that enabled him to reach the height he did. As for the weather, it was hopelessly bad in that part of the Himalayas. On his expedition they never had more than four consecutive fine days in five months.

Mr. D. FRESHFIELD, after congratulating Dr. Workman on the success that had attended his determined efforts to explore and attain great heights in the western Himalayas and on the beauty of the photographs he had secured, spoke as follows :—

'Until to-night I had been under the impression that the one great advantage of the western over the eastern Himalayas as a field for mountaineering was their climate. It appears, however, from Dr. Workman's experience that there is little to choose between them. This being so it seems to me that the east has many recommendations. The great peaks are nearer civilisation, their glaciers end much higher ; you can ride up to 13,000 ft., or in some places to 19,000 ft. ; you can camp on grass up to 17,000 ft. ; some of the peaks are obviously accessible, particularly those on

* Mr. Weston writes, 'The kakemono represents a group of Japanese Alpine flowers (naturally not actually growing together on one spot) found in the high ranges known as the Japanese Alps. It has been painted for me by the leading Japanese water-colour artist, Ioki Bunsai, who is himself an enthusiastic collector of Alpine plants, and who climbed for that purpose to be able to paint them. The peak in the background is the Northern Yariyatake.'

the frontier near Khambijong. I consider the next party who go out to this region, with fair luck in weather, are certain to reach 24,000 ft., or near it. It will be, in my opinion, less of a feat than that accomplished by Dr. and Mrs. Workman under what, judging from his description, were far less favourable conditions.

'The essential for success in attacking loftier peaks is a good staff of porters, and I do not think these will be easily secured, trained, and kept under discipline without the co-operation of the Indian Government. The Ghurkhas undoubtedly are good raw material; the performances of one or two of those with me at 20,000 ft. were remarkable. But in ordinary circumstances they do not like carrying. Tact, time, and perseverance will be needed by the assailants of any peak over 24,000 ft.'

Mr. EDMUND CANDLER, who was present, referred briefly to his experiences on the way to Lhasa.

The VICE-PRESIDENT was sure that members would most cordially thank Dr. Workman for his extraordinarily interesting paper. They could not but admire the perseverance and determination with which he had conquered difficulties and the modesty with which he had spoken of his remarkable achievements spread over four years.

The vote of thanks was carried by acclamation.

Dr. WORKMAN said a few words in reply, and with reference to the effects of rarefied air at great heights mentioned that he had once ridden a yak over one of the higher passes, about 19,000 ft., and that it had been severely affected, in spite of the fact that its ordinary *habitat* was at a very great elevation.

A GENERAL MEETING of the Club was held in the Hall on the evening of Tuesday, June 6, at 8.30, the Bishop of Bristol, *President*, in the chair.

Messrs. W. Hooper and H. P. Ziemann were balloted for and elected members of the Club.

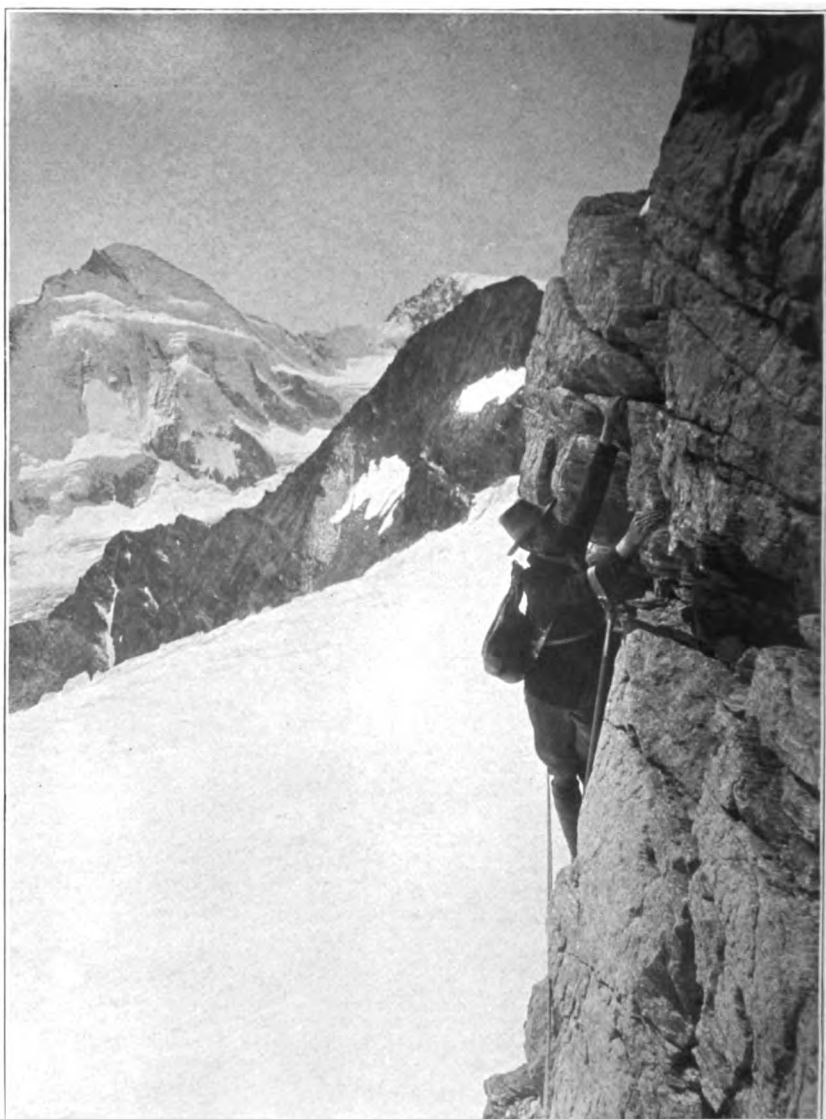
Mr. W. T. KIRKPATRICK read a paper entitled 'Ten Years with-out Guides.'

After a few remarks by Mr. HOPE, who had been Mr. Kirkpatrick's companion, Mr. READE asked how the times of the expeditions described compared with those given in the 'Climbers' Guides.' Mr. KIRKPATRICK said they had never paid much attention to times, and had never aimed at speed, preferring to spend all the time at their disposal on the mountains.

The PRESIDENT congratulated Mr. Kirkpatrick on his paper, which had been full of interest; he had begun by stating that he had nothing to say, but after three-quarters of an hour he had not succeeded in saying it.

A hearty vote of thanks for the paper brought the proceedings to a close.

Most of the articles of equipment referred to in the paper were on view, and were subsequently examined by many of those present.



R. Philip Hope. photo

Swan Electric Engraving Co.

A SHORT (?) CUT TO COL DURAND.

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TEN YEARS WITHOUT GUIDES.

By W. T. KIRKPATRICK.

(Read before the Alpine Club, June, 6, 1905.)

WITH regard to the title of this paper, which relates some of the experiences of Mr. R. P. Hope and myself during the last ten years, perhaps I should explain that one of those years Hope was unable to climb, and that last year my climbing was confined to Table Mountain, Spion Kop, and Majuba Hill, so that, though our guideless climbing covers a period of ten years, we have each of us only done nine seasons, one of which was spent in Skye. I mention this not because it is important, but in the interests of historical accuracy.

I am not using a mere figure of speech when I say that I was never more surprised than when I received a letter from my friend the Hon. Secretary, two or three years ago, asking me to read a paper. I wrote back and told him, with perfect truth, that I had nothing to say. He returned, however, to the charge the following year, and gradually by the exercise of those wiles which an honorary secretary knows so well how to employ, he has lured me into the position which I now occupy.

I am still of the opinion that I have little to tell that is worth telling. We have explored no distant countries and climbed no new peaks. We have only played in the old playground and climbed the old mountains by the old routes; and if we have occasionally climbed them by a new route, it has been more from ignorance of which was the right way up than from anything else. The only interest that attaches to our expeditions lies in the fact that they have all been done

without guides, and that, beginning with little or no experience, our knowledge of the craft, such as it is, has been practically self-taught,* so that our methods may therefore differ in some respects from what is considered strictly orthodox.

A former President of the Club, whom I happened to meet three or four years ago, when he found that I practised guideless climbing, told me that he climbed for pleasure, and that he liked to have plenty of everything, including everything that was good, carried for him. I suppose we all climb for pleasure, for recreation in the true sense of the word, and for love of the mountains, but to my mind the pleasure is immeasurably increased by depending on one's own resources rather than on professional assistance.

On a guided expedition the average amateur tells his guide he wishes to ascend a certain peak by a certain route. He need not possess any special skill in mountaineering, nor exercise any special intelligence. He has only to walk step for step over a snow field, to stand steady, if he can, in steps cut for him, and to climb rocks where the very hand and foot holds are often pointed out to him, knowing the whole time that if he fails there is a strong arm and a thick rope ready to make good his deficiencies. When he reaches the top he eats and drinks the good things the porter has carried for him, without troubling himself about the descent.†

A guideless party, on the other hand, especially on an unknown mountain, have to be on the alert from the moment they leave the mountain path; and even paths are often hard to follow in the dark, as we have sometimes found by bitter experience. They have to look at and consider their route as a whole, especially that portion of it which immediately confronts them. They have to see that every step is cut with the least expenditure of labour, and that no needless ascent is made. They have to decide when it will pay to descend and re-ascend, and whether the traverse which is required to avoid this will prove more laborious or not. In fact, they have always to think how they can arrive at a certain point with the least danger and exertion, and often have to take the question of time into consideration also. On

* I should like to acknowledge our indebtedness to the Badminton volume on Mountaineering.

† Of course I know that many of those who climb with guides take an active part both in the planning and execution of their expeditions, but I think what I have said applies fairly enough to most amateurs.

a mountain of mixed rock and snow they have to decide a dozen times when it will pay to take to rock and when to snow. All this naturally adds much to the interest of the expedition. Moreover without guides you can go your own pace.* You can halt as long as you like at, and after, your meals and on the top of your mountain. There is a delightful feeling of freedom and independence, and, above all, what you do you do yourself. The great drawback is, of course, the carrying, and though we have usually taken porters to the huts we do not take them further. Extra clothing and other necessary equipment can be reduced by careful selection, and by considering every ounce, and even fractions of an ounce, to a very light weight. As an instance of the minute consideration we have devoted to the matter of weight, I may mention that one year, when we were trying to find the best holland covering for a rucksack, I received a small pattern from Hope, with the weight marked in grains, and compared with a sample which I had sent him. His sample was a grain or two lighter than mine, and was promptly adopted.

I am told that a good many members are interested in the matter of our kit, and I have been specially asked to describe it fully. Our rucksack has gone through a process of evolution. We began with oiled linen, which was perfectly waterproof, but liable to catch and tear on sharp rocks. Our last rucksack is made of thin holland lined with the thinnest jaconet (which it is desirable to renew each season), the straps consisting of woollen bands, which once did duty as Jaeger braces. A piece of the same material makes a light and effective sling. The total weight of this rucksack is $8\frac{3}{4}$ oz. It is a flimsy-looking concern, but it proved quite satisfactory, and was in perfect condition at the end of 1903, a fairly hard season. Its twin brother carried 35 lbs. over the Strahlegg last year, but I was no party to that expedition.†

For extra clothing I carry a tussore silk shirt and shorts, weighing together 6 oz.; a Shetland wool sweater, weighing $5\frac{1}{4}$ oz.; a Shetland wool body belt, weighing $1\frac{1}{2}$ oz.; thin woollen stockings, $3\frac{1}{2}$ oz.; wool slippers, $3\frac{3}{4}$ oz.;

* I remember once meeting two guides with two Englishmen in tow, one of whom appealed piteously to us to tell him the German for 'Don't pull.'

† In 1905 we carried rucksacks made of Burberry's thinnest gaberdine and weighing 6 oz. each. It is not absolutely waterproof, but a jaconet bag, weighing 1 oz., keeps one's extra clothing dry. This worked well and saved nearly 2 oz.

and as a tribute to civilisation I add a silk collar, weighing $\frac{1}{4}$ oz. My putties are thinner than usual, but are full length and weigh $5\frac{1}{2}$ oz.; Jaeger camel's hair gloves weigh $1\frac{1}{2}$ oz.; and Shetland wool mittens, which are well worth having in reserve, and are very comforting at a cold breakfast place, weigh 1 oz. the pair. I also carry a Jaeger scarf, which does duty as a helmet, a pillow case, and sometimes as a cummerbund. It goes by the name of 'general utility,' and weighs $1\frac{1}{2}$ oz.

With this kit, weighing in all about 30 oz., I have been able to keep warm on the coldest days, though I dispense with a waistcoat altogether; and, with the addition of such necessaries as comb, tooth-brush, sponge, &c., it has been my only luggage for as long a period as three weeks at a time.

We manage to do all our cutting with a $2\frac{1}{2}$ -lb. axe, and find the one-piece crampons, with four spikes, weighing 11 oz. the pair, very useful, and quite worth their weight; the weight of the full-sized crampons being, in my opinion, quite prohibitive. An alarm watch is indispensable for the guideless climber, and saves him many a wakeful night in the huts.

Our lantern was manufactured by Hope, of talc and aluminium, is perfectly efficient, and weighs $3\frac{1}{2}$ oz.; compass, $1\frac{1}{2}$ oz., and monocular glass 6 oz.

We carry an aluminium-handled pocket-knife and an aluminium plate, cup, fork, and spoon, and find them very useful both on a mountain and in the huts, where they save the time and trouble of washing up the hut utensils before an early start.

Aluminium boxes of various sizes are the best vehicles for such things as meat, butter, jam, honey, salt, vaseline, &c.; and if a man is wise enough to let his beard grow in the Alps the smallest possible aluminium box will hold enough vaseline or hazeline to keep his face right for two or three weeks.

A bit of oiled silk is the lightest wrapper for a sponge, and a purse made of oiled linen keeps your notes drier than leather does, and is lighter to boot. If you happen to have any 5-franc pieces it is wise to settle accounts the night before a climb, and unload them on to your companions.

It is impossible to give the detail of everything, but when I say that my spare collar-stud is aluminium, and that even the size and weight of a pencil is considered, it will, I think, be admitted that reduction of weight has been carried to the utmost possible.

As regards food, our supply is usually both better and more

varied than that of most guided parties we have met, and we generally have at least three hot courses for dinner.

We find that for an expedition of 24 hours, 8 lbs. of provisions per head is ample, bringing the total weight of the rucksack to about 8 lbs., axe and rope being additional. This weight is, of course, reduced when leaving a hut for the actual climb, though in case of traversing a mountain it cannot be so much reduced as when the party intend returning to a hut.

We used to carry aluminium water-bottles, but latterly have substituted an aluminium stove, which serves to melt snow where water is not available, and enables us to have hot meals at all hours of the day or night. The stove, with frying-pan and saucepan, and spirit enough to last two men for 24 hours, weighs $1\frac{1}{2}$ lb.—less than half a bottle of wine; and a climber who has once enjoyed hot chocolate and fried sausages on a snowfield at 5 o'clock on a chilly morning, will never regret the loss of a bottle of thin red wine, or even his glass of Bouvier on the summit. We have always dispensed with wine altogether, and though I do not despise a glass of wine at one's hotel in the evening, so far as my experience goes I think when actually climbing one is much better without it. Really the number of bottles that mark the route up many well-known mountains would almost suggest that some persons climb for the sake of drinking. I believe the guides are responsible for a large proportion of the bottles, and if they only knew how great an assistance these signposts are to the guideless climber, and how often the joyful cry of 'broken bottle' has revived one's spirits when doubtful of the route, I think perhaps they might drink a little less wine. Having made them a present of this friendly hint, I would hasten to assure them that I yield to none in admiration of their many excellent qualities. In the course of our rambles we have made friends with many of them, and I can well understand the bond that unites the Alpine climber and his guide of many seasons; but I think the bond is more firmly welded when your comrades belong to the same rank of life as you do.

It has been laid down, and I think wisely laid down, by most of those who have written of guideless climbing, that it should only be undertaken after several seasons with first-rate guides. That is a condition which, I must confess, I never fulfilled. My early visits to the Alps were few and far between, and though I did a certain amount of walking, my snow expeditions consisted of the Diavolezza and Corvatsch,

for which I had a guide of whom I entertain the most pleasant recollections, but whose name I cannot remember, and a day on the lower Grindelwald glacier with a very indifferent guide. That was my only experience of mountaineering, when I met Mr. R. P. Hope by chance at Sulden in 1895, and we started guideless climbing. His expeditions with guides had not been much more numerous than mine—namely, the Za, the Pigne d'Arolla, the Lötschenlücke, an attempt on the Aletschhorn (during which two guides disposed of five bottles of wine and a whole bottle of brandy), the Ortler, and the Königspitze. His experience on the last was the turning-point, as he started at 1 A.M., reached the top in mist at 6.30, was hurried down by the guides, who said bad weather was coming on, and reached Sulden at 9 A.M. on an absolutely perfect day. The next morning we joined forces, our third man being a friend of mine who had never done any climbing at all and was rather short in the wind.

The Tyrol is, of course, an ideal place in which to begin climbing without guides. The mountains are easy, the expeditions not too long, and the luxurious huts provided with food are a great assistance. We crossed the Vertainspitz in a snowstorm, and our first real snow expedition was a delightful day on the Cevedale. We then took the Ortler, and I believe there were no fewer than fifty-one persons on the summit that day. However, we managed to start first, so as to avoid following a guided party, and maintained our lead.

We did the Marmolata with a porter, to satisfy the scruples of some of our friends, but found him a great encumbrance, as we had to pull him along a great deal faster than he liked to go. At Cortina we found a nice chimney on Pomagagnon, scrambled on Tofana, and climbed the Cristallo; and here we spent our first night out.

We had started late from Cortina, our third man was slower on rocks even than we were, and we did not reach the top till 4.30 P.M., in time to get some magnificent effects from the evening sun shining on the red rocks. We got back to the col at 7, and raced over the unknown glacier on the N. side, intending to descend to Schluderbach. We had been told that the glacier ended just above a sheer wall of rock, and had been advised to keep well to our left. We did so, and arrived, just as it was dark, at the edge of a desperate chasm, the bottom of which was invisible in the darkness. We threw stones down, to hear how they fell, a method we have often employed to ascertain the steepness of

the ground ; whether an ordinary practice or not I do not know. In this case a gentle push to a boulder resulted first in silence and then in a crash about two hundred feet below, showing that the wall was too steep to be trifled with. We had no lantern, and, after prospecting in various directions and letting each other down the rocks in the endeavour to find a way, we decided that the only safe course was to stay where we were. In our inexperience we had brought no extra clothing, and had practically exhausted our provisions. I dined off a small bit of chocolate and the pulp of a lemon, and wound some of the rope round me for warmth as we lay down under the partial shelter of a rock. Our third man on this occasion was almost convinced that it is not good to climb in a cotton shirt and Oxford shoes.

When the light came we found the wooden ladder about 20 ft. from where we had stopped, and on reaching Schluderbach devoured omelets as fast as the cook could produce them. We crossed the Gross Glockner from the Stüdl Hut, where we slept in real beds, with Jaeger blankets, and made our way over the Pfandelscharte to Zell am See. And so ended our first season, a most delightful one, though it only lasted three short weeks. True, the mountains required little skill, but I can honestly say that I have many a time enjoyed a scramble on an insignificant peak, unknown to fame, far more than a big mountain with guides.

In 1898 Hope was unable to climb, and in the latter part of that season I found myself with a friend who had no pretensions to be a mountaineer, and we were reduced to taking a guide for four or five expeditions, and at Zermatt we engaged one for that side of the Matterhorn. He was what Mr. Barrie would describe as a very 'maggerful' man, and from the moment we left Zermatt he took possession of us, body and soul. He even took possession of my water-bottle, which contained a little wine, and shortly after retiring into a refreshment chalet, informed me that the cork had come out and that the wine was lost. When we arrived at the hut he decreed what we should eat and when we should eat it. At the appointed time he put us to bed, tucked us in as if we were children, and ordered us to sleep—an order which I was unable to obey in that worst of Alpine huts. During the climb he pulled us along *nolens volens* until I felt that I was a mere automaton in his hands. He pulled the string and I moved. So he pulled us up and down. I had 'done' the Matterhorn, but I had not enjoyed it.

Guideless climbers are often asked how they find the way.

Careful prospecting through a small telescope generally gives a fair idea of the line of route, and when you come to details, nail-marks on the rocks are the great stand-by. It usually pays well if it is possible to go over the first portion of the route the night before, as it saves uncertainty and loss of time (and temper) in the darkness of the early start. Still, we have climbed a good many mountains which we have had no opportunity of examining before, either through glasses or otherwise.

Our traverse of the Fletschhorn from the Simplon side was a typical, or rather an extreme, case, as it had not been included in our programme, and we arrived at the village of Simplon without even a map of the district, much less a climbers' guide. A Baedeker which we had consulted in the hotel at Fiesch told us that 'the night is spent in the Hohsaas hut of the Swiss Alpine Club,' but on enquiring the way thither we were told that no such hut existed. So we started up the Laquinthal in an indefinite sort of way, and reached an inhabited alp where we could probably have got fairly good quarters; but we wished to get higher, and on the way we met a man and a boy, who told us that there was a hut higher up, which belonged to the boy or his family, and that we should find some wood, the property of the man, and could use both on payment of 50 centimes for each. The boy, who rejoiced in the high-sounding name of Leopold Arno, and had black curly hair and an Italian type of countenance, said it would be *ziemlich frisch* in the morning, and that he had better go down to the alp and bring us up a blanket. We duly found the hut, which was a small structure of loose stones, without a practicable door, and with no utensils except a segment of a teacup. However, we lit a fire and cooked our soup in an aluminium water-bottle, and in the middle of our dinner Leopold Arno arrived with a blanket, a bolster, and a candle, the last of which showed thought, but was not required. Finding some of our clothing hanging near the fire to dry, he took charge thereof, and at the end of our meal, when we vainly endeavoured to get the swollen vegetables out of the water-bottle, he carried it off, bringing it back in a few minutes perfectly clean, though how he managed it I have no idea. He then conducted us to another hut, which contained a loft with some hay. Here he arranged our bed, tucked us in, and having asked what time we wished to be called, lay down not far from us. Next morning he valeted us most efficiently, lit the fire, and finally conducted us for a short distance, when he said farewell, after pointing out which

mountain was the Fletschhorn—a piece of information which we urgently required.

Strolling over the Fletschhorn glacier we somehow got separated. Finding myself alone, I concluded that Hope was engaged with his camera, and sat down to wait. As he did not appear I went back to where I had last seen him, and shouted as loud as I could. There was no response, and I began seriously to think he might be down a crevasse, when at last, to my great relief, I saw him wildly waving his ice axe, and no doubt making the signal which was proper to the occasion, half a mile ahead. When I overtook him he told me that he had never stopped at all, and, missing me, had gone to the crest of a big moraine, and howled his best for fully fifteen minutes. This little incident satisfactorily ended, we made for what the compass told us was the S.E. arête, that being the way indicated by Baedeker, and followed it to the top, descending by the ordinary route to Saas Grund. Since the Fletschhorn day we have made it a rule never entirely to lose touch of each other. It is true, however, as I was unkindly reminded at the Winter Dinner, that there was a subsequent occasion, when one of us spent the night in a hut, while the other was tied to a fir tree on a precipitous hill-side, some 2,000 ft. lower down; but as I had the best of the bargain on that occasion it made no great impression on my mind.

The Schreckhorn was another peak we attacked without ever having seen the side of the mountain by which we meant to ascend. Reaching the Schwarzegg hut at 8 p.m., too late to prospect, we met there a member of the Club who had been up the mountain two years before with a guide, and who gave us information which was erroneous in rather a vital point. We managed to pull ourselves up the hard snow in the great couloir without any step-cutting, but did not leave it by the first little couloir on our right, which we had been told to do, as it was absolutely overhung by séracs. Of our own fault we took to the rocks above the Schreckfirn too soon, and then, following our instructions, made for the lowest gap in the Schreckhorn-Lauteraarhorn arête. It seemed contrary to common sense, as it led away from the Schreckhorn top, instead of towards it; but our instructions were explicit, and we thought there must be a good reason.

I cannot say how many icy and snow-covered couloirs we crossed, but I think we crossed nearly every one there is on that face of the mountain, and some of them twice, as we finally turned to our left and reached a deep gap about the middle of the ridge. It was now 5.30 p.m. A long jagged

arête lay between us and the summit, and though four hours might have taken us there and back this was by no means certain, and we gave it up. The face below us was now alive with stones, so we sat down and fed to pass the time till things were quiet, and at 7 P.M. started down. We soon reached a long couloir, which seemed to offer a good route, but a shower of stones caused us to wait another half-hour, and it was not till 8.15 that we ventured into the couloir. It consisted of ice, with 6 inches of rather rotten snow; so we roped with 80 ft. of rope and went down backwards in the pitch dark. Every now and then the snow became almost too thin to hold us, and we moved one at a time, and occasionally tried the rocks by the side. But rocks in the dark are always a bit risky, and we soon returned to the snow. It felt like doing tread-mill backwards, for the bottom seemed to get no nearer, and it was just midnight when we discovered that the bergschrund gaped below us. Very cautiously the leader went down to the edge and found nothing but space. A traverse brought us into the stone shoot, where we felt a bridge, though we could not see it, and, stumbling over avalanche débris till clear of danger, we dug a hole in the snow and went to sleep. At 3 o'clock, refreshed but rather chilly, we started again, and, missing the right route on the glacier, had the new experience of cutting down an ice slope by starlight. We reached the hut at 7.30 A.M. by the couloir, having met on our way a guided party, and the guideless one whose well-meant but erroneous directions had sent us wrong. I am afraid we felt some malicious satisfaction when they returned in the evening, having also failed; while the guided caravan, who got up the mountain, did not reach the hut till next morning, their safe arrival being a great relief to the two guideless parties, who had held a serious and anxious consultation as to whether it was their duty to organise themselves into a search party and sally out to rescue the guides.

I have hinted that our methods have not been entirely orthodox, and probably the principal point wherein they have differed from the accepted canons is that we have usually climbed two on a rope—or at any rate two with a rope. Not that we have any doubt of the wisdom of the rule which prescribes three. On the contrary, we have always been ready and anxious to take on a third man whenever we have found one willing to entrust himself to our tender mercies; but it is by no means easy to find three men whose ideas and capabilities are sufficiently similar to make a good working

party, and the fact remains that all our best climbs have been done alone. On hard rock a party of two naturally moves much faster than one of three, though even here it is no doubt better to have a third man in case of accident; but in that event I think a fourth is needed, one to remain with the injured man and two to go for help; but when climbing in a party of two—well, you can't afford to have an accident.

In crossing covered glaciers we have adopted the late Mr. Mummery's suggestion of using two separate ropes, the second man having a loop near the end of one, through which he carries his axe when in the neighbourhood of crevasses. In case of accident he fixes his axe in the snow with the loop over it, thus holding the man in the crevasse, when he is free to untie from that rope and advance with the other to pull out his man. In theory this should be some protection, but we have never had an opportunity of testing it. In fact, when travelling two on a rope it is better not to fall into crevasses. Except immediately after a heavy fall of snow, when it is not wise to cross a covered glacier two on a rope, I have never come across a crevasse of dangerous width—that is, one where you can get no support from either side—which could not be detected beforehand, while the smaller ones, which you can scramble over, even though one leg drops in, are not of serious account.

I must confess that one morning, crossing the Löttschenlücke after a heavy fall of snow during the night, I put more than one foot into a completely concealed crevasse. As it was just below a snow col I expected a crevasse, and was going cautiously with my axe at the trail. Being a narrow crevasse the axe arrested my fall and I struggled out easily. Besides this there have been only two occasions in the course of our scrambles in which we really felt that we had required the rope as a protection against crevasses, and on one of these occasions Hope, and on the other I, had only ourselves to thank for our carelessness in stepping into a perfectly obvious crevasse.

A member of the Club who climbs without guides, but who told me he always has a third man, or supplies his place by a porter, mentioned an occasion when one of the party fell into a large crevasse which was totally concealed; but on cross-examination he admitted that at a little distance, either to the right or left, there was some indication of its existence. When crossing a covered glacier two on a rope the leader wants three pairs of eyes, one in the middle and one on each side; but being gifted with only one he must keep them constantly

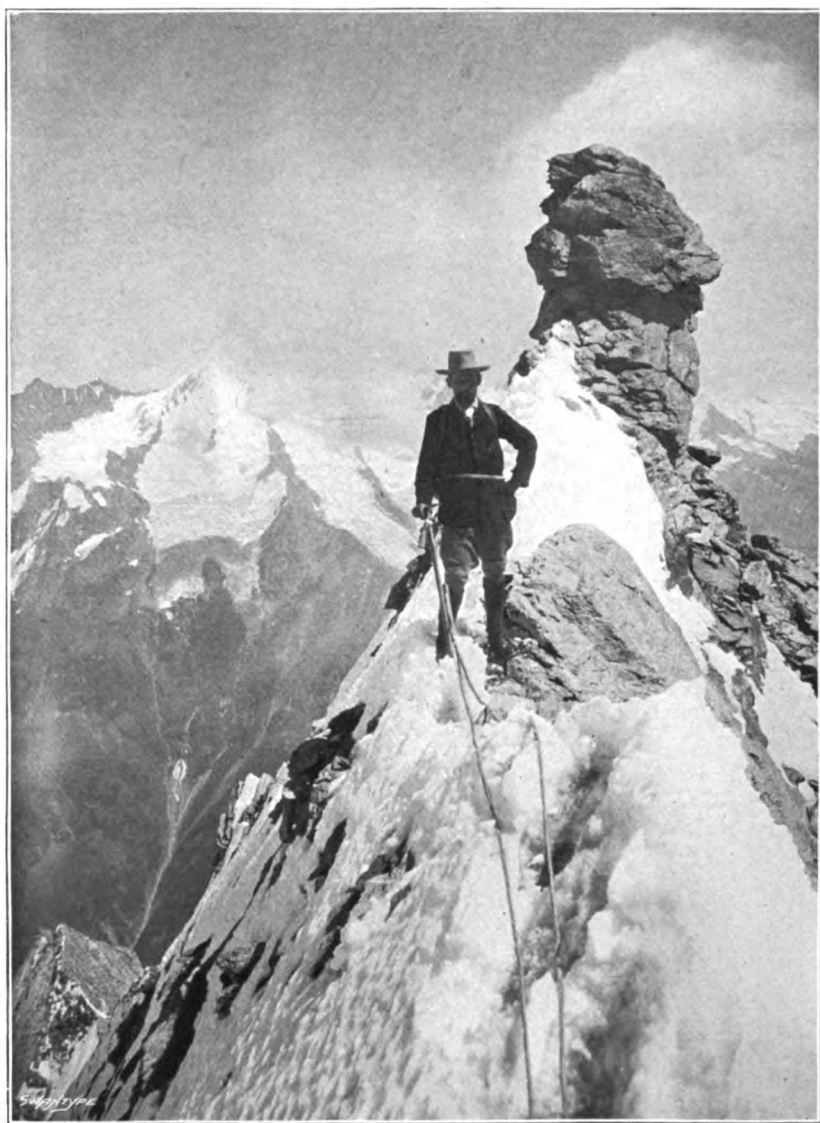
moving in every direction, and if he does so, and probes sufficiently where there seems any prospect of crevasses, he should bring his party safely through.

As regards the use of the rope, our practice has been not to rope as long as we feel that we can move safely without it. Except in bad places, where only one should move at a time, the rope is a hindrance, and may, especially where there are loose stones to be dislodged, be a danger. We have climbed such mountains as the Bietschhorn, Monte Rosa, Weisshorn, and Grand Combin without using the rope in the ascent, when the snow was absolutely hard, as also Mont Collon from Chanrion; and I believe that once, on arriving at the Vallot refuge from Tête Rousse, the rope was still neatly coiled. In all these cases we naturally roped for the descent; but we have climbed the Dent Blanche from the Staffel Alp without roping, up or down, till we reached the Ferpèche glacier in the afternoon; and we have also traversed the Rothorn from the Trift without roping till we got off the arête on the Zinal side. When climbing alone we have usually carried 80 ft. of the light rope in two lengths of 40 ft. each, weighing 2 lbs. in all, which is, I think, strong enough for all practical purposes. Of course if the leader is in the habit of dropping off steep rocks on to the rope it might not be strong enough; but we have always managed to avoid places where this was likely to happen, or at any rate to avoid such an undesirable occurrence.

When we do rope there is never any discussion as to who shall lead. On average ground the leader, up or down, is usually the one who is able to go faster at the time. On steep rocks Hope is the one who calls for the rope, and on ice slopes it is I. On snow fields and in crossing bergschrunds I am usually given the place of honour and danger, as being the lighter, and therefore easier to pull out of a crevasse.

Hope always declares that I have an extraordinary faculty for choosing the hardest places on rocks. I need hardly say this is from no desire on my part to find difficulties, and on these occasions he directs me from below. I am bound to say he once sent me up the worst bit of rock I have ever climbed, after rejecting as too easy the ordinary *mauvais pas* on the southern Aiguille d'Arves, where the fixed rope hangs. The place he selected gave me, I think, the only bit of rock-climbing in my experience which I should not care to repeat.

Hope has a peculiar way of scrambling up an ice slope with a slight covering of snow, which frequently saves time. Holding the head of his axe in one hand, he digs in the pick,



R. Philip Hope, photo

Swan Electric Engraving Co.

ON THE EAST ARÊTE OF THE WEISSHORN.

and, using his toes and the fingers of the other hand, often gets up a considerable distance before he begins to slip. A good step then enables him to help me up the slope, which is probably too much damaged for me to follow him otherwise. When he does cut steps, if we do not intend to come down the same way, instead of cutting all the steps the same size he follows the plan of cutting large steps about 3 ft. apart, with a small nick in between, to help him to get into them.

With regard to climbing in bad weather, we have, of course, never started for a big expedition when the weather seemed hopeless; but we have often started on a doubtful morning, and sometimes it has turned out right, and sometimes wrong. But as long as a party do not go beyond the point from which they can get back in any weather there is no harm done.

One year we traversed the Grand Combin from the Col des Maisons Blanches, and had just sat down to feed on the summit, at 4 P.M., when a snowstorm came on. Luckily there were soup-plates cut on the Mur de la Côte, and we reached the Corbassière glacier in 1 hr. from the top of the mountain, having raced through the dangerous corridor. We were also caught on the top of Mont Collon by a snowstorm, which continued throughout the descent, and necessitated our crossing the latter part of the Pièce glacier in the dark, and, still worse, its most abominable moraine, which I stumbled over for the second time at night—a penance which nothing will ever induce me to risk again.

We arrived at the Little Scheideck one evening after dark, intending to climb the Eiger, which we had never seen from that side. There was then no Climbers' Guide to the Oberland, and we examined the route before dinner by the light of local photographs. Luckily we happened to meet another guideless party, also members of the Club, who had just come down from the Eiger and gave us most useful information. We started next morning in a thick fog, and were highly pleased when it rolled away after two hours' uncertainty, and revealed the Jungfrau more beautiful than I have ever seen her.

Some years ago, starting from the Saleinaz hut, we attacked the Argentière from the Col Chardonnnet, and came in for a succession of short snowstorms and gusts of wind. The climbing from that side is fairly stiff, and we had got about two-thirds of the way up when we found ourselves on a broad but steep snow-ridge. The snow slipped away on one side. Hope moved a little to the other side. It slipped away there

also, and though we had just completed a staircase of about a hundred ice-steps we turned back without a moment's hesitation. Our descent was as slow as our ascent, and at 9 p.m., already wet, we got under a large overhanging rock on the Jardin d'Argentière, where we had to sit crouching forward. The rain trickled half-way down the rock, and then maliciously dropped off on to our backs. We tried to light our lantern, but the wind whirled it away, and we could only eat such things as raisins and chocolate, which we could get at by rummaging in our sacks. Then a mighty thunder-storm came on, flash after flash of lightning revealing our majestic surroundings, and thunder such as I have seldom heard reverberating against the great wall of the Aiguille Verte. It was terrible, but magnificent.

When it abated, Hope, having an idea that we ought not to go to sleep, entertained me in the most gallant way with stories, most of which I had heard before, and which I acknowledged with a feeble grunt. Nevertheless, we soon began to doze. In the morning I realised for the first time what it means to have one's teeth chattering with cold, for mine chattered wholly beyond control, while I had to stump about for something like twenty minutes before I regained the use of my legs. Then we got down to the Argentière glacier. The sun came out; we had hot cocoa and a good meal, and were neither of us one iota the worse. We usually expect one night out each season, and altogether we have spent seven or eight nights out in the Alps, but none have been half as bad as that night above the Argentière glacier. Yet the thunder-storm we witnessed there was one of the finest things I have ever seen.

That we have constantly exercised care and caution is, I think, proved by the fact that we have never had an accident, or I think I may say anything approaching to an accident. In fact, the most serious wound which either of us has ever received was a cut on the finger from the edge of a sardine tin, which required a bit of sticking-plaster. We have only once been the objects of a search party. That was during our first season in Switzerland, and we saw their lights disappearing up the Arolla glacier as we climbed through the window of my bedroom at the Mont Collon Hotel shortly before midnight, and went to bed.

We have never climbed from centres. Thus in 1902 we slept at no fewer than twenty-nine different places among the mountains. We began that season at La Bérarde and finished at Chamonix, having perhaps reached our high-

water mark by traversing the Meije. This was, I believe, the first English traverse of the Meije without guides—done by a Scotchman and an Irishman.

Having given an outline of our first season, I will conclude by giving also a sketch of our last season together, which shows how we have worked on from small beginnings* to what are considered fairly arduous expeditions. Our programme, as usual, embraced most of the big ascents in the Alps from end to end, but was completely upset by the exceptionally bad weather of 1908.

We began at the Orny hut, where we had a pleasant scramble for a first day on the Aiguille d'Orny, which I should say is far the finest pinnacle on the Arpette ridge, though not often ascended. We crossed over to the Saleinaz hut by the Col Droit, exercising our arms a little by scrambling on the Aiguilles Dorées, where we found the chimney on the Aiguille Javelle too exhausting in our untrained condition. I think it is the tightest and most uncomfortable chimney in which I have ever struggled.

We had intended to try the Argentière again, but the weather was hopeless, and we had to cross the Col Chardonnet for the second time in a snowstorm. On the other side there was a thin fog, which mingled with the general whiteness of the snowfield in such a way that we literally could not see what was in front of us, and had to throw lumps of snow ahead to find out the nature of the ground. When we had got a short way below the Col a gleam of sun came through the fog, though not enough to dispel it, and we sat down in the snow and had a most convivial meal of *bœuf à la mode*, jugged hare, and cocoa, all served hot. We christened this 'the mad luncheon party,' as we did not quite know where we were, nor how we were going to extricate ourselves.

From the Montanvert we did the Tacul and Charmoz. The condition of the latter may be imagined when I say that we had no rock work till we got within 20 ft. of the top. We had ascended by the Nantillons glacier the whole way to the foot of the couloir, not liking the look of the snow bridges leading on to the Rognon. Owing to the bad condition of the mountain we gave up any idea of traversing, and left the top at 1.30. From the same cause we were very slow in descending to the glacier, and this time we took to the Rognon, and stayed there—at least for the night. We actually examined what proved to be the proper way off, but, as it looked by no

* In this particular, I think our example deserves to be followed.

means safe, we continued to descend the rocks, keeping well to our right, and finally found it impossible to get off. By this time it was too dark to climb back again up the steep rocks with safety, and we devoted our energies to finding dry quarters, as it was threatening rain; and, after a hot supper, we turned in. Instead of the usual method of going upstairs to bed we had to climb down with some care into a little cave under a big boulder. The inside man was well jammed against the rock, though his mattress consisted of loose stones, which had a tendency to drop on to the Nantillons glacier. We took the precaution of roping, so that the outside man should not disappear in the night without drawing his neighbour's attention to the fact. Unfortunately there was a back door, and the wind found us out, as it always does, however carefully you select your shelter. The crashing of stones near us on one side, and of avalanches on the other, had a weird effect, and made us glad to have a good roof over our heads.

On an off day we managed, as usual by mistake, to find a new route on the Aiguille de l'M, which much impressed us with the mountain, till we found the ordinary route on the descent. We then fled from the bad weather to Binn, where we hoped to be able to climb in any weather. We had two splendid days for our journey there, but the third day we were consoled by having a violent snowstorm, in which we found the top of the Cherbabung. We were also attracted to the Klein Schienhorn, by the fact of its tariff being *après agrément*, but found no diversion on it, except for the last 20 ft., which overhung and gave us some sport.

Then we went over the Hohsand pass to Tosa Falls, and on to Devero and Veglia, a lovely spot, where, if it were on the Swiss side of the Alps, there would be many hotels. We had to celebrate the birthday of the landlord's daughter by drinking Asti on the top of red wine and a local mineral water, with the result that we failed on Monte Leone next day.

We next crossed the Rossboden pass from Simplon to Saas, and went up to the new and excellent Mischabel hut. There it snowed for three days out of four, but we got a fine day in between for the Nadelhorn. In order to avoid the cold north wind, we took a short cut straight up the face of the E. ridge, instead of going round by the Windjoch, and lost about an hour in consequence, as the face was mostly ice, with a foot of fresh snow over it. In descending we did not take the short cut, but my hat did, as it blew out of the guard and followed our morning's tracks. Seeing it in

difficulties on the way we endeavoured to help it on by sending down portions of the cornice, which finally landed it close to the regular track, a good 1,000 ft. below. After another day's snow we waded up to the Windjoch, and as soon as we put our heads over the col were nearly blinded by a driving blizzard. As we could not see, we felt our way down an ice slope till it got too steep for our crampons. A second cast proved more successful, and we got down on to the level glacier into a thick fog. Having taken our bearings two days before, we steered by the compass for an hour and a half, when land was sighted, and we soon descended out of the mist and made a good route to St. Niklaus.

At the Findelen Glacier Hotel we found a friend, and went up the Rimpfischhorn together; at least, we fed together, and were all on the top at the same time, though, as each member of the party chose his own pace, the distance which separated us was sometimes rather more than the ordinary rope's length.

Next day Hope and I proceeded to the Trift Inn, and started for the Rothhorn on an ominously warm morning, having been warned the previous night, by an eminent member of the Club, that we should find portions of the ascent in very bad condition. An improvement must, however, have taken place during the night, as we found no special difficulty, and traversed the mountain without incident, till we reached the snow arête which leads off it on the Zinal side. This was in the very worst condition; on its N. face the slope was ice, and the snow on the crest and S. side was thin and rotten, affording no safe anchorage. Moreover, the south wind, which had been unpleasantly high all day, had now increased to a hurricane, and threatened to blow us on to the Moming glacier. We found the best way was to crawl down backwards, feeling for the old snow steps, of which some slight traces remained; and so we progressed slowly downwards. Every two or three minutes, when a heavier gust than usual blew across the arête, we had to stop and lie close to its surface, embracing it as firmly as we could with both arms and legs, sometimes having to remain in this position for several minutes. We could not hear each other speak, and our only method of communication was for Hope, who was below me, to pinch my leg to let me know where he was stopping and when he proposed to start again. This went on for two hours, and we had not got half-way down the arête. In fact, I had begun seriously to wonder whether we ever should get down it. However, the snow slope

on the S. side was now not quite so rotten as it had been higher up, and we decided to leave the arête and take to it. Descending to a rock patch, we roped for the first time during the day, and slithering over the bergschrund made our way safely in heavy rain to the Mountet hut, where Jean Baptiste Epinez welcomed us as old friends, and rigged us out in some of his best Sunday clothes. This two hours on the arête was the worst time we have ever had on a mountain.

After the Rothhorn climb it snowed all night, so that, as may be imagined, the Gabelhorn was not at its best next morning; but after much hesitation we started at 6 o'clock. We kept too much to the arête, and had a great deal of cutting in consequence. The snow on the last slope just held, and we reached the top at 3.30 P.M., fed, and getting quickly down the rock face felt as if we were at home again when we reached the glacier, as we had studied the route well from the Findelen Hotel; and, except for having to wade up to our knees in snow, we had no trouble.

Our next expedition was the Dent Blanche, for which we started at 2 A.M. from the Staffel alp. Having made a *cache* of provisions on the glacier, as we meant to return direct to the Schwarzsee the same day, we took the old route to the Wandfluhhorn, not knowing the exact point at which to ascend from the Schönbühl glacier. When we got on to the upper snowfield, for the first time in the season we had perfect snow, and went over it at something like four miles an hour. In the course of our descent the spirit moved us to make for Arolla, which involved a weary tramp over the Mont Miné snowfield. On reaching the Col Bertol I felt disposed to stop there, and shouted up to the hut to enquire for rooms; but hearing they were already over-full we raced down the Bertol glacier, and just got off it before dark.

After a Sabbath day's rest at Arolla, where we met the father of guideless climbers, we returned to the Bertol hut, and crossed the Col d'Hérens to the Schwarzsee, diverging on the way to enjoy the view from the Tête Blanche. Next day we started over the Furggjoch for the Italian Matterhorn hut, carrying provisions for 2½ days in case of bad weather. It looked so doubtful at one period of the day that we almost thought of descending to Breuil, but happily we persevered, and found Captain Farrar and his guides taking an afternoon siesta in the hut. Starting comfortably at 6.30 next morning, we tried to avoid the ropes, but finally gave it up, and climbed the rope ladder at the *mauvais pas*. Captain Farrar, who had



Stuyvesant

R. Philip Hope, photo.

FROM THE EAST ARÊTE OF THE WEISSHORN.

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started some time before us, had totally disappeared, we knew not where, but at length we perceived him far below us on Carrel's ledge. After a short halt on the summit we slid down the ropes to the shoulder and unroped. At the bottom of the couloir, instead of following the ordinary route to the Swiss hut, we kept straight on, descending to the Furgg glacier, and raced down to Zermatt, which we reached just 12 hours from the time of our start.

So we have wandered in and out among the mountains, seeing them from every side and under every aspect. We have done nothing wonderful, but we have had many days of pure and unalloyed enjoyment, the remembrance of which will be to me a perpetual refreshment and delight.

Addendum.

The following list includes, I think, everything which we find necessary when in light marching order :—

	Weight. oz.
Gaberdine rucksack, 20 by 18 inches	6
Jaconet bag for extra clothing	1
Tussore silk shirt and shorts	6
Shetland wool sweater	5½
Body belt	1½
Woollen stockings	3½
Wool slippers	8¾
Silk collar	¼
Putties	5½
Camel's hair gloves	1½
Shetland wool mittens	1
Jaeger scarf	1½
Extra silk pocket-handkerchief	¾
Sponge	
Tooth-brush and powder	
Comb	
Soap	
Vaseline	
Needle and thread	
Sticking-plaster	
Crampons	11
Axe sling	1
Compass	1½
Goggles and case	¾
Silver brandy flask	1½
Aluminium-handled knife	
„ plate, cup, fork, and spoon	4
	60¾
	o o 2

To this must be added half the following common property :—

	Weight. oz.
Lantern	3½
Monocular glass	6
Aluminium stove and spirit	24
„ food-boxes	4½
80-ft. thin rope	32
	—
	70

Thus each man's luggage when going up to a hut for one night consists of

	Weight. oz.
Personal property	60¾
Half common property	35
Food for 24 hrs.	48
	—
	143¾
	or 9 lbs.

For an expedition of about 12 hrs. from a hut the items should be approximately—

	Weight. oz.
Personal property	44
Half common property	35
Food	24
	—
	103
	or 6 lbs. 7 oz.

THE JUNGFRAU BY THE JUNGFRAUJOCH ARÊTE.

By C. F. MEADE.

AT 1 A.M. on September 2, 1903, Ulrich and Heinrich Fuhrer and I emerged from the Concordia hut and roped up. We were all well laden and prepared for a long expedition, for we were to attempt to descend the Jungfrau's eastern ridge, known as the Jungfrauoch arête. Provisions for more than 24 hours, 300 ft. of spare rope, as well as climbing irons, which turned out useless, made up a good weight.

Attempts to descend the Jungfrauoch ridge had failed, and as far as we knew no one had explored it in a downward direction from the top of the Jungfrau; hence a large extent remained virgin.

The night was cold and clear; above, stars sparkled, unobscured by any cloud; and below, bathed in moonlight, lay the vast ice reservoir that forms an upper basin to the Aletsch glacier. Around it towered the ghostly moonlit shapes



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JUNGFRAU FROM ALETSCHHORN, SHOWING N.E. ARÊTE.

Photo by V. Sella.

of the Dreieckhorn, Aletschhorn, Jungfrau, and Mönch. Between the latter two lay the Jungfrauoch.

The ridge we hoped to descend led down to this pass from the summit of the Jungfrau.

Quickly by light of moon and lantern we scrambled down the rock slope below the hut and embarked on the broad bosom of the glacier. The snow was firm and crisp, the moonlight was brilliant, so we dispensed with the lantern, and Ulrich at the head of our single file set off at a slow, swinging, tireless pace. Stride followed stride monotonously, the snowfields seemed to slope gently on to infinity, and the mind, for the time oblivious of externals, was occupied dreamily with thoughts of the task before us. Thus we were scarcely conscious of the soothing monotony of our progress till the Jungfrau herself reminded us that we had reached the moat that guards her inmost stronghold. For now the slope steepened suddenly and was intersected by the bergschrund. So, as gleams of the dawn were already visible, we paused on the brink of this chasm for a rest and a meal, little realising that below us in the bergschrund was the body of a rash young climber who had set out only a few days previously actually intending to traverse the Jungfrau alone. We noticed that the ice bridge where the numerous tracks had crossed was slightly broken, but there was nothing very unusual in a broken ice bridge, and it was not till several days afterwards, when news that a climber was missing reached Grindelwald, that a search was made. But much fresh snow had fallen in the interval and no trace of him could ever be found.

Till near the margin of the bergschrund the slope of the névé had been most gentle, but above the ice-wall rose steeply and entailed the cutting of many steps. This labour now continued, with little intermission, for the rest of the ascent.

By 6.15 A.M. we had hastily trodden the summit of the Jungfrau and were at last at work on the beginning of our ridge. No pause had been possible, owing to the wind, which blew ominously from the south and almost paralysed us with the violence of its sudden icy gusts. So as yet we were only dimly conscious of all the marvels of the view which afterwards throughout this long and never-to-be-forgotten day stamped themselves indelibly on the mind.

At first we had easy walking, for the ridge was of snow 2 or 3 yards in breadth and gently rounded in shape. But not for long. Soon its soft curves broke off short, for a cliff of rock plunged down sheer for 30 feet, and the difficulties of the ridge which were to engage us continuously for another

12 hrs. had begun. Narrow was the path that was to lead to our salvation, for from here onward the character of the ridge changed utterly. No more rounded outlines; only slim blades of fairy snow crest, or slender jagged towers of crumbling rock tossed aloft against the sky in grim, contorted shapes. And among the towers were deep-cut clefts in the ridge, where one could painfully cling astride and so survey the terrors to be overcome in the passage of the next fierce crag or snow crest.

Right and left there was always the abyss.

And all along this heavenly path the whole of Switzerland seemed to lie at our feet. We had seen the dawn light up the overwhelming majesty of Mont Blanc, and had greeted all the Alpine giants from the Bernina to the Matterhorn and the Oberland around us. On the far north horizon lay a dark cloud, the Black Forest, eastward Neuchâtel and the many arms of the Lake of Lucerne, while to the west was Berne, a tiny toy city. But the joy in travelling along such a ridge consisted (if it were possible) in even more than the view. Those only who have known and who are worthy to know can understand the delight of striding with cautious confidence along some dizzy crest, or of traversing with craft and toil the face of giant cliffs, or of scaling the crags that tower above a ridge—in short, the joy passing all understanding of contending with the elements of Nature in her own fastnesses, where to her votary she reveals herself in her grandest and most intimate forms. This joy is to be found at its fullest in places where the climber's battle is at its fiercest, and oftenest when success or failure hang undecided in the balance. For those who ask, 'What do you do when you get to the top?' or 'Why not choose the easiest way?' this paper is not written.

Ruskin, indeed, has taught that the great mountains should only be admired from below. Alas that those who obey him in this will never see one half of the beauty of the Alps, not necessarily perhaps the best, but at least a most exquisite half.

And those who have never mountaineered will never know that a hard climb in the High Alps is one of the most soul-stirring experiences that man can undergo.

The first piece of rock mentioned above was a moderate sample of the work which was to follow. We found ourselves huddled together on the point of one of the many crags which bristled like huge black fangs along the ridge. Our object was to reach the cleft at its base, a distance of some

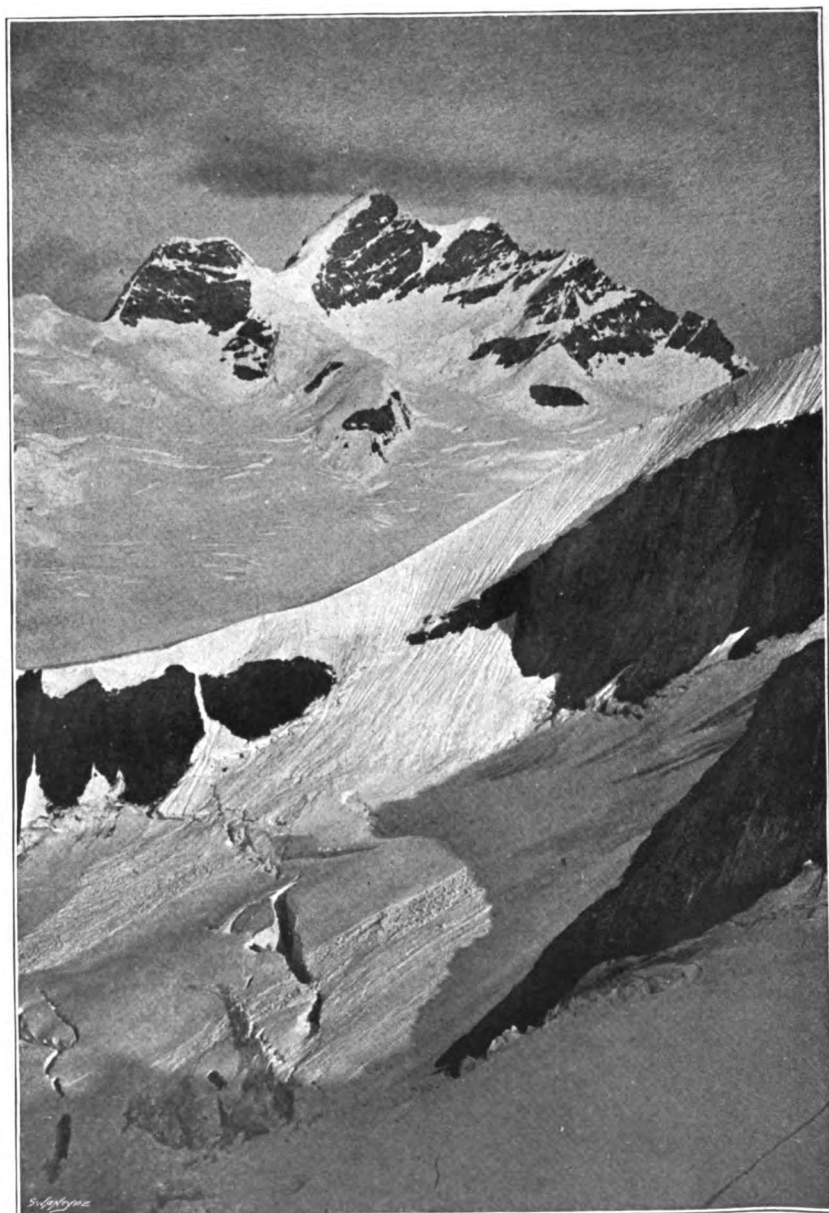


Photo by V. Sella.

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JUNGFRAU FROM GRÜNHÖRNLI.

30 ft., but the rock was sheer, with scarce a hold for hand or foot. Here, then, part of our 300 ft. of spare rope could be used. Quickly one of the ready-made loops we carried with us was slipped round the peak of our rock. Through this a good doubled length of rope was passed, by the help of which we slid and swung ourselves down with axes slung to our wrists or stuck in the loops at our waists.

From the cleft another turret had to be climbed. Indeed, of all the innumerable towers that confronted us that day one alone we turned, and that a small one. The rest were all climbed, although many of them reared themselves up vertically to dizzy heights above the ridge and required many yards of spare rope for effecting their descent.

The snow work which followed was almost the hardest part of the whole climb. Not only was the crest of the snow as sharp as a knife, but loose and most treacherously incoherent. Heinrich now led while Ulrich brought up the rear. As Heinrich plied the axe the snow sped downwards, hissing in miniature avalanches on either side. No good steps could be cut in such a frail material; indeed, the state of the snow verged on the impossible, and Heinrich had to thrash and pound it down into shape sufficiently wide to stand on. Then one at a time, creeping with the utmost caution, we advanced. The uneven violence of the wind added to the difficulty of balancing in such scanty and precarious footholds.

After this kind of work the rocks seemed almost easy, although they were generally rotten and often resembled in shape the well known Zinal ridge of the Rothhorn; for sometimes we had to step gingerly along the crest, at other times to straddle it, or again to swing ourselves by the arm across smooth slabs—in short, to employ all the perpetually varying methods of dealing with difficult Alpine ridges.

At 9 A.M. we discovered a small shelf suitable for reposing on a few yards down on the south-east side of the mountain and hanging over the Jungfrau glacier, some thousand feet below. It was a relief thus early to get Ulrich's opinion that we must certainly succeed in our attempt. At any rate, a glance back at the way we had come was enough to convince us that retreat was already not to be thought of. Indeed, a great Alpine ridge seen end on at close quarters presents one of the ghastliest pictures of utter inaccessibility imaginable.

But even amid moving scenes like these of such terrific beauty we could spare no time so early in the day, and dared not linger more than a short half-hour. And all too brief it

was, for at every point along the whole of this most unearthly line of crests and spires, from the top of the Jungfrau until we left the ridge close to the Jungfrauoch, the views both far and near were invariably magnificent.

Some 4½ hrs. after we had left the top of the Jungfrau we came upon the first trace of human beings, and found ourselves upon a snow peak with a cairn upon it. This we surmised to be the point reached by Messrs. Kesteven, Wicks, Wilson and Bradby in their ascent in 1900, when they had reached the main arête by way of the tributary ridge leading up from the Jungfrau glacier.

This ridge we passed on our right at 11 A.M. (three-quarters of an hour after leaving the cairn), and now found ourselves once more on unknown ground. But the wind now blew less violently, and we realised thankfully that the weather was going to keep fine.

Yet our ridge maintained its character gallantly. The towers increased in height and difficulty, the clefts became even narrower, and the ridge generally even more difficult to cling to than before. Thus it was not till we reached the top of the last giant gendarme but one that we ventured to halt again at 2.15 P.M.

After half an hour's rest a further climb, as usual never easy and always exciting, brought us to the last great tower of all. We climbed on to its top and surveyed the gulf below. Our mountain had characteristically kept its best till last, for not only did the descent appear vertical on all sides, but lower down the rock overhung.

Fortunately Ulrich was able to take up a strong position at the top, and to fix one of our emergency loops round the peak, as a support to the length of doubled rope which, as usual, served us for handhold in places where the rock offered none.

Then we began to lower ourselves over the edge. First Heinrich climbed down to a ledge about 20 ft. below and waited; then I followed till my feet touched his back. This position was awkward, for suspended where I was I could not give Heinrich any help with the rope should his arms give out during the descent, nor was there any room for me on the ledge till he had vacated it; so I urged him to move on and make room. Yet when I found myself in his place on the ledge my position was scarcely better, as the rock at my back thrust me out, and the ledge at my feet leaned away, so my balance was most insecure.

Happily Heinrich's arms were almost fatigue-proof, or he might have had a disagreeable fall. Certainly at the end of

a long day of almost continuous arm-work, when the party (including even the last man) are burdened with heavy sacks and their ice axes, it is well for each member to give strong support with the rope. To have done this adequately we ought probably to have descended this gendarme only one at a time.

As it was I passed some rather anxious moments while the rope slid with unusual rapidity through my fingers, which were powerless to check it effectually. However all ended well, as Heinrich successfully reached the bottom and traversed with some difficulty a few yards of steep ice slope on the Scheidegg flank of our mountain. This brought him once more on to the crest of the ridge, where he was able to seat himself astride some 80 ft. sheer below the summit on which Ulrich still remained perched.

For me there was no great difficulty in following, well supported as I was by the rope from Ulrich above. So I was soon able to take up a straddling position behind Heinrich. For the last man, however, it was a different matter. A long conversation took place between the two guides, Ulrich aloft on his perch and Heinrich a 'horseback' with me on the ridge 80 ft. below, all shouting to make ourselves heard. At length a satisfactory device for the safe descent of Ulrich was hit upon. The doubled spare rope originally fixed was retained, while a single length of rope was passed through the loop at the top of the tower, thus enabling us to lower Ulrich on a pulley. By this means he reached the bottom safely and joined us in our position on the ridge. We were now secure and triumphant, having achieved the descent of the last great gendarme. So, as there appeared now to be no more obstacles between us and the Jungfrauoch, we made ourselves as comfortable as the extreme narrowness of our seat would permit and partook of a final meal.

Above us loomed the great black tower down which we had just come. The clue to its ascent was obviously not on this side. Part of our spare rope which had jammed, and which we had been obliged to cut, hung two yards or so clear of the rock. Certainly no one can hope to be able to keep literally to the ridge in any attempt to ascend the Jungfrau from the Jungfrauoch. The innumerable towers encountered would require a series of turning movements constant, elaborate, and unending. The fact that we found it convenient to keep to the ridge practically throughout its whole length was due to the quantity of spare rope we carried.

It was now nearly 7, night was coming on, and it was with

some satisfaction that we finally quitted the ridge to take to the south-eastern slope. But we felt that we had had our fair share of rock-climbing, and it was almost a grievance to us that the rocks still continued difficult. Perhaps weariness and the increasing darkness exaggerated the difficulty; at any rate, we were glad after $1\frac{1}{2}$ hour's scrambling to cross the bergschrund and find ourselves on a gentle incline of glacier once more. But at this late hour the Aletsch glacier has disagreeable traps in store for the unwary, for parts of it more nearly resemble a swamp than a glacier. Thus through slushy snow and pools invisible in the darkness we trudged and floundered sleepily till the Concordia hut was reached at 10.15 P.M. Here we roused the keeper from his slumbers, got some supper, and were soon asleep. Next day we hurried off on our way back to Zermatt.

Times.

Leave hut	1 A.M.
Top of Jungfrau	6.15 A.M.
Bottom of first tower	8.30 A.M.
Rest between fourth tower and snow-point	9 to 9.30 A.M.
Cairn peak	10.30 A.M.
Snow peak	11.45 A.M.
Rest at top of last big tower but one	2.15 to 2.50 P.M.
Foot of 80-ft. tower	6 P.M.
Reach the glacier	8.15 P.M.
Back at Concordia hut	10.15 P.M.

MONTE ROSA FROM NORTH TO SOUTH.

By EDWARD A. BROOME, F.R.G.S.

WHAT a curious conglomeration is the ordinary up-to-date ascent of Monte Rosa; comprising as it does a portion of the expedition by railway, spending a night in a crowded hut, having all sorts of queer company on all parts of the mountain, doing a certain amount of climbing, and with a few hotel luncheons and teas thrown in! My climb of August 30, 1904, was not the ordinary one, but included all these joys, and more too; such as a complete traverse of the Monte Rosa mass from N. to S., a short new ascent of the highest peak, a descent therefrom not often taken, altogether making one of the best and most delightful expeditions of a good season. Without demur, therefore, I obey orders

and proceed to spin a short yarn, and with the more pleasure as it is a good many years since anything has been written or any new scrambles on this particular peak described in our 'Journal.'

Monte Rosa, perhaps the only ugly and shapeless mountain in all the Alps as seen from the Gorner Grat, but surely the most ethereally beautiful when viewed from below Monte Moro, has been climbed and traversed many and various ways, the only really uninteresting route being the tedious and often emetic snow-grind usually taken by novices, and frequently, as in my own case, one of their first expeditions. I wonder what percentage ever get beyond the Sattel, and how many begin and end their mountaineering experiences then and there. All the other routes are good; the well-known ascent from the Grenz glacier by the southern rock arête is interesting and by no means difficult, while the only climb really to be deprecated is the one by the E. face from the Marinelli hut on the Italian side, and this, though fairly easy, is very long and dangerous from sérac and stone avalanches, and can never be attempted without a good deal of risk.

My idea last year was to combine the traverse of the Nord End, which I had not been up before, with that of the Dufour Spitze from the Silber Sattel; so with this view we left Zermatt by train (Aloys Pollinger, jun., his brother Heinrich, and myself) August 29, and were conveyed without much exertion to the Riffelhaus, where the maxillary muscles were the only ones made much use of. Later on we found ourselves forming part of a large and lazy party, strolling up the Riffelhorn path, down to Gadmen, and across the glacier to the Bétemps hut. Arrived there we found a huge crowd, and during the evening the census was taken at forty-three in all, either twenty-two climbers and twenty-one guides or *vice versa* (I forget which), besides the Club hut attendant and his mate. This in a hut arranged for fifteen to eighteen was a little disconcerting, but I was found a comfortable corner by an earlier arrival, a polyglot friend, who seemed to know the ropes a good deal better than most; and with the aid of a little tact and good temper every one shook down, we all got fed, and even managed to keep the windows open all night (!), thereby ensuring some sleep. Albeit a well-known Austrian Deputy (and climber), with his *Gemahlin*, had to be accommodated in the hut-keeper's dependence, the ousted ones and some few others camping out. My polyglot friend (whose nationality I had not previously fathomed) informed

me under cross-examination that he was a 'simple Swiss,' and a simple Swiss he surely was; but I never met any one before (Swiss or Saxon) with quite so much simplicity, sound sense, and *savoir-faire* combined, and had to thank him for a pleasant evening and a comfortable night. Afterwards I was glad to hear that he (as my stable companion) had scored in the culinary department, where my attendants had constituted themselves 'cocks of the walk' and taken first turns at the stove.

Next morning we got off betimes (2.30), and following the ordinary Monte Rosa track for some distance, to perhaps half an hour above the 'Felsen,' we turned to the left and traversed the glacier horizontally (as far as the huge schrunds would allow) in a northerly direction to the foot of the wall of rocks forming the lower end of the N.W. buttress of the Nord End, and almost facing the Stockhorn. I think the point we struck must have been a good bit lower down (more to the left) than Scriven and Penhall's 1878 route,* while Mr. Coolidge's second recorded ascent of the Nord End, the first from this side,† seems to have commenced more up the Jägerhorn side of the main buttress. However that may be, we now made for a little bay of glacier running up into the wall of rocks in a north-westerly direction, and having got over the customary big bergschrund found ourselves in a wide couloir sloping upwards from right to left, which together with the rock-face above it afforded some really sporting climbing. The wall of rocks at the top was especially good, and having surmounted them and reached the snow at the top, we turned to the left, so as to get the easiest slope and also to cover the whole of this long spur or buttress of the peak from its very beginning. The Zermatt guides seemed to think that this particular line from the glacier up had not been *ascended* before, though it had once been *descended*, by Mr. Schintz.

From here we followed the crest almost entirely over snow-fields to the summit, and as the sun got up the going became softer and somewhat toilsome, and indeed this proved the only monotonous part of the whole expedition. The scenery, however, all along the crest was magnificent—on one side all the great snow-peaks and on the other the green Italian valleys, while the sunrise lower down had been superb, and I can truly say

* *Alpine Journal*, vol. ix. p. 108.

† *Ibid.* vol. vi. p. 145.



Photo by V. Stella.

Swissphoto 922.
Swiss Electric Engineering Co.

MONTE ROSA FROM THE BREITHORN.
(LYSKAMM ON RIGHT).

I've wandered east, I've wandered west
 Through many a weary way,
 But never, never can forget
 The dawn of that young day.

Unfortunately feasting the eyes doesn't fill the belly, and the wind was too cutting all along this exposed ridge to allow us to sit down and refresh on the snow. We therefore had perforce to wait till we got to the comparatively sheltered rocks just below the summit, and these were reached at 8.30, six hours' continuous going from the start, and rather too long a fast, at any rate for the one Protestant Pilgrim of the party.

Leaving the top of the Nord End at 9 o'clock, we found first a few nice rocks to descend, but soon got on to the Silber Sattel, the beautiful sharp ice ridge which connects the two chief peaks of Monte Rosa. This looked as if it would require a good deal of step-cutting, but by descending a little below the arête to the right or west side we were able to kick along in hardish snow, and rapidly found ourselves past the col and right under the Allerhöchste Spitze, whose summit towered up 500 ft. above us.

At this point we stopped, and I remarked to Pollinger, 'Well, which way now?' His reply, 'Up that snow slope to the left and the rock gully above it; that is the regular way,' did not quite satisfy me, as I thought it too much to the left, that it would take us a long way round and on to the summit ridge some distance from the top, while there would also be two subsidiary peaks on the ridges, the Grenzgipfel and the Ostspitze, to surmount *en route*. He, however, considered it was somewhat doubtful if we could get straight up, and at any rate as far as he knew it never had been so climbed. This naturally led to the rejoinder that 'it was about time it was tried,' and ended the discussion; so after a hasty glance at a route, Aloys, nothing loth, led gaily up.

I must say the next $1\frac{1}{2}$ or $1\frac{3}{4}$ hour (I did not time it exactly, but it was probably nearer the former) was a really good bit of stiff climbing. The rocks were very steep, very cold, very glazed, and after a week's bad weather held snow in every crack and cranny. The work was all on the face, with some very narrow traverses here and there, and no chimney till just at the top. The difficulties were considerable, especially for the first man, and at times we were all glad of some little assistance. As saith the Bard—

And he that stands upon a slippery place
 Makes nice of no vile hold to stay him up.

There was, however, nothing impracticable or unsafe, and after one pitch, about one-third of the distance up, we felt fairly sure of success. In the rocks about 200 ft. below the top the leader found, stuck in a cleft, a funny old bleached and weather-beaten ice-axe, of old-fashioned shape and make, which, though fairly sound on the inside, was quite perished on the other, and had evidently been dropped from the summit many years before, and this he took with him as a trophy. I judged this to be a bit of corroborative circumstantial evidence that our line of ascent had not been taken before, for any one going up here must have seen and retrieved the relic. At the top of the rocks we clambered up a long chimney, which took us on to the ridge within a very few feet of the sardine-tin-strewn summit and on the W. or same side as the ordinary ascent *via* the Sattel, and not on the Grenzgipfel or E. side; so we considered we had succeeded in making yet another and a more direct way even if only slightly shorter and of no great practical use. The rocks had been bitterly cold coming up, gloves impossible, and for the first time in my life I found one or two of my finger-tips a bit benumbed. A few minutes' snow-rubbing, however, restored colour and circulation, and I never felt any ill after-effects. The top of the Dufour was reached at 11 o'clock exactly, just two hours from the Nord End; and some of the Bétemps multitude had only just arrived, others were still low down on the W. ridge, and still more never got to the top at all. Over-night we had been reminded of Sennacherib's cohorts and how

That host with their banners at sunset were seen;

and now the simile was completed, for truly

That host on the morrow lay scattered and strown.

On the summit we were glad of a good rest and found a nice warm, snug niche facing south and out of the wind, where an hour (and not the least pleasant of the day) passed all too quickly. We could have remained longer had I listened to the voice of temptation and consented to go down by the *route ordinaire*. The Pollingers thought we had all done about enough for one day, that the Herr was tired and the shorter way was the best. When, however, the said Herr pointed out that unless they went down by way of the Lysjoch it would not be carrying out his original scheme to make a complete traverse of both mountains; further that, although the way *was* long, the wind *was* cold, and the minstrel *was* infirm and

old, they could all just manage to crawl down the longer way, complete the round trip, and still subsequently survive the supreme struggle, the point was gracefully conceded.

Leaving the peak at noon exactly, we went straight down the good and well-known rock rib on the S. face that comes up from the Grenz glacier. This is the route first taken by Mr. Fulton in 1874 and now so deservedly popular, and is one of the best climbs in this district. I had been up before, and found no difficulty in finding the best way down, though for some reason or other it is not often descended. As a matter of fact, you can climb up or down anywhere on this rib, for its rocks, though steep, are excellent. They have been described as 'some of the pleasantest to climb in all the Alps,' though on this occasion they would have been pleasanter had they been less filled with wet snow. The time taken was just $1\frac{1}{2}$ hour to the foot of the rib, and then there was the usual bit of hard steep ice to cut across horizontally to the head of the Grenz glacier.

When once on the névé it is necessary to work round to the left in a southerly direction to below the foot of the Lyspass, leaving successively several of the minor peaks of Monte Rosa high up on the left. I hardly know any point where the oromaniac (as I have heard the Alpine enthusiast miscalled) is so thoroughly admitted into the very heart and spirit of the glorious glacier world: all above a circle of the highest peaks in Italy and Switzerland surround and hem him in, while below the immense Grenz glacier falls away gradually and gracefully at his feet towards its junction with the icy Gorner, many miles below.

The Lyskamm from here specially interested us, as it recalled a good traverse made together on it a year or two ago, when we ascended from the Lysjoch and taking the whole length of the long sharp ridge over both peaks descended by the Felikjoch—a very fine 'ice and snow' day. I name this here as in Signor Sella's beautiful photograph which illustrates this paper, and which shows most of our Monte Rosa climb, the Lyskamm also shows up (end on) so well.

From the upper névé basin we now descended rapidly and steadily, though with many crevasses, both bridged and open, to cross, down the whole length of the Grenz glacier to the Bétemps hut, reached at 3 o'clock, just $12\frac{1}{2}$ hours from the start in the morning. After a hasty meal the guides went off at once to Zermatt, while I later on strolled alone in a more leisurely manner across the Gorner glacier, meeting nobody, last night having evidently been the grand fashionable 'crush,'

and nothing except a heavy shower of rain, precursor of a final break in the weather. Tea and shelter at the Riffelhaus and a descent by rail finished the day.

Thus ended our last climb last year, the route taken having apparently made the longest possible traverse of the mountain, combined with highly enjoyable and indeed model proportions of difficult rocks and interesting ice-work. It was also the last, but not the least, of a tip-top season in which the Fates for once were friendly, giving us, besides other good things, the Matterhorn by the Zmutt ridge; the Gabelhorn up the S. (Arben glacier) face and down by the W. arête; Montenvers to Courmayeur over Mt. Blanc du Tacul, Mt. Maudit, and the Calotte; back across the Aiguille du Rochfort and Mt. Mallet; also the Col des Nantillons, described in the February number.

When shall we again have such settled weather and such good mountain conditions throughout the climbing season?

CLIMBS IN THE CAUCASUS.

By DR. ANDREAS FISCHER.

PART II.

Elbruz Traversed from N. to S.

ON August 21 we reached Utchkulan, and early next morning Herr von Meck left for Piatigorsk and Kislovodsk, his intention being to return to the mountains by way of the Baksan valley, whilst the rest of the caravan (*i.e.* Jossi, Jani Besurtanoff, Achia from Teberdinsk, and myself) were to cross the passes N. of Elbruz, in order to get to the Baksan valley. After a week or so we hoped to meet again, either at Urusbieh or at the Kosh of Terskol, whence we meant to ascend Elbruz by the ordinary route. As none of our Tatars had been there, we wanted a man to act as guide across country, and (on the evening of our arrival) some hours were spent in conversation before the right man stepped to the front. The name of this *brave des braves* of Utchkulan is Esa Erkenoff. It is true that his local knowledge did not go much further than to the Burun-tasch; but he is a most admirable story-teller, such as I have never seen or heard of either in the *salle des guides* of the Monte Rosa Hôtel at Zermatt, or in the Caucasus.

It was very late (11 A.M.) when we at last got quit of Utchkulan (or Utschkulansk). We had wished to *ride* as far as the Burun-tasch, but if we had waited till the horses

arrived we should probably be waiting there still. 'Chursuk Karasho,' said the men. No; Chursuk had no more horses than Utchkulan. But it had cigarettes and some bread, and we left it in tolerably high spirits. Soon after we had crossed the Ullukam (Kuban) and entered the valley of Ulluchursuk it began to rain, and our men (with the exception of Jani, who is a companion *à toute épreuve*) wanted to stop at a most dirty and miserable kosh, but Jossi and I, preferring our tent to koshes, as well as to all the cancellarias in the world, were quite deaf to the eloquent speeches of the man of Utchkulan, so we went on. At 5 p.m. we got to the place where the valley of Ulluchursuk bifurcates (Bituk and Kukürtlü). The weather was as bad as possible, and, as there was no firewood to be found higher up, we stopped there and pitched our tent on a hill, to the right of a brook which descends by a gorge in the northern range. Heavy rain continued to fall the whole night, and the roaring of the swelling torrents at our feet made a good serenade.

The next day (August 23) was hopeless; it rained as if the great volcano opposite (quite invisible now) were not dead, but had to be extinguished anew; it was cold, and snow was falling higher up. Elbruz, then, will be Mingitau more than ever, and our chances of climbing it *en route* seemed uncertain enough. Late in the evening there was some movement in the air, for a moment some stars were visible, and we prepared for the great vision, *i.e.* the view of Mingitau. The giant did not come out, but we *felt* that it was near, and when at last we went to sleep it was with much happier feelings than yesterday.

The hopes of man are not always vain; next morning the weather was perfection, not a cloud visible! And now in the background of the valleys (S.E.) rose Mingitau, so majestic and with such fascinating power as cannot be described. Although the E. summit could not be seen there were *two* summits, a very fine pyramid to the E., and a huge cupola to the W. Some green hills in the foreground rather intervened, and partly hid the front of the mountain, but the imagination at once seized the whole, and Mingitau in its glittering garment of fresh snow was a mountain king such as I had never seen the like of. Since the day we climbed Djalovchat we had admired Elbruz every time when we reached a considerable height (Belalakaya, Dombai, Nakhar); every time it looked more imposing than before; and very well did I remember that other glorious view I enjoyed when, fifteen years ago, I saw Elbruz for the first time (across the

Baksan valley, with Mr. Freshfield, on 'Freshfield's Pass'). But to-day the impression was much stronger; the bright and brilliant vision after darkness and chaos was not only a view, but an *event*, the best, perhaps, I owe to the mountains as yet. No doubt the idea that this time we were not only to admire, but to do, made some difference, but for the moment I felt as if, this very morning, Mingitau had given me the best it had to give.

At 5 P.M. we arrived at the desolate plateau of the Buruntasch (3,072 m.), and, as there was neither grass (for the horses) nor water, we descended about 150 m. to the E. and found a good camping-place on the broad, grassy lava moraine between the Ulluchiran glacier and the Karatschul glacier. I must not speak here of the sunset and 'Alpenglühén' on Elbruz, nor of the charms the great white mountain had when, some hours later, the moonlight made it a mass of glittering silver, whilst the dark valleys and gorges in the foreground were enshrouded in deathly gloom.

We now settled our plans for the following days. I found Jossi very willing to do his best, and we agreed to traverse Elbruz to the Baksan valley. Our 'train' was to continue its march over the passes. Some days before, when studying the maps, I had thought of making a midnight start from the Buruntasch and crossing the mountain in one long day, at least as far as to some shelter in the rocks of the S.E. side. But now, as we saw Elbruz covered with fresh snow from top to base, we had to give up such plans, and a high bivouac—say, Monte Rosa height—without fire and sleeping-bags, &c., would not do, in spite of all the charms of a full moon. So we decided to start at noon and go on, slowly but continually, the whole night, in the hope that we might gain the top at sunrise on the second day. Jani wanted very much to accompany us; he had ascended Kasbek (twice), and, as his ambition is to become one day the first great guide in the Caucasus, he had set his mind on climbing the Mingitau. We liked him very much and could not have wished for a better companion, for he is brave, strong, always willing, and never out of temper. But his shoes! How was the man to save his feet on that shelterless mountain, which threatened to be colder now than ever? Yet all our remonstrances were fruitless; Jani insisted on the expedition. We went to sleep, hoping that the Ingush might awake a wiser man.

This time the sky did everything to help us; when we got up in the morning it was bitterly cold; grass, stones, everything was white with frost and all the waters were frozen.

' Good morning, Jani.' ' Elbruz no good,' he answered, and pointed to his feet, ' Jani—Urusbieh.' The weather was perfect and promised to remain so for some days, so we thought Elbruz rather good. At 11 a.m. we parted; Jossi and I turned to the mountain; the three Caucasians stayed a long while, waving their hands and repeating, ' Terskol, Terskol.'*

Our start was easy, like a walk over the Wengern Alp. A large gently sloping moraine, grass-covered at its base, leads up between the two already mentioned glaciers. We went on for a good while apparently without getting any nearer to the mountain. Were we really ' going ' so very slowly to-day? No; when looking back we found some consolation in observing that our tent was getting smaller and smaller, dwindling away at last to a light green spot far below. ' Now they strike it,' said Jossi; ' now they are going.' A few minutes more and the little caravan disappeared in the dark valley of the Malka; now for the first time we felt quite alone. Soon after we passed the last grass and flowers. More keenly than at any time before we noticed to-day the beginning of the snow region, as if to-day it were of special importance.

On the dark lava boulders there was no longer good going, and we turned to the ice, *i.e.* to the Karatschul glacier (E.), which had a somewhat strange appearance. We found hard ice without the usual azure colour. In purest white, strangely contrasting with their dark rock frames, the frozen masses fell down and covered the desert like a sheet of linen. The surface of the glacier was exceedingly uneven, not crevassed, but strangely furrowed. For an hour or so we continued diving up and down; then the glacier got steeper and a labyrinth of crevasses gave us a chance to learn that even on Elbruz one cannot pass wherever the route seems shortest.

At 3 p.m. we reached the first plateau—*i.e.* the border of the huge névé mantle which falls down from the two summits. Here, at about 3,600 m., we met with the dreaded fresh snow, which was to trouble us for the next 20 hrs. Close to some rocks we found some water, the last. The sun was still warm, and we enjoyed an hour's rest. The view was not

* If the weather and other circumstances are doubtful, it would not be prudent to send off the tent and all resources from the Buruntasch Pass, for a party that is forced back on this side of Elbruz might probably find the road to the nearest *table d'hôte* to be long.

grand, as we were cut off by the huge bulk of our mountain from all the glories of the S. side; but I should not like to call it insignificant; we saw the large ice streams flowing to the Malka, a landscape full of peace and quietness. But already, to the N., there appeared larger masses, livelier forms. We leave the close limits of Buruntasch, and now every step upwards will disclose a new piece of the world, till at last, on the summit—'two thousand metres more, you say,' remarked Jossi, 'and all in deep snow.' In front, diagonally upwards to the S.E., there appeared a black island in the midst of the white snowfields. We steered for it and reached it, a group of fantastically shaped lava rocks, at 8 P.M.—much later than we had hoped, for the slopes had been rather steep here,* and some of the hidden crevasses, very unpleasant for so small a party, required great precaution. Moreover, we too learnt (what had been experienced many years before) that distances on the Elbruz have to be measured with the legs as well as with the eyes.

In a hospitable niche of our island we hoped to rest a while and to make tea, but the temperature (-13° C.) did not allow it; all we succeeded in doing was to make some snow into luke-warm, drinkable water whilst we were busily running to and fro. The night was clear and still, so still as even in the mountains nights seldom are, for there was not a sound audible, no avalanche, no murmuring of water—nothing. Never in my life had I felt so far away from the 'world,' in such absolute solitude. But the cold got more intense, and after $1\frac{1}{2}$ hr. we had had quite enough of the charms of our island. As our best aneroid was out of temper I could not make out the height exactly, but I estimated it to be 4,500 m. at least. Any party with a train of porters, to bring up sleeping-bags and other bivouac luxuries, would find here no shelter, it is true, but a sleeping-place, where in fine weather they might spend a better night than in a crowded Club hut. But probably they would not like the creeping out in the early morning. We had brought no luxuries with us, and left the place without regret.

The route did not require much path-finding instinct; the most direct must be the best. Far away in the S.W. a dark line at the upper end of the snow-slopes indicated the beginning of a large plateau; behind it, in ghostly paleness, towered the two summits (for what we saw there seemed high

* Much steeper than those on the S. (and S.E.) side of the mountain.

enough to claim that title). It was a beautiful night; the full moon was up, and the snowfields all round glittered like silver, and far away to the N. loomed the boundless and mysterious steppe. We toiled up through knee-deep snow, searching ever and again to make sure of solid ground, although I now think that there are not many crevasses on the mountain at this altitude. At some places the snow was blown into heaps, and for two or three steps the crust would be hard enough; then we sank in again, deeper than before. For hours Mingitau did not change in form; the two huge cupolas would not come any nearer. And for hours (after midnight) we were fighting against the intense cold, which began to get dangerous to our feet—and for some time not only to our feet. Fortunately we both were well trained, and knew from winter expeditions what was at stake and what might be endured. It is true Jossi's maxim, 'Singing is good against severe cold,' which some hours ago we still had found to be to the purpose, would not serve any more. The first 'Holioh' sounded very hoarse, and the end of the second did not come out at all. But, as nobody ever 'jodels' in the Caucasus, why should we do so on the Elbruz at 2 o'clock in the morning? We tried other means, encouraging each other to further persistence, by continuous beating and dancing, whenever after ten minutes' wading we took a halt of nearly the same time. At last the outlines of the two summits grew more distinct, and the entrance of the famous saddle, our next stage, came into view.

'Two more changes of leader, and we reach it!' No; six times each of us had to take his turn as leading man, for we managed only very short bits, and the snow-slope (though not at all steep here) seemed of merciless length.

At 2.30 A.M. we gained the Elbruz saddle, the large, cleft-like corridor (perhaps, part of the main crater of the dead volcano before the eruption of the present peaks?), 5,268 m. The hour would have allowed us to gain the top before sunrise, but we were exhausted, and feared, moreover, the cold wind, which seemed unbearable at a temperature of -18° C. Close to the foot of the western summit some rocks peeped out of the snow; there we spent a considerable time in performing gymnastics, while waiting for the sun. At last it rose in indescribable splendour, but very cold was its first greeting! It was long before we felt some warmth; fortunately there was no wind. About 6 A.M. we thought we had regained strength enough for the last attack, and partly over loose boulders, but mostly through deep powdery snow, we

slowly ascended the rather steep but nowhere difficult slopes which lead to the western summit. We halted pretty often, but every new exertion was highly recompensed. Though I felt no longer able to grasp the panorama in detail, yet I was highly impressed by the grandeur and beauty of the whole. Now the eastern cupola sank down, and behind it, first one by one and then in groups, the purple-coloured peaks of the Central Caucasus appeared. Now the light penetrated into the depths, giving back shape and colour to the world. These were moments to be experienced but once in life; it was like a Creation day. At 7.20 the slope lay behind us. La Garde! and the mountain is conquered. Every one, coming up from the saddle unprepared, will think so, and even those who 'know better' may, for a moment, believe more in what they see than in what they have learnt from books, for the corniced ridge in front looks as like a summit as any in the world. In reality it is but the eastern rim of the old western crater, which appears as a lake-like plateau, bounded, about 200 m. more to the W.,* by higher rocks. In spite of the thick layer of snow, which at two places only left free some dark rocks, the rim of the crater shows distinctly enough, at least, in the E. and W., less so in the N.; in the S. we at once noticed the gap Mr. F. C. Grove has described,† the steep sides of which are the most characteristic feature of the summit ridge. On the almost level plateau we, for the first time during the whole ascent, found snow in tolerably good condition, and a few minutes before 8 a.m. (August 26) we at last stood on the highest summit of Elbruz (5,629 m.), a snow-covered mound rising on the western rim of the crater, about 100 feet above its surroundings. An almost absolute calm prevailed, and the temperature having risen to -8° C., and rising still (up to -6°), our stay on the summit was more agreeable than any other of our halts had been since we left the Karatshul glacier. We began to revive and to open eyes and minds to the grandest spectacle Nature had ever offered us.

The weather was perfect, the sky cloudless. As the view has been described by others, I should only like to add that the ranges of the Western Caucasus, the *Abkhasian Alps*, between

* I think our way from the saddle up to the nearer end (E.) of the plateau was a little more to the north than the route of those coming up from the S. side.

† *Frosty Caucasus*, p. 235.

Belalakaya and the Klukhor Pass, assert themselves very well, though, of course, they do not rival the giants of Suanetia and the nearest groups of the main chain of the Central Caucasus. As to *form*, the E. summit of Elbruz is undoubtedly the finer of the two.

We spent two hours on the top and plateau, leaving the saddle at 11 A.M., to descend the southern slopes. There (as soon as we had struggled through some soft patches near the saddle) we found the snow in better order, and for the first time that day could move pretty quickly. Before us we continually had the incomparable view of the chain of the Central Caucasus shown in Sella's well-known panorama, and a wonderful sight it was, the nearest mountains across the Baksan valley seeming to grow higher and higher as we descended. We did not turn to the Terskol glacier, but went *south*. In the place of the cannon of Chamonix a loud rumbling of thunder greeted us, just as, late in the afternoon, we were searching for a way through a highly romantic labyrinth of lava cliffs; on a sudden dark clouds swept up and veiled all the bright and radiant peaks, and for half an hour we had little hope of a comfortable night. But before darkness fell the sky became perfectly still and clear again, and when we reached the wooded valley of the Upper Baksan (close to the Azau glacier) the stars twinkled cheerily through the pine branches.

The Kistinka Group.

On September 3 at 11 A.M. I left the station of Gvileti, in the Terek valley, accompanied by Jani Besurtanoff and a porter, and went up the Kistinka valley, which opens a little S. of the Darial Gorge and Tamara Castle. For an hour or so the way lies over steep and stony ground on the right bank of the river. Then the scene changes; the path winds up through thickets (bushes, sorbs [service trees], &c.), the red and yellow colours of which announced the approach of autumn. The torrent, forcing its way between enormous blocks of granite and through romantic gorges, forms fine waterfalls. The valley next widens out into green meadows, and the path, leaving the river, leads up by the grass slopes to the N.E. Opposite there appears a side glen, through which the Kuruchuram (?) rushes down in a lofty waterfall. The Kistinka valley is a 'valley of terraces,' with lake-like level ground between the different steps. From the lowest terrace the slopes on the E. are bare, whilst on the W. they are still wooded for a good distance. No village and no houses, only

shepherds' koshes are found. Beware of the big, dirty white dogs; they are very ill-mannered beasts. As we advance the valley gets narrower. The eastern mountain range falls down in very steep black walls; the peaks and hanging glaciers on this side are invisible for a long time. On the western side the cliffs do not descend into the valley, *i.e.* some ground is left for steep slopes, and these slopes are 'Geröllhalden' *par excellence*: nowhere, either in the Alps or in the Caucasus, have I seen such a series. They are execrable to ascend, but coming down you may *glissade* on them as on a snow-slope, for many of them have no big stones. Some of the Kistinka peaks—for instance, the Kuru-Tau—are the most broken and 'verwittert' I have come across in the Caucasus. And the moraines at the Kibischa glacier must be 'tasted,' as they cannot be described.

My men lost much time in coming up, for they had found some friends and comrades who agreed to feast with them that evening, which they did with so much good will and success that of the sheep we bought *en route* very little was left for Jani and myself to help ourselves to, and night was falling ere we reached the terrace I aimed at, *i.e.* the point marked 2,791 m. on Herr Merzbacher's map. The Schino-Tau is *the* mountain of the valley (as the Breithorn is for the St. Niklaus valley), but Kuru-Tau (4,091 m.) being the nearest peak within reach, although we did not see much of it that evening, I resolved on trying this one first.

We (Jani and I) made an early start on September 4, and in about 1 $\frac{3}{4}$ hr. reached the terrace at the foot of the slopes falling down from the ridge between Kuru-Tau and Schino-Tau. A most excellent camping-place this would have been, and had to be afterwards. The huge mass of Kuru-Tau now came into view, a dark, rotten colossus, with gendarmes and tremendous cliffs on the E., but much less forbidding from the slopes S.E. The highest summit was not visible, but what we saw of the mountain seemed to be rather 'easy,' but laborious. And so it was indeed. The greatest difficulty, perhaps, we met with at the very beginning, *i.e.* the crossing of the Kistinka River. Then for two hours steep grass slopes and moraine. Then for two hours more steeper 'Geröllhalden.' Then some cliffs up to a sort of terrace, where we found a small glacier entirely covered with detritus. Then a long climb up the steep and terribly broken—but nowhere really difficult—rocks to the top. The summit ridge runs from S.W. to N.E., and is very long but narrow (sharp at some places). It has four summits, three of them at the S.W. and one at

the opposite end of the ridge; the third (from S.W.) is the highest. The mountain is quite black on the S.E. side (our route), but on the N. it is, like the Ecrins, covered with ice and snow from top to base, and must appear a very fine peak indeed. It certainly commands a grand view of Kasbek, as well as of the whole Kistinka group. But for us, some minutes after our arrival, Kuru-Tau had other things in store—hail, showers of snow, &c. Jani had gone to the next summit (W.), a rotten rock tower, in order to build a stone-man there too; mists and clouds soon made him invisible. Having had enough of Kuru-Tau, I shouted for my companion—quite in vain. So I climbed over too. Jani was not there! And no answer came. The next 20 min. were perhaps the most anxious I remember. Then, like a ghost, Jani suddenly emerged from the clouds, innocently smiling (as he always did). He had gone to the furthest (and distinctly lower) summit, and built another stoneman there! I tried to appear pleased, but was right glad Kuru-Tau had no more summits in *this* direction. The descent was pretty quick (glissades on some of the 'Geröllhalden'); it rained, and half an hour was employed in throwing big stones into the swollen Kistinka to make a sort of bridge. The whole valley was lost in thick fog, and dark night set in long before our porter's voice became audible from the camp.

The next day was fine, but we had to spend it in carrying our tent, firewood, &c., up to the afore-mentioned terrace.

On September 6 we started again for better work, and went up the main valley to reconnoitre Schan-Tau (4,430 m., the highest peak of the group), and to climb it if a good and *quick* route could be found. No such route being discovered, we made for the *Kibischa* glacier. The uppermost terrace of the Kistinka valley is the steepest and highest of all; the river comes down through a deep and wild gorge (cleft with perpendicular walls), and forms a series of waterfalls. There is no path; but the terrace can be climbed on both sides of the river. We ascended by the E. side, and came to a sort of plateau—*i.e.* a chaos of moraines—which, for more than one reason, may be called interesting. The waters divide into several branches; there are peninsulas and islands, and very deep trenches (some of them you perhaps would find abominable if you had to cross them), &c., &c. The tongue of the *Kibischa* glacier is much longer than the maps have it, as they only show the visible (clean) part of the ice stream, but not the long and entirely moraine-covered end of it. The *visible* ice stream of the *Kibischa* glacier is not only

the largest, but also the finest of the glaciers of the Kistinka group; it rises gently, and without any large crevasses, and soon widens out to a *véritable mer de glace*. The mountains at its head are *not* in proportion to the size (dimension) of the glacier; and I could not help thinking: What a pity Schino-Tau has not been placed *there*! In front of us (S.S.E.) there rose a *very* modest 'Breithorn'—*i.e.* a long ridge, streaming with masses of *névé*. The highest point (3,668 m. by Merzbacher's map) lies at the western end. We went up in a direct line from the glacier, and, after some trouble with the crevasses and some step-cutting on the final slope, reached the top at 11.30. There we found a stoneman, but no notes. For the first time I had a good view of the top of Schan-Tau, but did not see any tempting route; and I think the climb from the Kistinka valley would be a very long and circuitous one. However I meant to try it, but after Schino-Tau. To the W. our peak (the 3,668 m.) falls down with steep and exceedingly broken, but very easy, rocks to the deepest depression in the range; a most direct and easy *pass* from N. to S. it may be called, with very little snow on the S. side. We went down by these rocks, quickly traversed the glacier to N.W., and arrived at the foot of the highest peak the Kibischa can boast of—*i.e.* a sort of 'aiguille' (3,713 m. by M.'s map), which offered a short but very nice climb. There was no cairn on the top, and Jani set to work with as great enthusiasm as if we had conquered one of the grand mountains of the Caucasus. (Ours might, perhaps, be called 'Kibischa-Tau.') The descent to the *north* proved to be easy. From the moraines down to camp we followed the same route as in the morning.

At 6 o'clock on September 7 we were *en route* for Schino-Tau, 3,928 m. For some time we followed our Kurutau route, then kept to the left (S.W.) and ascending a long grass slope and a moraine, arrived at the foot of the Schino glacier. A long snow ridge runs north from Schino-Tau and connects it with Kuru-Tau,* and when climbing the latter we had seen that, once upon the crest, the top might be gained without any considerable difficulty. But first the ice-clad slopes up to it had to be climbed. The obvious route seems to be a steep ice couloir leading to the deepest depression in the ridge which lies to the left (S.) of some sharp pinnacles;

* In 1908 Mlle. *Preobrajenska* of Vladikavkas (the first 'amateur,' as it seems, who visited the valley) went up to a certain point of this ridge (nearer to Kuru-Tau than to Schino-Tau).

this or the rock ribs to the right of the gully may be climbed to a considerable height; not much step-cutting would be necessary. But the detritus slopes at the base of (and partly *in*) the couloir looked most arduous. So I proposed to climb by the broken ribs and some snow (or ice) slopes directly upwards from the glacier to a considerably higher point in the N. ridge, and Jani, after having examined with his telescope, agreed to try there. However, when we approached the glacier my companion more and more disliked this route and in the most expressive manner repeated, 'Nicht gut, nicht gut!' (He had learnt as much German as is wanted for conversation in the mountains, for I found that nearly everything may be made intelligible by the two expressions 'gut' and 'nicht gut.') Well, now he was of opinion that the *couloir* would be 'gut,' and to the couloir he went, turning round now and then and inviting me to follow him. I had no mind to do so, but continued my way on the glacier, firmly believing my companion would come back. He did *not* come back, and so Schino-Tau (at least the N. ridge of it) was to be climbed by two 'parties' on different routes. At 7.40 I had crossed the bergschrund, and now found what I had expected, a very interesting climb up the broken ribs, sharp edges, chimneys, &c.—the whole very steep and in some places not so easy as to make me like the idea of descending by the same way, but at no place of *particular* difficulty. Some shady niches were still filled with the hailstones that had come down in little avalanches the day we were on Kuru-Tau. And fine crystals—many of good size—are found everywhere in the rocks; in a couple of hours I saw more than I had seen all the days before between Teberda and Terek. For an hour or so I made much better progress than Jani, who was struggling with the bad stuff in the couloir, and we were just able to exchange some more 'gut' and 'nicht gut.' Then I lost sight of him and the voices no longer penetrated the distance.

As soon as the quality of the slopes permitted I traversed a little to the right and saw my friend climbing the last rocks up to the gap. 'Gut, gut!' I had risen a good deal higher, but knowing that, on the easy snow ridge, the Ingush would come up at an uncommonly rapid pace, and not liking to be beaten *there*, I had no time to lose; for the rock ribs got scarce and soon entirely disappeared, and whilst I was step-cutting up the final ice slope in front Jani advanced as not many mountaineers (immediately after having climbed *such* a couloir) are likely to advance. Still, I won the match by some minutes, and had just filled my pipe when Jani was

there (10 o'clock). A most delicious hour was spent on some rocks; there was not a cloud on the mountains yet, and a more favourable standpoint to admire the whole group of *Kasbek*, from the dark depths of the Terek valley up to the radiant snows of its lofty summits, can hardly be found. There certainly was no worthier object for the last film that was left in Herr v. Meck's camera. The climb along the arête, partly rocks, partly snow, was quite easy and as pleasant as could be wished. For some hundred metres the ridge rises gently, due S., then it curves and, getting steeper, ends in an ideal snow pyramid, which we gained some minutes before noon. The highest point we only tried to touch with the ice-axe, as it was formed by a huge cornice, overhanging the high precipices to the Kistinka valley. On a solid platform of rocks, some metres W. of the snowy crest, we spent a couple of hours, and there Jani built one of his very best stonemen. Not being satisfied with the size of the materials near at hand, he carried some heavy blocks from a distance. 'They must see it from the post stations in the valley,' he said.

Gradually the high peaks in the W. were enveloped in mists, the summits of *Kasbek* too disappeared, and the long ice streams seemed to have no other origin but the clouds. The valleys of the Upper Terek still looked very fine in the sun, and to the E. the view was quite clear. The whole Kistinka group is, perhaps, not better seen from any other peak. The range opposite (E. of the valley) is imposing as a mass, but these dark and clumsy masses are like torsos without heads, and do not look tempting. Only the Schan-Tau culminates in two snowy summits, but these too seem much too small for *such* a pedestal. It has some exceedingly steep hanging glaciers on *this* side; one of them is marked on the maps (but too small); two others, more to the N., are not marked at all.

We left the top at 2 o'clock, and descended first by the S.E. ridge (easy rocks), then by a steep 'Geröllhalde' down to a small glacier (not marked on map). From there a quick descent would be possible to the left, but, the glacier being crevassed there, Jani refused to try, and this time I gave in. So we went south, had some more 'Geröllhalden,' and by way of a short side glen (where we frightened some chamois) got to the already described moraine chaos at the end of the Kibischa glacier. There we parted: Jani crossed the stream and went down the right of it, whilst I hoped to find a more agreeable way on the left bank. And on the left bank



Photo by H. W. Sawcross.

Swan Electric Engraving Co.

AN AVALANCHE FROM "THE DOME", SIKHIM, HIMALAYA.

I had to descend as far as the point where we jumped in the morning, for I saw no possibility of crossing at any other place. But my 'route' had one advantage: I now and then had a look down into the most romantic gorge of the Kistinka, which (as well as the waterfalls) is not well seen from the other side. When I arrived at camp Jani was just starting with his gun for tur-hunting, and some hours later, as it was quite dark, I started with the lantern in search of him. He had been very lucky, and carried a magnificent (heavy) steinbock on his shoulders. Schan-Tau, then, had not to be abandoned on account of famine. But it had on account of the weather. Rain during the night, snow down to camp in the morning. For once we had to beat a retreat. When we descended the last terrace to the Terek valley the Darial Gorge at our feet, filled with mists whirled in a strong wind, looked more gloomy and grand than ever.

ROUND PANDIM.

By H. W. SHAWCROSS.

IN December 1900 I undertook a trip round Pandim *via* the Guicha La. A description of the journey up to that point is needless, as it has been already described in 'Round Kangchenjunga,' by Mr. Douglas W. Freshfield. From my camp at Alukthang I made an attempt to climb Pandim, and just failed to attain the ridge S. of that mountain and close to its crest, reaching a height of about 19,000 ft.

On December 11, camping at Chemthang (15,250 ft.), I had the extraordinary good luck to snapshot an avalanche coming down from the cliffs of what Mr. Freshfield calls 'the Dome,' and which in the old survey map is marked as 'Kochirang-kang.' This is only one of several avalanches which I saw that memorable afternoon at Chemthang.

My next camping ground was the plain above the Talung glacier called 'Lungpangphak.' The view at this point is magnificent, especially looking towards the Talung saddle and Kangchenjunga, consisting of 14,000 ft. of ice and perpendicular rock. At this point the Talung glacier is covered with rubbish to such an extent that I am not surprised that Mr. Freshfield thought it ended below the Guicha La. It, however, makes a bend to the E. round the spur that divides it from the Tongshyong glacier coming from the 19,000-ft. gap. These two glaciers must have met within very recent date, but are at present seemingly receding.

My day's march ended at Rytgong, on the edge of the rhododendron jungle. This jungle is very dense and almost impassable, but by making a *détour* we avoided the densest part and reached the junction of the Rinpiram and Ronghep, where the torrent has cut for itself an almost vertical channel through the rock, very narrow and about 20 ft. deep. A natural bridge of fallen boulders enabled us to reach the opposite bank.

The sides of this valley are exceedingly precipitous, more especially the northern cliffs, which are very high and at times almost perpendicular. A short distance below the natural bridge, and on the right bank of the Rinpiram, are two hot-water springs smelling strongly of sulphuretted hydrogen. Near here we saw a large troop of monkeys—Himalayan langurs—on the opposite bank of the stream. They manifested considerable interest at the unwonted sight of man.

The going was always rough and the jungle generally very dense, so that the marches had of necessity to be very short. In fact, it was on the fifth day after leaving Chemthang that we reached Sakyong, a small village opposite that extraordinary village Pontong, which is situated on a ledge half way up the almost vertical cliffs on the opposite side of the Talung Chu, and which is reached by a series of ladders from the same bridge over the river. Well indeed is the valley called the Talung, which I take to mean the valley of rocks, though in all fairness the name ought to be given to the valley of the Rindiang, in which the Talung Gompa is situated. From the bridge we cut a path to the track that leads to Lingdem. From this point there is a track, consisting mostly of bamboo scaffolding on the sides of rocks and cliffs, till Lingthem Gompa is reached. This Gompa is peculiar in that it is run purely by Lepcha Lamas. From Lingthem the track is mostly on solid ground, but very rough, and descends to the Sanklan Sampo, over the Teesta, leading to Samathek.

IN MEMORIAM.

CHARLES EDWARD MATHEWS.

THE ALPINE CLUB has lost in Charles Edward Mathews the last of its actual founders, though happily not the last original member, the only one among them who through nearly half-a-century has continued to take a prominent part in its affairs. There are few of our members by whom his death will not have been felt as a personal sorrow, apart from the loss to the Alpine interest generally,

of which all must be deeply conscious. Few men have lived a more strenuous life, making themselves acceptable to all sorts and conditions of men, and fewer still have retained so much of the vigour of youth well beyond threescore and ten.

Charles Edward Mathews, who was born in January 1884, was the second son of Mr. Jeremiah Mathews, in his day the most highly esteemed land-agent in the Midlands. Leaving school early, he did not follow his elder brother to Cambridge, but began at once to study law, was admitted a solicitor in 1856, and set up for himself in Birmingham, where he presently rose to the top of his profession. Introduced to the Alps by his elder brother in 1856, he from that time onward scarcely ever missed spending his summer holiday among them, while the few days of Christmas and Easter holidays were with almost equal regularity devoted to the Welsh hills. Mountaineering and mountain walking were the one outdoor pursuit which he always continued to follow, and the refreshment thence derived assisted an exceptionally vigorous constitution to get through in fifty years enough work for two or three ordinary lives. There were few things in Birmingham in which he had no share, and his activity made him a prominent member of every society or council to which he belonged. His natural gifts he cultivated with assiduity, and, besides being a vigorous writer, made himself, as the Alpine Club well knows, an admirable and effective speaker.

Birmingham, or its immediate neighbourhood, was his home all through his adult life. On his marriage in 1860 he took a little house on the Worcestershire side, whence he presently removed to Edgbaston, where was his home for thirty years. During much of that time he had a cottage near Machynlleth, where he delighted to entertain his Alpine friends at the holiday seasons, conducting them up Cader Idris and Plinlimmon, as well as on smaller climbs of his own discovery. Naturally he knew these mountains well—I think he had been up Cader Idris a hundred times; but he used to tell, as an interesting proof how completely among the mountains Nature is master of man, how during a winter storm an exceptionally strong Alpine party went the whole way round Llyn-y-Cae, on the south side of Cader Idris, without hitting on the way up, and thereupon acknowledged themselves defeated. In 1898 he built himself a house in the country, on high ground overlooking Sutton Coldfield Park, with the idea that he would thenceforth spend rather less time at his office. But the claims of business, professional and civic, were exacting, and it is doubtful whether he gained more by the purer air and change of scene than he lost by the daily journeys to and fro. When the last of his family left home he parted with this house, and was in the act of settling into a new one in Edgbaston when he broke down.

According to the testimony of the last Alpine friend who visited his Welsh cottage in August last, he was then 'in first-rate form both mental and bodily, as vigorous as any man of half his age.' 'I certainly never dreamed,' adds Mr. Butler, 'that his apparently abundant stock of vitality was so nearly exhausted.' Later on he

paid a visit in Scotland, where he walked as usual, and then returned to professional work in Birmingham. Late in September he broke down suddenly and, as it proved, finally. At first there seemed a fair prospect that with time he would recover, but this proved delusive. On October 20 he passed quietly away, and was laid to rest after a funeral ceremony in the mother church of Birmingham which testified emphatically to the respect and regard which all sections and classes in the city felt for him. It was the right end for such a man. None of us could have wished for him, what he certainly would never have desired for himself, that he should exist for a few more years after all the reality was gone out of life.

No man could have been so successful and so vigorous without great natural powers; but the special moulding of his career was mainly due to two influences, the Alps and the vivid local life of Birmingham, and in both spheres he made himself widely felt. To his importance in Birmingham, to his usefulness and activity in every department of life there, eloquent tribute was paid by his life-long friend, Mr. Chamberlain, at a special meeting of the Birmingham Liberal Unionists immediately after his death. If Birmingham is—as few who are well acquainted with municipal affairs in this country will doubt—the most efficient of English cities, the place in which local patriotism is most of a reality, Charles Edward Mathews was one of the men who gave it that distinction. All his life through he busied himself, in spite of the steadily growing demands made on his time by his own profession, with Birmingham affairs, on the Town Council, as Clerk of the Peace, as a governor of King Edward's School, as a member of countless societies, professional, literary, and political. And his services to the Alpine Club were at least equally great. A most efficient President (1878–80), he set the example, which has since been followed to our great advantage, of closing his term of office with a presidential address. In many subsequent years he served as an extra member of the committee, and took a very active part in arranging for our present quarters when the Club had outgrown its original rooms in St. Martin's Place.

There are Radical reformers who will let nothing alone so long as they think that it is not perfect; and there are Conservatives who will never alter anything when once they have been satisfied that it is good. Charles Edward Mathews had a little of both tempers: he was keen in hunting out abuses and defects, though never purely destructive, and he held tenaciously to a custom once established. His first public act in Birmingham was to write a series of letters to one of the local papers criticising severely the defects of the Birmingham hospitals and similar charities, and he went on to draw attention under another *nom de plume* to the waste of opportunities at King Edward's School. But he followed up his first criticisms by founding, through his own personal exertions, the Children's Hospital, one of the earliest of its class, and he gave active help in administering King Edward's School after its reorganisation, a work which he never relinquished to the end

of his life. The Alpine Club knows how staunchly he adhered to his custom of attending the winter dinner, which he regarded as a duty as well as a pleasure; and his Oxford friends had what is now a sad illustration of the same trait. When the Oxford Alpine Club was established some thirty years ago, I naturally invited Mathews to the first annual dinner, it being an understanding among us that we should always try to secure some prominent members of the Alpine Club as guests. He had already many friends in Oxford, especially in New College, where he had been a familiar visitor for a good many years, and he was invited again and again till it became a fixture. Year after year he would inquire the date of our dinner months beforehand, lest by any chance he should form another engagement. Last May he had promised to give us, after dinner, an account of his mountaineering in Greece in 1908. When he reached my house he said, 'I ought to be in bed, but I was not going to fail the Oxford Alpine Club.' He really was unwell, so much so that almost any other man would have sent an excuse: but no one at our meeting would have guessed it. After the event, one feels that probably Nature was then warning him that his strength had limits, and that he called into play for our benefit his indomitable energy, unhappily for the last time.

Mathews's intellectual interests were almost as diverse as his practical labours, and were followed out with similar energy. He was well read in most branches of English literature, and had an extremely well-chosen library of books. Being a fervent admirer of Tennyson, he made himself acquainted with all the early editions, and with the various poems which Tennyson in his youth published anonymously. A still greater devotee of Dickens, he knew his way over the Dickens country, and had a theory as to how the mystery of Edwin Drood was to have been worked out, while there was not an allusion or a quaint phrase in 'Pickwick' which he had not at command. Though not a reader of military history in general, he had a passionate interest in Waterloo, and accumulated every book bearing on it. Eight or nine years ago, wanting a short holiday after an attack of influenza, he persuaded me to accompany him for a week to Brussels. In the course of it we drove or walked over every road used in the campaign, every detail of which he had at his fingers' ends. He even, on one day when I was unable to accompany him, traversed alone the route which plays so great a hypothetical part in Waterloo literature—that which Grouchy would have followed if he had 'marched to the cannon.' It was like Mathews to test a theory thoroughly by practice, and it was with a certain air of triumph that he recounted to me his experiences, according to which Grouchy could by no possibility have arrived in time to take part in the battle. And he was much pleased when I congratulated him on having done something for Waterloo controversies, by disposing *ambulando* of the great fiction that Napoleon lost Waterloo through Grouchy's fault.

Mountaineering was to Mathews much more than a diversion; it was the pursuit which, amid all his multifarious energy, he had

ever most at heart. And it is of course as a mountaineer that his name will live, not only in the memory of the Alpine Club but in the world at large, where he has for nearly half a century stood forward as a leading representative of mountaineering. Other men have performed more sensational feats, and gone further afield; other men have from time to time been more conspicuously before the public, or rendered more immediate service to the Club. But no one has on the whole done so much, because no one has continued his Alpine activity over so long a period. It is true that he was not in the strict and literal sense one of the chief pioneers. Indeed, there were few men, conspicuous during the first decade of the Alpine Club's existence, who had not the fortune to make a larger number of new expeditions than C. E. Mathews. On his first visit to the Alps in 1856, he and his brother William were misled by local confusion of nomenclature into ascending a minor peak instead of the Grand Combin, which was not conquered till long after. In 1867 he and Mr. Morshead made the first ascent of the Lyskamm from the south—the proper side if one thinks only of the formation of the mountain, and forgets the fleshpots of Zermatt—and also crossed from Macugnaga to Zermatt close under the Nord End of Monte Rosa over the Jägerhorn, a passage which has probably never been repeated. In 1864 he and his brother George made the Col de Trélatête, an expedition involving extraordinary glacier difficulties ('I had rather not describe the passage of this ice-fall,' wrote Mathews in the 'Journal'; 'it would better suit the pages of a sensation novel'). As it starts from high up the Allée Blanche, and leads not to Chamonix but to Contamines, the Col de Trélatête has no practical convenience, though it has been once or twice crossed by climbers in search of novelty, which they certainly find. There was also in July 1860 a vigorous assault on the Weisshorn, then still unascended, which was defeated by the state of the snow, and an attempt in 1863 to achieve the desperate feat of climbing straight up the Silberhorn from the Lauterbrunnen side. Otherwise Mathews' mountaineering, though it comprised a vast number of ascents and was continued through an extraordinary number of years, was on the whole uneventful, thanks partly to good fortune, more to his ingrained aversion to running needless risks, most of all, as he used to declare, to Melchior Anderegg's admirable guiding. There was, however, one exception, an ascent of the Matterhorn from Breuil, made under most dangerous conditions of weather, &c., which would have entailed disaster on most parties; but Mathews and Morshead, J. A. Carrel and Melchior, formed probably as strong a combination as ever confronted such a task. He very reluctantly described it in the 'Alpine Journal,' but he never liked to talk of it, regarding it as a risk which prudent men ought not to have incurred, though, as he put it, even inquisitors are sometimes more human than their creed.

The chief idol of Mathews's mountaineering worship was always Mont Blanc, which exercised over him a singular fascination. He

had ascended it twelve times, and by every route, before publishing in 1898 his book on 'The Annals of Mont Blanc,' and I believe that he went up once more afterwards. The book, which involved considerable labour, such as a busy professional man might well have hesitated to expend, is at once a proof of his abiding interest in all that concerned the monarch of the Alps, and an illustration of his own special gifts. In it he discussed, with a thoroughness and lucidity such as no one else dealing with the subject had ever displayed, the complicated questions of evidence and inference arising out of the first ascent, and the relations, not altogether amicable, between Jacques Balmat and Dr. Paccard. It does not follow that all readers must accept his conclusions as unanswerable, but no one could have written those pages who was not an expert both in evidence and in mountaineering, and an enthusiast for Mont Blanc into the bargain.

Concerning the actual foundation of the Alpine Club, in which he and his brother William took a leading part, enough has probably been written. Many of us owe to these pioneers of mountaineering a great debt of gratitude, and we are not likely to under-estimate the importance, now become world-wide, of the movement then set on foot. To their perseverance we owe it that the abuse and ridicule with which the first series of 'Peaks, Passes, and Glaciers' was bespattered in the press produced no effect, and was replaced when the second series appeared by a respectful, if still rather ignorant, appreciation. And Charles Edward Mathews was perhaps the readiest of them all to draw the true moral from Alpine events in letters to the newspapers, and thus gradually to educate opinion. Nor was he slow to press on mountaineers themselves the principles which he deemed essential to be observed, if the pursuit which they and he loved was to be a wholesome and legitimate one. The early stage of Alpine climbing had in it a large element of exploration; there was utility in discovering new routes, together with the fascination of the unknown; and the first climbers were few. But as the Alps gradually were conquered, and mountaineering became fashionable, there grew up not unnaturally a tendency towards ignoring risks if only a novelty could be discovered, a tendency also towards guideless climbing. The latter was reasonable—even admirable—provided that men were careful to learn their business thoroughly before attempting it in earnest. The former called for warning from the veterans, who appreciated the strength of the temptation, but felt that unless it were kept within bounds mountaineering would be fatally and not unreasonably discredited. As regards guideless climbing, Mathews did not go so far as some older men, who protested against it altogether. He sympathised with the desire to dispense with professional help and do all for oneself, though very emphatic on the folly of incompetent men venturing to try it. Indeed, he enjoyed few things more thoroughly than acting as guide on the Welsh mountains which he knew so well. But he was more than emphatic against the folly of those who braved obvious danger whether through

ignorance or through recklessness, who neglected the recognised precautions, such as the use of the rope. After an interval of over twenty years, his paper, in vol. xi. of the 'Alpine Journal,' is probably little known to the younger generation. It was badly wanted at the time: his analysis of the long list of fatal accidents, from 1856 to 1881, showed that nearly every life was thrown away through disregard of those rules which make all the difference between the most deadly risk and practical immunity from danger. How much effect similar protests have had it would be obviously impossible to calculate. Men will always be found who are impatient of restrictions, or make errors of judgment in applying rules which they have not fully digested. But so far as mountaineers nowadays do adopt a sound code of precaution, they owe nearly all to the insistence of such men as Leslie Stephen and Charles Edward Mathews. An obituary notice of the latter cannot end better than by reproducing his own half-forgotten words at the end of 'The Alpine Obituary':

'What, then, are the conclusions to be drawn? Surely my readers will already have done so for themselves. Mountaineering is extremely dangerous in the case of incapable, of imprudent, of thoughtless men. But I venture to state that of all the accidents in our sad obituary, there is hardly one that need have happened; there is hardly one which could not have been easily prevented by proper caution and proper care. Men get careless and too confident. This does not matter or the other does not matter. The fact is that everything matters; precautions should not only be ample but excessive.

The little more and how much it is,
And the little less and what worlds away.

Mountaineering is not dangerous, provided that the climber knows his business and takes the necessary precautions—all within his own control—to make danger impossible. The prudent climber will recollect what he owes to his family and to his friends. He will also recollect that he owes something to the Alps, and will scorn to bring them into disrepute. He will not go on a glacier without a rope. He will not climb alone, or with a single companion. He will treat a great mountain with the respect it deserves, and not try to rush a dangerous peak with inadequate guiding power. He will turn his back steadfastly upon mist and storm. He will not go where avalanches are in the habit of falling after fresh snow, or wander about beneath an overhanging glacier in the heat of a summer afternoon. Above all, if he loves the mountains for their own sake, for the lessons they can teach and the happiness they can bring, he will do nothing that can discredit his manly pursuit or bring down the ridicule of the undiscerning upon the noblest pastime in the world.*

HEREFORD B. GEORGE.

* *Alpine Journal*, vol. xi. p. 85.

I have been asked, as having been C. E. Mathews's companion in the High Alps for many years, to write a few words about his characteristics as a mountaineer. Let me say first that we had, each of us, finished our more adventurous work in the Alps before we began to climb together; and that, having by that time families dependent upon us, we agreed that we should not be justified in running into unnecessary risks in our climbs, or attempting novelties which might prove dangerous. Hence but few new expeditions will be found recorded by him in the pages of the 'Journal,' though, under the guidance of Melchior Anderegg, we climbed in the course of our travels most of the interesting peaks from the Graians to the Tyrol, and I should say of my late friend that he belonged to the old school of mountaineering, when there was still a halo of mystery lingering about the 'wrinkled old hills,' and the first object of the mountaineer was to penetrate that mystery and win his way to the summit by the most convenient route; that he was therefore an explorer and a climber rather than a gymnast; better on snow and ice than on rocks—not fast, but careful and in difficulties absolutely to be relied upon—with a good knowledge of geography and of the science of mountaineering; physically strong and capable of long days and hard work, if necessary, but preferring rather, by sleeping out the night before, to have leisure to enjoy the glory of the mountain without attempting to break the latest records. For he looked on the Alps as the means of relief from the strain of a busy professional life, a time to purify mind and body. On this subject he eloquently expressed himself in the speech which he made at the dinner of the delegates to the International Alpine Congress held at Geneva in August 1879.*

He enjoyed keenly the excitement of climbing, but his pleasure was greatly increased by the attendant circumstances—a night bivouac on the mountain-side with a pipe, a sympathetic companion, a talk (say) about some new poem of Tennyson's, or a discussion with old Melchior about the next day's route.

He had ever a high ideal of the duties and courtesies of the Club of which he was proud to have been President, and was himself singularly free from jealousy and ever ready to help with matured advice a less experienced climber. If he had a weakness it was for good food on the mountains, and he liked, therefore, to arrange for the commissariat himself. His supreme effort in this direction was put forth in 1879 in the Aiguille Grise hut, where he provided a banquet of five courses, including fresh trout, with *café noir* and liqueurs. But that was on an historic occasion. The then President of the Italian Alpine Club, Signor Sella, was reported to be on the mountain, and he was to be invited to this banquet if he were found in the hut. He was, however, camping on the rocks 2 hrs. higher up, and it was not till the early dawn of the next morning that the

* 'On arriving in Switzerland he (Mr. Mathews) said they were like the muddy Rhône on its entrance to the Lake of Geneva, but on quitting it they resembled the noble river that rushed and sparkled under the bridges of the city' (*A. J.* vol. ix. p. 335).

two Presidents met, on a snow plateau, just as the first rays of the morning sun were flashing over the ridge of Mont Blanc. It was a sensational meeting, ever to be remembered by those who witnessed it; for the Italian President, who was going to take 3 days in his *trajet*, in token of the good feeling between the two Clubs, accepted an invitation to a dinner at Couttet's, which came off with great *éclat* on the second night afterwards. On such occasions as these Mathews was at his best, but in all his relations he was ever a most genial companion, a most staunch friend. He had his foibles, no doubt, as we all have, but his were intensely human, innocent and amusing, and added greatly to the charm of his society. Look behind them and you would ever find a sterling example of what should be the best type of an ex-President of the English Alpine Club.

F. MORSHEAD.

THE ALPINE CLUB LIBRARY.

THE following additions have been made since July :—

New Books and New Editions. Presented by the Authors or Publishers.

(Foreign works may be obtained through Mr. David Nutt, 57 Long Acre, London, W.C.)

Adelboden, Bernese Oberland. Zürich, Orell Fussli, 1905
8vo, pp. 23; map, ill.

Alaska. Volume III. Glaciers and glaciation. Harriman Alaska Expedition.
New York, Doubleday, 1904. 21/-

Roy. 8vo, pp. xii, 23; map, plates.

Almanach du Montagnard. Revue annuelle de la montagne.
8vo, pp. 62; ill. Paris, L. Laveur, 1905. Fr. 1

This contains a medley of notes on mountains and climbs. The interest of the publication lies in the portraits of climbers and guides which are given.

Alpen-Kalender 1906. Herausgegeben von M. Wundt.
Berlin u. Stuttgart, Spemann, 1905. M. 2
Size 10" × 6". Each page is for 3 days and has an illustration with accompanying text. The 'Kalender' is well printed.

Alpine Gems. A series of beautifully coloured plates vividly portraying the grandest scenes to be found in the Alpine Range, and embracing specimens of the choicest works of art. To be published in about ten parts of 3 plates each.

Part 1. Traunsee, Dachstein, Kitzsteinhorn.
London, Owen, High Holborn, 1905. 1/6 net
The plates are of unusual excellence in colouring and printing.

Arolla. Guide to Arolla. Copied, with some changes, from the third edition of the MS. guide written and compiled by W. Larden, brought up to the date of the summer of 1904.

A typewritten copy of the original MS., which is in the hands of the Geneva Section of the S.A.C. Copies have been sent to the two hotels in Arolla.

Baker, E. A., and F. E. Ross: edited by. The voice of the mountains.
London, Routledge; New York, Dutton [1905]. 2/6 net

Sm. 8vo, pp. xxii, 294.

A carefully made collection of extracts in verse and prose from Byron, Schiller, Tennyson, Hugo, Swinburne, and many others.

- Battisti, Dr Cesare.** Guida di Mezolombardo e dintorni. . . Il gruppo di Brenta. Pubblicazione della 'Soc. d' abbellimento' e d. 'Soc. Rododendro.' 8vo, pp. 188; maps, ill. Trento, Soc. Tip. Ed. Trentina, 1905
A guide for the ordinary tourist chiefly; with notes on climbing in the Brenta and Tosa groups.
- Bibliotheca geographica,** herausgegeben von der Gesellschaft f. Erdkunde zu Berlin. Bearbeitet von Otto Baschin. Band X, Jahrgang 1901. Berlin, Kühl, 1904
8vo, pp. xvi, 571.
A valuable arrangement by countries of geographical books and articles.
- Carducci, Giosue.** Poesie. MDCCCL-MCM. 4ta edizione. Bologna, Zanichelli, 1905
8vo, pp. 1075; 2 portraits.
Among the poems are:—Courmayeur, Su Monte Mario, Mezzogiorno alpino, Esequie della guida Emilio Rey, In riva al Lys, Elegia del Monte Spluga. From the verses on Emile Rey, we quote;—
Spezzato il pugno che vibrò l' audace
Picca tra ghiaccio e ghiaccio, il domatore
De la montagna ne la bara giace.
A un tratto la caligine ravvolta
Intorno al Montebianco ecco si squaglia
E purga nel sereno aere disciolta:
Via tra lo sdrucio de la nuvolaglia
Erto, aguzzo, feroce si protende
E, mentre il ciel di sua minaccia taglia,
Il Dente del gigante al sol risplende.
- Desideri, I.;** Tibet; see Puini, C.
- Deutsche Alpenzeitung.** V. Jahrgang. 1. Halbband, April 1905-September 1905. München, Lammer, 1905
4to, pp. 291; ill.: supplement pp. 219.
The high standard in illustration reached in previous years by this periodical is still kept up. There are illustrations from photographs from drawings and from paintings, many of them successfully produced in colour.
Among the articles are the following;—
H. Seuffert, Aus der Palagruppe.
J. Simon, Chamonix.
O. Eckstein, Der Montblanc.
H. Sattler, Der Westgrat des Hohen Göll.
A. Rupp, Aus den Berner Alpen.
H. Andry, Thusis u. Hohen-Rhätien.
A. Mittelstaedt, Im Val Piora.
H. Uhde-Bernays, Giovanni Segantini.
H. Hoek, Ueber alpine Darstellung.
H. v. Remagen, Schiller u. die Alpen.
Each fortnightly part has this year a supplement entitled 'Verkehr und Sport,' giving many items of detailed information on tourist and climbing Clubs.
- Ferrand, Henri.** Guide pratique de l'Oisans et du Briançonnais. Guides Pol. Valence & Lyon, Toursier [1905]. Fr. 2
8vo, pp. 136; maps, ill.
- Fresia, Camillo.** Cuneo e le sue Vallate. Cuneo, Fresia, 1905. L. 1
8vo, pp. viii, 133; map, ill.
- Giacosa, Giuseppe.** Novelle e paesi valdostani. 3za edizione. Milano, Cogliati, 1905
8vo, pp. 283; ill.
Strange tales well told, but made gruesome in the telling and by the illustrations. The tales are founded on facts, and deal with Alpine life and climbing.
- v. Glanvell, Victor Wolf.** Führer durch die Prager Dolomiten. Wien, Lechner, 1890
8vo, pp. xii, 168.

- Hatcher, J. B.** Reports of the Princeton University Expeditions to Patagonia, 1896-1899. . . . Edited by William B. Scott. Volume I. Narrative of the expeditions. Geography of southern Patagonia. Princeton, The University; Stuttgart, Nägele, 1903. 32/- Folio, pp. xvi, 314; map, plates.
- Heer, J. C.** Guide to Lucerne, the Lake, and its environs. 14th edition. 8vo, pp. 157; map, ill. Lucerne, Keller, 1905. Fr. 1
This is a well-illustrated little guide issued by the Committee of local development in Lucerne. Also published in French and German.
- Hegi, Dr G. und Dr G. Dunziger.** Alpenflora. Die verbreitetsten Alpenpflanzen von Bayern, Tirol und der Schweiz. München, Lehmann, 1905. M. 6
8vo, pp. 66; 30 coloured plates.
An excellent little book. Each plate contains figures of 8-10 plants, well drawn and coloured. The Latin and German names of plants are given.
- Hugo, V.;** Les montagnes; contained in E. A. Baker, Voice of the mountains, q.v.
- Italia nostra.** Illustrazione mensile delle bellezze italiane di natura e d' arte. Anno 1, no. 1. Serie alpina, no. 1. Folio, pp. 20; plates. Torino, Streglio, maggio 1905. L. 2.50
Very good illustrations.
- Kilgour, W. T.** Twenty Years On Ben Nevis. Being a Brief Account of the Life, Work, and Experiences of the Observers at the highest meteorological Station in the British Isles. Paisley, Gardner (1905). 2/6 net
8vo, pp. 154; ill.
A very interesting record.
- Largaiolli, Dr Filippo.** Bibliografia del Trentino 1475-1903. 2da edizione interamente rifatta. Per cura della Società degli Alpinisti Tridentini. Trento, Zifpel, 1904
8vo, pp. xviii, 296.
pp. 1-35 contain 'Alpinismo, guide, acque minerali.'
The list of books here given indicates some blanks in the Alpine Club Library, which members and friends may perhaps fill up.
- McCracken, W. D.** The Tyrol. London, Duckworth, 1905. 5/- net
8vo, pp. xx, 328; ill.
This is a series of charmingly written articles on the history and scenery of the Tyrol. The book should prove welcome to all who would care to have travel in the Tyrol pleasantly recalled to them. Before describing—in a few humble words—his ascent of the Ortler, the author details the styles of existing climbers, without specifying in which class he places himself. 'There are the mere *Sommerfrischler*, the summer boarders, who merely take walks. Then come the class of *Pässebummler*, passloafers, sometimes also called *Jochfinken*, saddle-birds, who travel over the passes. The next class are the *Hochtouristen*, the high tourists, who travel over the peaks, and are also called *Bergkraxler*, or mountain-scramblers. . . . The *Bergkraxler* may be described as a man who is looking for trouble. If a mountain is too easy as it stands, it must be made difficult. He avoids the natural approach. He looks for an exposed ridge, a crumbling ice-crust, or a couloir, where stones may be expected to fall. . . . He tries to ascend the greatest number of the most difficult peaks by the most difficult routes; and to string them together by the most dangerous ridges,—all this in one day, and, if possible, without a guide.'
- Passarge, L.** Sommerfahrten in Norwegen. 3. Aufl. 2 vols, 8vo. Leipzig, Elischer [1901]. M. 8
Travel between 1877 and 1893. Drontheim, North Cape, Romsdal, Galdhøpig, Sognefjeld, Jostedal, Jotunheim, etc.
First edition 'Drei Sommer in Norwegen' 1881; second edition, 1884.
- Piglione, Luigi.** La Guerra in montagna. Roma, Voghera, 1905
8vo, pp. xv, 212.

Puini, Carlo. Il Tibet. Geografia, storia, religione, costumi. Secondo la relazione del viaggio del P. Ippolito Desideri 1715-1721. Memorie d. Soc. geogr. ital. vol. 10. Roma, 1904. L. 10 8vo, pp. lxiv, 403.

This has been printed from a MS. in the National Library of Florence.

The editor gives, pp. xv-lxiv, an introduction on geographical information regarding Tibet up to the beginning of the 19th century. The Jesuit father Ippolito Desideri of Pistoia crossed the Himalaya by the Zoji-la, and entered Tibet about the end of May 1715. He stayed six years in Tibet, and returned through Nepal, and after some time in India, returned to Europe in 1726.

Rohracher, J. A. Toblach und das Ampezzotal. 2. Aufl. Bruckmann's illust. Reiseführer, Nr. 42-42a. München, Bruckmann [? 1905] 8vo, pp. 60; ill.

Swinburne, A. C. Loch Torridon; contained in E. A. Baker, The Voice of the mountains, q.v.

Switzerland. Dictionnaire géographique de la Suisse. Tome 3, livraisons 1-12. Langenberg-Lugano, Alpes de. Neuchâtel, Attinger, 1904 4to, pp. 192; maps, ill.

We have had on several previous occasions to call attention to this valuable compilation on the topography of Switzerland. Volumes 1 and 2 have already been issued, price Fr. 33 and Fr. 36 respectively.

— **Illustrierter Führer auf die Gipfel der Schweizeralpen.** I. Band = 52 Nummern. Luzern, Speck-Jost, 1905. Fr. 3 Obl. 8vo, pp. 54; ill.

Each number consists of a drawing of a mountain, with routes marked thereon. Printed on the back of each illustration is a description of the route. These were originally issued with the periodical 'Das Schneehuhn.'

Taine, H. Voyage aux Pyrénées. Edited by Wm Robertson. Oxford modern French Series. Oxford, at the Clarendon Press, 1905. 2/6 8vo, pp. xv. 211; map.

The 'Voyage' was published first in 1855. This edition for school use comprises about 3/5ths of the original work; the Society sketches and philosophical portions are omitted.

The text occupies 136 pp. Useful notes on geography etc. occupy the remainder of the book.

Turner, Samuel. Siberia. A record of travel, climbing and exploration.

8vo, pp. xvi, 440; maps, plates. London, Unwin, 1905. 21/-

Urner-Alpen. Führer durch die Urner-Alpen. Verfasst vom Akademischen Alpen-Club Zürich. Herausgegeben vom Schweizer Alpen-Club. 2 vols, sm. 8vo. Zürich, Tschopp, 1905

This is the second of the series of guide-books, which were begun last year as a continuation of the 'Itineraria.'

de Vere, Aubrey, Mountain language, Glengariff, To a mountain in Switzerland; contained in E. A. Baker, Voice of the mountains, q.v.

Waddell, L. Austine. Lhasa and its mysteries. With a record of the expedition of 1903-1904. London, Murray, 1905. 25/- net 8vo, pp. xxii, 507; maps, plates, some coloured.

This most interesting work contains a full and vivid description of the march of the British force to Lhasa, and of scenery and incident on the way. The parts dealing with the religion of Tibet are specially valuable, as a contribution to a little-known subject.

With regard to mountain sickness the author writes, that it "was experienced by nearly every one more or less at high altitudes, in the form of headache and nausea. . . . It is undoubtedly induced by indigestion, hence probably the custom for hill-men to chew cloves or ginger when crossing high passes. The remedies we found most efficacious were phenacetin with brandy and purgatives.' With regard to snow-blindness, the application of adrenaline was found most useful.

The Tibetans appear to regard mountains with a religious awe. At the summit of the Tang La, 15200 feet, 'Chumolhari lifted her snowy head over 8000 feet above us. The summit of the pass is marked by a line of cairns. . . . At the cairns our Tibetan servants and mule-drivers stopped, and turning towards the Chumolhari, or "Mountain of the Goddess Lady," doffed their hats and reverently placed a stone on the cairn, exclaiming in a shrill voice: "Take this offering given to the gods! the gods have conquered, the devils are defeated." Is this the origin of cairn-building on a virgin summit?

The book is excellently illustrated.

Wagner, R. Die Gruppe des Hochlantsch. Herausgegeben vom Grazer Alpenklub. Graz [1905]

8vo, pp. 98; map, ill.

Wheeler, O. D. Wonderland, 1905. Description of the northwest.

Imp. 8vo, pp. 119; ill.

St Paul, Minn., North. Pac. Railway, 1905

Descriptive of the Yellowstone Park, the Mount Shasta region, etc.

The first edition was published in 1893.

Zillertal. Zell a. Ziller, Verschönerungs-Verein. 8vo. pp. 24; ill. [1905]

Older Books.

Andersen, Hans Christian. The ice-maiden. Translated from the Danish. . . sq. 8vo, pp. 127; ill. London, Bentley, 1863

This is a fairy-tale of Switzerland. A second edition of this translation was issued in 1875.

[**Bagguley, G. T.**] Twelve days' trip to Norway. Sq. 8vo. pp. 30. (1892)

Bray, Captain Claude. Ivanda or the pilgrim's quest. A tale.

8vo, pp. vi, 355; ill.

London and New York, Warne, 1894

The scene is in Tibet.

Bunbury, Selina. A summer in northern Europe, including sketches in Sweden, Norway, Finland, . . . etc.

2 vols. 8vo.

London, Hurst and Blackett, 1856

Calcutta to the Snowy Range; *see* (W., F. F.)

Foster, George. Travels in the Northern Part of India, Kashmire, Afghanistan, & Persia, and into Russia by the Caspian Sea, in the Years 1782, 1783, and 1784. London, Tegg, [c. 1825]

Sm. 8vo, pp. 111-284.

This forms part of vol. 24 of Tegg's 'Collection of Travels.'

The original edition published in Calcutta in 1821 was entitled:—An accurate account of entertaining travels in Cashmeer.

Freeston, C. L. Cycling in the Alps. With some notes on the chief passes.

8vo, pp. xviii, 249; ill.

London, Richards, 1900

Grandjean, Maurice. A travers les Alpes autrichiennes.

4to, pp. 287; ill.

Tours, Mame, 1896. Fr. 3.50

The history, legend and scenery of various parts of the Austrian Alps. Fully illustrated.

Harrison, Rev. W. What I saw in Norway. . . . Reprinted from the Pendlebury and Swinton Journal.

8vo, pp. iv, 50.

Manchester, Johnson; Pendlebury, Tillotson, 1882

Howell, James. Instructions for forreine travell. 1642. Collated with the second edition of 1650. Edited by Edward Arber.

Southgate, 1 December, 1869

This is no. 16 of Arber's English Reprints.

Howell crossed the Pyrenees and the Alps, but makes only the scantiest reference to either in these 'Instructions.'

Laing, Samuel. Notes of a traveller, on the social and political state of France, Russia, Switzerland, Italy, and other parts of Europe, During the present century. Second edition. London, Longmans, 1842

Roy. 8vo, pp. xl, 496.

pp. 317-357 and pp. 472-487; Switzerland, Simplon.

The first edition was also issued in 1842.

- Lyll, Robert.** Travels in Russia, the Crimea, the Caucasus, and Georgia.
2 vols, 8vo. London, Cadell; Edinburgh, Blackwood, 1825
- Monk, James A.** A week in Switzerland. How I reached the Hospice of the Great St. Bernard. A midnight's adventure among the mountains.
8vo, pp. 14. Pendleton, Printed by J. A. Scott (1887)
- Norway, Twelve days' trip (1892); see [Bagguley, G. T.]**
- Panorama . . .** preso dalla somità della Cattedrale di Milano. [c. 1850]
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Mountain. Special attention has been in the past year paid by Club
members to French Hoek Peak, whose summit was reached by 15
persons on the day of the Club excursion. There are fifty ways up
Table Mountain, and of these short particulars are given. We
must congratulate the Editor on his production, as the difficulties of
getting unpaid contributors to send in papers in a country where there
is little of leisure in life to bestow on a sport like mountaineering,
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G. K. Gilbert, Variations of Sierra glaciers.
J. S. Hutchinson, First ascent of Mt Humphreys.
W. D. Johnson, The grade profile in alpine glacier erosion.
J. N. Le Conte, The Evolution group of peaks.
N. F. McClure, How Private Burns climbed Mt Pinatúbo, Philippine Islands.
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No. 33. E. Fournier, Recherches spéléologiques dans la chaîne du Jura.
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No. 36. Félix Mazauric, Explorations hydrologiques dans les régions de la Cèze et du Bouquet (Gard), 1902-1903.
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ALPINE ACCIDENTS IN 1905.

THERE has been once again a regrettable number of fatal accidents among the mountains during the past season, but not more than might have been anticipated from the increasing number of those who visit them, and from the very unfavourable character of the weather during a considerable part of the summer. The newspapers have been, as usual, full of accidents to gatherers of edelweiss, to 'week-enders,' and to the ever-increasing number of those who through ignorance, inexperience, or foolhardiness venture into places which, while they involve no risk to the mountaineer, are distinctly dangerous to those who have no knowledge of mountains. We are glad to say that no member of our Club has been lost to us, though several Englishmen have met with fatal accidents. The Rev. Walter Haslehurst slipped, from having insufficient nails in his boots, on a wet grass slope on the Arvirgrat, Melchthal, on July 28, and was killed; and Mr. William Winter whilst in company with the Rev. W. G. Edwards, A. C., slipped on an icy rock in going from the Dossenhütte to Rosenlauri on August 27, with fatal results.

THE ACCIDENT ON THE FÖLZSTEIN (HOCHSCHWAB).

An accident involving a grievous loss to Austrian and German mountaineers happened on May 7. Dr. Victor Wolf von Glanvell, Dr. L. Petritsch, and G. Stopper fell from the rocks of the Fölzstein (1,956 mètres), in the Hochschwab group, in Styria. The bodies

were found by a search party on the following day. All the three were practised and skilful climbers, especially Dr. von Glanvell. The cause of the accident is said to have been most probably a fall of stones, caused either by chamois or by the condition of the upper part of the mountain wall at the time. The Fölzstein is much resorted to by the Alpinists of Gratz for practice in rock-climbing. We heartily sympathise with our Austrian and German colleagues in the loss of so distinguished a climber as Dr. von Glanvell.*

THE ACCIDENT ON THE JUMEAUX (VALTOURNANCHE).

On July 14, at 2.30 A.M., S. Giacomo Dumontel, with his sister, the guide Cesare Meynet and the porter Luigi Maquignaz (both of Valtournanche), left the chalets of Baiettes, above Breuil, to traverse the Jumeaux. It was their intention to follow the route taken previously by S. Schintz with the same guide (C. Meynet), and if possible to descend the couloir between the Jumeaux to Prarayé. They reached the Punta Sella at 11.20. There they stayed an hour, and then went on to the Punta Giordano. Briefly, their attempt to descend the couloir between the two points failed, after costing them much time. When they regained the Punta Sella it was 5 P.M. They went on quickly by the crest that stretches towards the Becca di Guin. At the point where it is usual to turn off the ridge to descend to the Valtournanche they halted a moment, but, as the guides did not know the route to be taken, they went on. As the traverse of the Becca di Guin in the then state of the snow seemed likely to cost much time Meynet suggested to Maquignaz to examine the descent to Prarayé. It appeared not only possible but easy. They descended at first by good snow-slopes, and then, keeping obliquely to the left, by easy rocks and patches of snow and ice, along the edge of a large couloir which falls from the N. ridge of the Becca di Guin to the Za de Zan glacier. They did not see any stones fall down this couloir. At the end of the rocks a steep slope of black ice, of about 100 mètres, separated them from the bergschrund. Meynet went to the front to cut the necessary steps, while Maquignaz took the place of last man. The passage seemed likely to be difficult, if not impossible. Meynet led towards the centre of the couloir, where the bergschrund appeared to be filled with avalanche snow. Only a few steps remained to be taken to reach the edge of the crevasse, when Maquignaz was struck on the head by a large stone and killed. S. Dumontel and his sister were hurt slightly and Meynet had his thigh badly bruised. The survivors hastily moved out of range of the stones, and drew the body of Maquignaz to the level of the glacier, where they left it.

They then went leftwards towards the Tête de Roese. It was 7.15 P.M.; the accident had happened at about 7. At 8, the guide being unable to continue the descent, S. Dumontel and his sister

* *Rivista Mensile*, June 1905, p. 203.

dug a hole in the snow, and having made Meynet as comfortable as possible they waited for day.

At 5 A.M. on the 15th they continued the descent, Meynet walking very fairly well, and at noon reached Prarayé. Their sufferings from the cold had been severe. The body of Maquignaz was carried to Valtournanche on the 17th. (This account is abridged from Signor Dumontel's narrative in the 'Rivista Mensile C.A.I.' for July 1905, pp. 227-8.)

ACCIDENT ON THE BLÜMLISALP.

Three young men, named Nil, Isler, and Muralt, started from Kandersteg for the Blümlisalalphorn (12,044 ft.) on July 22. When they reached the Rothornsattel Muralt declared that he did not feel well and could not go on. His two comrades at once offered to accompany him in the descent, but Muralt firmly refused the offer and thought he would rather wait until they had completed their excursion. So the two climbed to the top of the peak, and came back again after a very short rest. But Muralt, whom they had conveyed to a safe place, had vanished. They immediately searched for him all round the wild spot where they had left him, but in vain.

At length they were obliged to descend, and they made their way to the Kienthal and set on foot two search expeditions. One of these discovered the body of the missing man next day. He had fallen down a sheer 400 m. He had obviously intended to accomplish the descent alone. The recovery of the body proved difficult in the extreme.*

ACCIDENT ON THE JUNGFRAU.

Karl Hermann and Karl Geldner, both thirty-three years of age, and natives of Basel, set out on Friday, August 4, from Grindelwald to the Guggi hut (2,397 m.) for the purpose of crossing the Jungfrau to the Concordia hut on the Saturday.

They left the Guggi hut at midnight, and were observed, by means of the telescope which is placed on the Little Scheideck, at 10 o'clock on the Little Silberhorn. Then mist came on, and the change of weather, indications of which had been given early in the morning by a strong S.W. wind, followed; the storm was accompanied by a tremendous fall in the temperature. Snow fell as low as 1,600 m. and local thunderstorms continued until the Sunday evening. As no news was heard of the two tourists as late as Tuesday evening, at which time they had intended to be back in Basel again without fail, the necessary measures were taken for a search for the travellers. A rescue party, consisting of guides, friends, and relatives of the missing couple, who had set out on Thursday, were able to be recalled again soon, for at noon on that day a party who were engaged in the ascent of the Jungfrau from the N. side found, above the Silbergrat and near the Silberlücke, the

* From the *Mitteilungen des D. und Ö. Alpenvereins*, No. 15, p. 183.

pick, and 5 hours further down the body of Geldner on the Guggi Plateau, at the foot of the Schneehorn rocks. They brought the sad news to the Scheideck at 8 o'clock in the evening. Next day it snowed without ceasing, so that it was only on Saturday morning at 8 o'clock that the rescue party could set out to fetch Geldner's body (with fourteen guides and five tourists). Under very great difficulties the body was conveyed to the Scheideck on Saturday evening. Geldner bore no wounds of any kind; he was frozen to death. In his knapsack was found a supply of provisions; near him lay the axe of his comrade Hermann. The silk rope was lying about a yard from his body, torn away. No trace was to be found anywhere of Hermann himself. Owing to the large quantity of new snow it was not until Tuesday, August 15, that a second expedition could set out in search of Hermann's body. Five guides and four tourists (including the writer) left the Guggi hut at 1 o'clock in the morning, and reached the place near the Silberlücke where Geldner's pickaxe was found, at 10.30. The fine powdery snow, which was more than 3 ft. in depth, made the search practically impossible, and after descending by the same route the party returned to the Scheideck from their fruitless errand at 8 o'clock in the evening.

The two tourists undoubtedly fell victims to the weather. They were thoroughly experienced and capable Alpine climbers. Two years ago Hermann obtained with great distinction the Swiss guides' certificate (as an amateur guide). Both the lost climbers were officers in the Swiss army and members of the Basel section of the Swiss Alpine Club.

The above account is taken from the narrative by Dr. P. Mähly, of Basel—who is a member both of the Swiss and of the German and Austrian Alpine Clubs—in the 'Mitteilungen des Deutschen und Österreichischen Alpenvereins,' No. 17, September 15, 1905.

ACCIDENT ON THE BIONNASSAY GLACIER.

We take the following from 'La Montagne (Revue Mensuelle du C.A.F.)' for September 1905: Five young Germans left Geneva on August 15, 1905, to make the ascent of Mont Blanc by the Aiguille du Goûter. Overtaken by bad weather at the Pavillon de Bellevue, they spent the night there, and decided in the morning, their designs on Mont Blanc being out of the question, to search for crystals on the Bionnassay glacier. Either through ignorance of the mountains or led on by their search for crystals, they imprudently passed under the cornices of the Aiguille de Bionnassay. They were suddenly exposed to a fall of séracs. Müller and Nicolas Fuchs, who were at the head of the party, were struck and swallowed up. Two of the climbers, who were left, remained near the scene of the accident and endeavoured to lend assistance, whilst the third hurried to the Pavillon de Bellevue. Frédéric Payot, the well-known guide, who is the tenant of the Pavillon, started at once (about 11.30 A.M.), in company with three other guides. An hour later they

were joined by a fifth guide. 'It was not till after three and a half or four hours' stubborn work,' says Frédéric Payot in his report, 'that, aided by the three surviving tourists, we succeeded in dis-interring from the avalanche, from under an enormous number of ice blocks, the bodies of MM. Müller and Nicolas Fuchs.'

THE ACCIDENT NEAR THE LYSJOCH.

We take the following account of this sad accident from the narrative by Signor Alberto Ganna (certified to be exact by the companions of the lost guide) in the 'Rivista Mensile' of the Italian Alpine Club for September 1905. We have somewhat abridged the story.

On September 11, 1905, Valentino Laurent, a guide, aged fifty-nine, his son Carlo, his nephew Martino Vincent, and Francesco Favre, a porter, all of Gressoney, left their native village to pass the night at the Capanna Gnifetti. They were weather-bound at the Capanna during the 12th, and left for the Lyskamm on the morning of the 13th. They reached the summit of the Lyskamm at 11 o'clock.

There they rested about half an hour, during which time the weather was fine and calm, and then began the descent. After 2 hrs.' rather slow descent a fog assailed them. Somewhat disconcerted, but always keeping the right direction, they reached the plateau of the Lysjoch about 4 o'clock. The fog was now thicker, and they were not unanimous as to the route to be taken.

After much wandering backwards and forwards to no purpose they decided to stay where they were and to spend the night in a hole which they made in the snow. Nothing, in fact, remained for them but to stay crouching where they were, with the hope of finding the path of return on the morrow.

On the morning of the 14th the fog was still very thick and the weather bad; nevertheless they made a start. They wandered all day without knowing where they were. Towards evening, whilst it commenced to grow dark, a sudden gust of wind showed them a wall of rock, and Vincent and Favre recognised the Zumstein Spitze and the 'Crestone Rey' of the Dufour Spitze. Encouraged by this after so many hours of toil and uncertainty, Favre and Vincent decided to make for the Capanna Gnifetti to claim the help of its caretakers in rescuing Laurent père, who, exhausted with weakness and paralysed by the cold, was quite incapable of movement.

After having dug a second hole to serve the two Laurents for the night, Vincent and Favre, though they were in sorry case themselves, reached the Capanna Gnifetti at 10.30 P.M. Favre on his arrival took to his bed, suffering from exhaustion and frozen feet, and Vincent, being in no condition to start at once, took 2 hrs.' rest.

At 2 o'clock A.M. on the 15th Vincent, with Gilardi, of Campertogno, the caretaker of the Capanna Gnifetti, started with food and restoratives, hoping to carry effectual help to the two poor men in the hole on the snow-field. Favre was unable to accompany them, as he could

not put his shoes on, owing to his feet being swollen from the cold which he had suffered. Vincent and Gilardi reached the hole in the snow at 4.20 (it was above 100 mètres distant from the Entdeckungs-fels). On their arrival Valentino Laurent, though still showing some signs of life, was evidently very near death's door, and notwithstanding all the efforts of his rescuers died about 5 P.M. in the arms of Vincent. The intense cold of so many hours on the ice, the sufferings of two days without proper food, and two nights of mortal anxiety had done their work.

Vincent then volunteered to stay behind in charge of the body while Gilardi conducted Carlo Laurent, who was suffering greatly from the effects of the cold, to the Capanna Gnifetti, which was reached in 2½ hours. Gilardi at once went down to the Colle d'Olen, and a rescue party, consisting of Signor Alberto Ganna, the guides Angelo and Antonio Maquignaz, and four volunteers, with a sledge, set out for the Capanna. Carlo Laurent recovered. We may express our agreement with Signor Ganna when he says that, considering the sufferings endured by the party, it is a matter for thankfulness that no more lives were lost.

OTHER ACCIDENTS.

Two young and inexperienced workmen resident at Grindelwald, though not Grindelwalders, lost their lives on the Jungfrau on July 29. On September 1 Lieutenant Pache, a member of the Kangchenjunga expedition, was killed by an avalanche.

NEW EXPEDITIONS IN 1905.

Mont Blanc District.

MONT ROUGE DE PEUTERET (2,948 m.).—On July 26 Messrs. J. H. Wicks, E. H. F. Bradby, and C. Wilson ascended this—the S.W. sentinel of the Peuteret group. No record could be traced of any previous ascent, and no cairn was found. The ascent was made by the S. arête, and probably no other route exists, as the peak seems cut off by slabs from the Fauteuil des Allemands, and is apparently unclimbable from the Frésnay side or by the jagged northern ridge. The climb was steep and long, but not difficult. Leaving Courmayeur at 8.45 A.M., the S. buttress was rounded on the Frésnay side, the steep rocks of the peak being reached at 9 o'clock and the top at 2.10. The Val Veni was not regained till 8.45, and Courmayeur was reached two hours later.

Arolla District.

DENTS DES BOUQUETINS, S. PEAK (3,690 m.). DESCENT FROM S. ARÊTE BY E. FACE.—On July 31 Dr. O. K. Williamson and Mr. H. Symons, with Jean Maître and Pierre Maurys, having bivouacked under the rocks of the peaks near the point 3,097 m., ascended that

couloir and the rocks to the N. of it by which Mr. A. G. Topham had descended after making the first ascent,* and which strikes the S. arête just N. of a conspicuous gendarme. From the arête they traversed along the E. face and ascended until directly below the chimney which leads up to the gap immediately S. of the summit. This chimney, by means of which they had wished to attempt the ascent, was evidently impracticable, and is probably the same one concerning which Mr. Topham expresses a similar opinion.† The party therefore descended to the Italian Za de Zan glacier, bearing slightly N., down loose but not difficult rocks, and then by some slabs and an interesting chimney arrived at the 'rock staircase' by which Mr. Topham had ascended on the occasion referred to above; and they shortly afterwards reached the glacier. The route followed from the ridge until the point of striking Mr. Topham's staircase seems to be new.

Zermatt District.

THE WEISSHORN. SOUTH-EAST FACE.—This year's August weather favoured only the Mondays, and it was only at last on a Monday, August 28, that Mr. Winthrop Young, with Joseph Knubel, and Mr. G. E. Ryan, with Joseph and Gabriel Lochmatter, climbing in two parties, succeeded in ascending this face of the Weisshorn direct to the summit. Unfavourable clouds delayed the start from the hut until 4.45 A.M. The usual route for the S.E. ridge was followed over the first glacier and small containing rock ridge. Striking then diagonally N.W. up the second subsidiary glacier, which was rather heavily crevassed, the main ridge which descends from the S.E. arête was surmounted high up in the N.W. corner at its apparently most assailable point. The crest of this ridge was followed to where it merges in the foot of the huge snow couloir that seems to divide this face of the peak. In reality it lies to the east of the centre. Here the only halt, of half an hour, was made. By a long upward diagonal, inclining to the W., which necessitated much step-cutting, the bergschrund was crossed, and the shallow rib forming the western wall of the great couloir was reached near its foot. This rib was adhered to until it sank into ice-covered slabs at approximately the height of the Rothhorn. It might have been followed without apparent check to where it finishes on the S.E. ridge, somewhat E. of the summit. Up to this point, though complicated by a quantity of fresh snow, the rock had proved magnificently firm, with excellent holds, and the ropes had not been found necessary. Here, however, in order to pursue a direct line to the top, traverses inclining upward and slightly westward across uncomfortable-looking, ice-glazed *Platten* became the order, and the parties accordingly roped up. A shallow couloir or depression was crossed aslant to the next rib on the W. This was followed for a short distance, and then left for another westward traverse, the general direction being a vague

* A. J. vol. xvii. p. 254.

† *Ibid.*

bee-line for the summit. Just below the crest a final passage across some two hundred feet of slabby couloir gave very fine climbing. The snow crest was surmounted some five feet to the W. of the highest point at 11.10 A.M.: in all $6\frac{1}{2}$ hours. The climb is interesting, but neither so steep nor so stimulating as the somewhat similar ascent of the rib on the N.W. face, which terminates in the big gendarme. No falling stones or traces of them were observed during the day. The intention had been to descend by the Schalli Grat, but bitter wind and snow portended the inevitable break in weather, and the usual S.E. ridge, in none too good condition, was followed to the hut and thence to Randa in about $3\frac{1}{2}$ hours.

Bernese Oberland.

AELPLISTOCK (2,895 m. = 9,498 ft.).—On July 4 Mr. Frederick Gardiner, accompanied by Rudolf and Peter Almer, made the first recorded ascent of this peak. Leaving Handeck at 8.50 A.M., they crossed the stream descending from the Schafalpli, and mounted by a very faint and steep sheep track to the left of the stream until Schafalpli was reached, 5.5. They then climbed straight up the rocks and grass slopes at the head of the valley towards point 2,347 m. (breakfast 6.27-7). From there they traversed by a rock band towards the Aerlengrat, under point 3,483 m., and then, keeping under the ridge and mounting over snow slopes and glacier, reached point 2,880 m., and passed along the ridge to point 2,895 m. (9.45 A.M.). The actual summit consisted of three rock teeth rising about 30 to 40 ft. from the ridge, of which it was difficult to say which was the highest. It seemed to them that the central tooth was the highest; so they climbed that and found that it was so, although the difference between it and the other points was very slight. No traces of any previous ascent were found.

BRANDLAMMHOEN (8,115 m. = 10,220 ft.).—On July 9 the same party made the first ascent of this peak from the Bachli glacier. Leaving the Grimsel Hospice at 4 A.M., they reached the Bachlithal by a very steep, badly marked track until under point 2,412 m., where they breakfasted (6.30-7.15). From there they ascended over snow slopes direct towards a promising-looking couloir just to the E. of peak 8,115 m. without any difficulty (10.25-10.50). From the top of the couloir, however, the final peak rose in smooth precipitous rocks which seemed impracticable, as well as the slopes above the precipitous couloir on the S. side. Abandoning any attempt from that point, they descended to a rather unpromising couloir leading to the N.E. ridge of the peak. This was blocked by an apparently impassable rock. The negotiating of the overhanging rock proved rather difficult, but once that was passed they ascended easily to the N.E. ridge, and passed along it to the peak (11.40-12.30)—the rocks very rotten throughout, but not difficult. In the descent they avoided the couloir below the point where it was blocked by taking to the very steep rocks to the left, where they were safe from falling stones.

WASENHORN (3,086 m. = 9,960 ft.) (SOUTH SUMMIT FROM THE WENDEN GLACIER).—On July 28 the same party left Stein at 4.30 A.M., and mounting steep grass slopes to the left of the Oberthalbach they reached the upper part of the valley, and then passed over moraine to the right-hand branch of the Oberthal glacier between points 2,831 m. and 2,918 m. Climbing up the steep glacier and threading numerous small crevasses, they reached the pass at the head of the glacier between points 2,993 m. and 3,002 m. (7.20–8 breakfast.) From there they descended the Wenden glacier until the foot of the N.W. rocky face of the Wasenhorn was reached. Up these very loose and steep rocks they climbed with much precaution, and arrived on the summit at 9.15–9.40.

THE NESTHORN BY N.W. ARÊTE.—The arête is not at all well marked on the Siegfried map (sheet 492), where it appears to be merely the edge of a hanging glacier. It is really a well-defined rock ridge, ending in snow about 400 ft. from the summit. Towards the bottom the arête curves round in a northerly direction, but it is quite distinct from the N. arête, which is one of the routes given in the 'Climbers' Guide.'

On August 18, 1905, Messrs. R. P. Hope and W. T. Kirkpatrick left the Ober Aletsch hut at 4.30 A.M. and crossed the bergschrund below the foot of the arête at 7.20. They followed the arête for an hour, and then traversed to a gully on the E., which they climbed until it broadened out and led on to the arête again, near the point where it bends to the N. The portion of the arête thus avoided seemed very slabby, if not impossible. The arête was then followed to the summit over several rock towers, some towers being turned where possible. The snow arête above them was free from ice and cornice, and the summit was reached at 9.10 P.M. The rocks in the lower part of the climb were rather rotten, and in the upper part difficult. The mountain was in very bad condition, all but the very steepest rocks being covered with 18 inches of new snow, which had to be scraped away to find the holds, and this made the time abnormally long. The descent was made by the ordinary route by moonlight, and the hut was reached at 5 A.M. on the 19th.

PASS BETWEEN LAUTERBRUNNEN BREITHORN AND POINT 3,387 M. LAUTERBRUNNEN TO RIED.—On July 26, 1905, Dr. O. K. Williamson and Mr. H. Symons, with Jean Maître and Pierre Maurys, made the first passage of this pass. Leaving the Hotel Ober Steinberg at 2 A.M., they ascended past the Oberhorn See, over the moraine of the Breithorn glacier, and on the latter to the E. side of the point 2,316 m. They here diverged from the Schmadrijoch route. Ascending the glacier in a S. direction, they reached the minor col immediately S. of the summit of that rock ridge which starts S. from the point 2,316 m. Ascending a snow couloir and the rocks to the left thereof, more rocks led them up to the ridge which extends southwards from the above-mentioned minor col. This ridge was followed to the point where it abutted on the glacier to the S. of it. A stone-boy was here erected. The glacier

was now ascended in a generally S.E. direction, the crevasses giving no trouble and the scenery being magnificent (the N. face of the Breithorn a splendid object), until the formidable bergschrund at the foot of the final wall was reached (total halts up to this point $1\frac{1}{2}$ hr.). A clinometer reading showed the angle of this slope to be 65° . Leaving the bergschrund at 8.22 A.M., the party proceeded to cut up the ice slope. The ice soon gave place to rocks with some snow over them; these in turn were followed by more ice, and bearing slightly to the left, hard snow finally brought them to the col at 11.9 A.M. (estimated height 11,000 ft.). Having halted till 12.32 P.M. for purposes of photography and the enjoyment of the glorious views, the party followed the ridge eastwards over the point 3,387 m., and so reached the base of a rectangular rock tower separating them from the Schmadrijoch. They now descended the wall of rock which falls away on the S. side of the ridge, bearing gradually to the left, reached a band of snow which they traversed in the same direction, and descended more rock: this gradually became firm and more interesting, and by an enjoyable climb they reached the bergschrund at 4.53 P.M. (halts from pass about 20 min.). Descending the Jägifirn without difficulty, the crevasses being well bridged over, the right lateral moraine of the glacier was reached, and so the Lötschenthal, Ried being attained at 10.5 P.M. (halts from time of reaching Jägifirn about $1\frac{1}{2}$ hr.). As regards the descent on the S. side of the pass, it is highly probable that further to the W. no way could be found. The expedition would not as a rule be possible late in the season, but under suitable conditions it can be confidently recommended. The name Breithorn Joch is suggested for the pass.

BEICHGRAT. POINTS 3,252 M. = 10,670 FT. AND 3,254 M. = 10,676 FT.
August 31.—The Rev. W. C. Compton, with Johann Stoller, of Kandersteg, and Mr. G. Yeld, with Benjamin Pession, of Val Tournanche, left the Ober Aletsch hut at 7.5 A.M. to make the first ascent of these two points, as to which the 'Climbers' Guide to the Bernese Oberland,' vol. i. p. 98, says, 'No Information.' At first they followed the Beich Pass route, then, keeping more to the N.E., they reached the place marked 2,798 m. on the Siegfried map. They then ascended the rocks indicated on the same map to the N. of 2,798 m., and working round the semicircle of rock to the S.E. of point 3,254 m. (10,676 ft.) of the Beichgrat, turned to the W., and mounting by the snow indicated on the map between the two rock walls which bound the above-mentioned semicircle, reached point 3,254 m.—the last bit being fairly steep rock—at 10.15 A.M. No trace of a previous ascent was found. After throwing together four or five stones, the rocks being heavily laden with new snow, they retraced their steps part of the way by the route taken on the ascent, and then descended the W. wall of the rock semicircle by a not altogether easy scramble to the snowfield on the W. of it. They then turned N. and reached the E. end of the snow arête of the other point of the Beichgrat, 3,252 m. (10,670 ft.), a beautiful little

snow pyramid. After a halt for breakfast, 11.55 A.M.—12.45 P.M., they reached the top of the pyramid, which had in one part quite an imposing cornice, at 1.0 P.M. The view was very interesting, the Nesthorn, Lonzahörner, and Lötschenthal Breithorn, in an ever-changing vesture of mist, being the great features of it. From the snow pyramid they descended by interesting rocks to the Beich pass and thence to Ried. There was an excessive quantity of fresh snow everywhere: in some places it was a serious hindrance, whilst in others, *e.g.* on steep ice, where it showed no sign of slipping away whatever, it was a very considerable help. The expedition was a most enjoyable one, and was the only one the party succeeded in carrying to a successful issue during eight days, owing to the very broken weather.

GISIGHORN (8,182 m.=10,440 ft.). *September 4, 1905.*—Messrs. R. Corry and R. C. Craig, with Clemenz Ruppen, made the first recorded ascent by the S. ridge from the col between the Birgischhörner and the Gisighorn.

The col is reached in 2½ hrs.' easy walking from Bel Alp; thence to a conspicuous cleft in the ridge, 1 hr. 5 min., and from this to the summit, 1 hr. 42 min.

Another party starting earlier ascended direct to the cleft by a very difficult chimney, and completed the ascent for the most part by the E. face, keeping below the S. ridge till near the summit.

If the S. ridge is adhered to, the climb is an interesting one, with two or three short passages of some difficulty. The traverse of the whole ridge of the Gisighorn from the S. to Dame Alys (10,821 ft.) on the N. would give at least 5 hrs.' rock-climbing.

ALPINE NOTES.

'THE ALPINE GUIDE.'—Copies of Vol. I. of the new edition of this work, price 12s. net, and of 'Hints and Notes, Practical and Scientific, for Travellers in the Alps' (being a new edition of the General Introduction), price 3s., can be obtained from all book-sellers, or from Messrs. Stanford, Charing Cross.

THE LIBRARY CATALOGUE is now printed, and may be obtained, bound in cloth, on application to the Assistant Secretary, 23 Savile Row. Price 8s.; postage 4*d.*

THE ALPINE CLUB OBITUARY IN 1905.—F. D. Brocklehurst (1868), J. Collier (1893), C. E. Mathews (Original Member).

SKI-RUNNING.—Mr. W. R. Rickmers will be in Innsbruck from December 18 to 19; in Villars-sur-Ollon, January 16 to 30; on the Feldberg (Schwarzwald), February 1 to 6; in Igls, above Innsbruck, February 7 to 23; in Kitzbühel, February 24 to March 5; and probably in Norway from about March 27 to April 15. No fees.

OPENING OF THE CARRIAGE ROAD FROM ST. RÉMY TO THE HOSPICE OF THE GREAT ST. BERNARD.—An account of the opening

of this road, and of the inauguration of the statue of St. Bernard, will be found in the 'Rivista Mensile C.A.I.' for September 1905, pp. 309-10. The first automobile reached the Hospice from Aosta on July 1. There was then snow on the last part of the ascent. It is reckoned that an automobile will ordinarily take about 1½ hr. from Aosta to the Hospice as against the 7 hrs. required by the diligence.

MOUNTAIN RAILWAYS.—In the 'Railway Magazine' for September 1905 (No. 99), pp. 247-54, will be found an interesting article on 'Mountain Railways,' by Mr. Lionel Wiener, with seven illustrations.

CORRECTION.—Page 543, line 30, 'Refuge Chalet' should be 'Refuge Charlet.'

REVIEWS AND NOTICES.

The Voice of the Mountains. Edited by E. A. Baker and F. E. Ross. (London: George Routledge & Co.)

NEARLY a century ago Jane Austen wrote, with her usual exquisite discretion, 'What are men to rocks and mountains?' Though we cannot yet claim that this judgment is universally upheld, it must at least be admitted that rocks and mountains have become a great deal to men. Perhaps we need occasionally to be reminded that the cult is not so entirely our own recent creation. This purpose is well served by the excellent little anthology 'The Voice of the Mountains,' which Mr. E. A. Baker and Mr. Francis Ross have collected from the literatures of many centuries and several lands, and presented to us in a delightfully artistic and portable form. The companionship that the ordinary vagrant sought in the 'Open Road' the mountaineer can now find in 'The Voice,' and the charming designs upon the cover will serve to prevent any confusion between the two in the usual hurried look round before closing the portmanteau.

The compiler of an anthology has always to face three serious questions. 'Is it to consist of extracts illustrating or mentioning all the incidents or places that it will be considered go to make up our subject?' In this case the quality of the verse or writer must often be disregarded. 'Is it to be representative of all the great writers whose names will be expected in our context?' If so, as probably few of them have been 'specialists,' much foreign matter will have to be included. 'Is it to represent merely the spirit of the subject, irrespective of special appropriateness or extrinsic merit?' This third course is the one the editors have followed with considerable success. By dividing the book into compartments, with poetic titles—'Many Waters,' 'Cloud Pageantry,' 'Visions of the Heights,' &c.—they have managed to include representative passages embodying the æsthetic side of mountain poetry; while the headings 'Eryri,' 'Albyn,' &c., give us the

requisite proportion of mentions of special districts and peaks, without particular regard for their form or merit as writing.

It is obvious that the exigencies of publishing have compelled them to reduce their selection to a very small proportion of the original material. The greater the elimination the greater the difficulty of final choice, and the more inevitable the criticism of those who miss their own favourites. It is improbable that in questions decided by taste or ear three men could ever agree upon more than five out of nine selections. The opinion of a critic can only, then, stand for its own individual value. Perhaps if it had been possible to take more time, and to make more use of the reading of others who may have been interested in the same wide field—for so little has been done in it that a vast extent of ground has to be covered by any one attempting to secure representative passages—some disappointments might have been avoided. Small slips like 'Aubrey de Vere' and 'Sir Aubrey de Vere,' 'Bishop Trench' for 'Archbishop Trench' (curiously enough he never was a bishop), and the repetition of the extract from Psalm cxxi. on pp. 170 and 282, can easily be corrected in the next impression. Would it not have been wiser, however, to have confined the anthology to English literature? One extract each from Victor Hugo and Gautier in no way represents the mass of French mountain poetry. If German was to be included, Goethe, Heine, and Schiller are but feebly illustrated, and there is nothing from the quantity of excellent mountain verse that the last four decades have produced in Austria, Switzerland, and Germany. If Italian, one would ask more from Dante and something at least from Leonardo, Tasso, and Petrarch. If Greek, why nothing from the incomparable Æschylean descriptions? And these are only a few. Again, we are forced to doubt the wisdom of including prose selections. The mere fact that copyright excluded Ruskin would have been almost sufficient justification. To take one instance, the passage describing the view from the Superga in his Inaugural Lecture is the finest description of mountain scenery, possibly the finest piece of word-painting, in the language. The extracts from Collingwood and others read as feeble shadows. Chiefly, perhaps necessarily, descriptions of sunrise or sunset, they are by the nature of the case impressions in colour, and attempted by unpractised writers they suggest efforts to paint in words by those who have never learned to draw in form or in the symbolism of style.

To come more to the particular. The sections are well chosen to cover the general object of the book, and charmingly named. Perhaps the absurdity of a separate large title, 'The Mountains of Fancy,' for one lyric and one motto from R. L. S. might have been avoided by a little readjustment. The first and last portions of the book, which embody the general spirit and fascination of mountains, are excellently arranged and well sustained. The mass of the centre and to some extent the end, which deal with particular districts or peaks, fall off noticeably both in merit and interest. It is lamentable, if it be really the case, that the mountains of 'Eryri,' of

'Albyn,' and of the 'Isle of the Mist' have inspired no better expressions than the occasional effusion of a visitor or the sonnet of a poet on tour. Could not something more representative of the northern minstrelsy have been included from the Gaelic legends, the grey Border ballads, or more recent verse, the Ettrick Shepherd for one? Wales is represented chiefly by three very weak modern lyrics and an extract from 'Aylwin.' There is nothing from the great school of Welsh bards, the Lays of chivalry, from Chatterton or Kingsley at a later date; or, again, of prose writers, from Giraldus or Henry of Huntingdon, from the early travellers' tales, or from Borrow, whom Watts Dunton has imitated. England is better represented, and Drayton's lines are a delightful discovery, but we miss in the north the Northumbrian and local ballads, and, among others, Gray's appreciation ('These mountains are ecstatic,' &c.); in the south more especially the Arthurian cycle, the 'Gesta Romanorum,' &c. Ireland and the Erse legends are unrepresented—another 'injustice'! Abroad the Pyrenees seem to have inspired nothing beyond two lyrics of the Felicia Hemans school. Tennyson, for one, might have helped here. America, besides a pleasing sonnet of Wendell Holmes' and some heavy lines of Whittier's, has only a really bad sonnet ('Cheyenne Mountain'), three 'word paintings,' and a poem by Lowell that defies reading. The Alps and Mont Blanc are well represented, though their tributes are somewhat scattered under several headings ('Dawn,' 'Mountains and God,' &c.); but, outside verse, we miss anything representative of Shelley's prose or of Gray and the early voyagers. 'Hellas and the Orient' is perhaps the least successful section. There is nothing illustrative of the poetry that has grouped itself through all ages about the mountains of Greece. The mountains of nearer Asia, Latmos and Ida, get their tribute, but of all the poetry of the East, the literatures of Persia, India, and China, not a line, and of the glorious nature poems of the Jews only a few mottoes scattered through the book.

The more idealistic sections are done with care and taste. Some of us might have liked to substitute the famous Shakespeare sonnet for one of the three by J. A. Symonds, under 'Dawn.' Certain writers seem rather over-represented for a small collection; to mention merely a private preference, some of the space occupied by the four poems by the Rev. R. Wilton, or the three by George MacDonald, who certainly was not a poet, or the three by Robert Buchanan, or the four extracts from Watts Dunton, might have been better filled by at least one sonnet of Rossetti's, 'The Hill Summit,' or the commencement of Campbell's 'Pleasures of Hope,' or Francis Thompson's 'Sight and Insight,' or Swinburne's musical lines from 'Atalanta'—'Sun and clear light among green hills,' &c., and his 'Me the snows that face the first o' the morning,' &c., or Shelley's 'Twere sweet 'mid stars and lightnings to abide,' or F. H. Myers' perfect epitaph, 'So let us leave him,' &c., or W. Cory's 'The plunging rocks,' &c., or Mrs. Meynell's 'To the mountains leads my way,' to cite a few that come to the

mind from later poets alone. And the great ages of English poetry are but very slightly represented. The last section, 'Vision of the Heights,' might well have included *Christian's* ascent of the hill 'Difficulty' or of the 'Delectable Mountains'; and since Tennyson was to have the last word, might not his exquisite lyric 'Silent Voices' have been preferred?

But in view of the great difficulties attending the selection of such an anthology criticism is perhaps ungracious. It is only suggested in the hope that Mr. Baker and Mr. Ross may feel inspired at some not too remote date to supplement their pleasant travelling companion by a collection that will represent, more widely than is possible in such small limits, the inspiring effect of the mountains upon poets and prose writers of all ages and lands.

It is peculiarly fitting that this first collected expression of mountain inspiration should, in its dedication to Mr. C. E. Mathews, form the last public tribute to one of the earliest originators and one of the kindest and most consistent friends of the new cult of mountaineering.

Climbers and mountain lovers alike owe a debt of gratitude to the editors.
G. W. Y.

Den Norske Turist Forenings Aarbog for 1905.

Once again we can heartily congratulate the leading Scandinavian Tourist Club upon the excellence of its Year Book, though it is not quite so sporting in character as is usually the case.

The early English travellers and the books which were the outcome of their travels form the subject of a long paper by Didrik Grönvold, and naturally much reference is made to the notable tour of Sir A. de Capell Brooke and his classic book of travel. Sir Arthur undoubtedly was the pioneer of travellers in Arctic Norway and Lapland. Several of the illustrations of the book have been reproduced in this paper, but it is a pity that the beautiful picture of the North Cape, 'drawn on stone by J. D. Harding,' is not one of the number.

Kaptein K. S. Klingenberg has contributed a valuable paper on mountaineering with a theodolite. 'What one sees from Gausta' is a carefully compiled list of the various points of interest seen from the most famous mountain in Southern Norway. Herr Hassan has an amusing and well-illustrated paper on tourist life in Sætersdal. In this he pokes some well-merited fun at English travellers and trippers.

The one mountaineering paper is contributed by Mr. Howard Priestman, the subject being Stetind—or Stedtind—a weird-looking truncated pyramid of bare rock which rises to a height of 1,410 mètres and which on the fjord side consists of merely two slabs of rock, or possibly of one only, across which there is, far up, a diagonal line, a ledge which it is remotely possible may form a sporting route to the summit of what is probably the most remarkable and at the same time the ugliest mountain in Arctic Norway. At the foot of this colossal slab, or these two slabs, is a small bank

of scree, which just prevents this huge pyramid from rising directly out of the waters of the Stedfjord. In his history of the attacks which have been made upon this mountain Mr. Priestman omits the name of Dr. Paul Gussfeldt, who accompanied Ekroll in 1888. The obstacles which hitherto have turned back all who have assailed this gaunt watch-tower of Ofoten are two steps which rise perpendicularly one above the other out of a narrow and fearsome ridge. The lower step, some 25 ft. in height, was forced by a young member of Dr. Collie's party. The upper step, which is about 30 ft. in height, is yet to be conquered, but not when there is a frost-biting north-east wind. That this obstacle will be overcome some day is, however, well-nigh a certainty. Once the two steps are passed, the work will be practically done, though undoubtedly there are some difficult places to be climbed on the face above.

Mr. Priestman, who made three new ascents in the neighbourhood of Stedtind, has in his paper and his accompanying map given us a valuable contribution to the geographical knowledge of a wild *terrain* whose innermost recesses are known only to Mr. Hastings, M. Charles Rabot, and the nomad Laps. Few men are aware how much climbing exploratory work has been done in this part of Arctic Norway by the first-named mountaineer, who, with his companion Hogenning, alone has climbed the icy domes of mighty Frostisen! Fortunately excellent photographs were taken on these ascents, and it is to be hoped that ere long the fruits of this arduous labour will appear in print.

Mr. Priestman's paper, so well illustrated, will lead others to seek for adventure in this wild but now easily get-at-able mountain land.

The Lysefjord and the romantic surrounding district have had justice done to them in the paper by R. Tveteraas.

The glaciologist Herr P. A. Øyen has a short paper on the advance or retreat of glaciers in 1903-1904. It appears that whilst one glacier has gingerly projected her icy foot a few mètres lower down the valley a neighbour has timidly withdrawn hers. This is the case in all the districts observed. However, the motion of the mightiest and most important glaciers of the Justedalsbræ, viz. the Tunsbergdalsbræ, the Nygaardsbræ, and the Lodals Kaupebræ, apparently have not been noticed. It is to be hoped that this omission will not occur when observations are being made in the future. On the other hand, the movement of the Maradalsbræ, the finest glacier in the Horungtinder, has been noted during two years. This proved to be the small advance of 3 mètres.

The list of new expeditions in 1904 is interesting and instructive. From this it appears that the whole of the real mountain exploratory work was done by Englishmen. In Söndmøre Messrs. Patchell and Slater may be congratulated on having wooed and won the two tallest of De tre Søstre, aiguilles which for many a long year have vainly beckoned to mountaineers to come to them, and at last have been obeyed.

WM. CECIL SLINGSBY.

CORRESPONDENCE.

THE HIGHEST CLIMBS ON RECORD.

To the Editor of the ALPINE JOURNAL.

SIR,—In the last number of the 'Alpine Journal' there is a paper by Dr. W. Hunter Workman which he entitles 'The History of a Record Ascent,' and on p. 506 he justifies this title in a footnote, as follows: 'The word "record" in the title of this paper is used as referring to the highest substantiated ascent yet made in mountaineering. The contention that Mr. Graham reached an altitude of 24,000 ft. has, on various grounds, whether rightly or wrongly, been so strongly disputed that it must be regarded as far from proved, and therefore the altitude mentioned cannot properly claim a place among those acknowledged to have been made.' It is true that Mr. Graham's and his companions' * claim to having reached 24,000 ft. has been disputed, but the statement that their claim cannot be acknowledged is, I think, not accurate. The whole question was carefully discussed in a note† by Mr. Freshfield six years ago. As Emil Boss is dead, and it is not known where Mr. Graham is, I hope you will allow me to point out that up to the present nothing has been brought forward directly to invalidate their claim.

It is now twenty-two years since their ascents were made; their expedition was the most successful one in the Himalayas up to that date. Mr. Graham first visited Sikkim with Joseph Imboden and climbed the Kang La peak (20,900 ft.). Imboden then returned to Europe. Later Emil Boss and Ulrich Kaufmann went out to join Mr. Graham. The party then attacked the Nanda Devi group in Garhwal. Mount Monal A²¹ (22,516 ft.) was ascended. In an unsuccessful attack on Dunagiri Mr. Graham reached 22,700 ft. He also climbed to 20,000 ft. on A²². He then returned to Sikkim, where they ascended Jubonu (21,900 ft.). As far as I know these ascents have never been questioned. It is Mr. Graham's highest climb—namely, Kabru, 24,015 ft.—that has been doubted. According to his account, he and his companions, although they did not reach the actual summit, which was cleft into three gashes, got into one of these gashes only 50 ft. below the true top.

That Mr. Graham and his companions had not climbed Kabru was first suggested in 1888 by the English officials in Sikkim, but I think I am right when I say that their doubt was not shared by any mountaineers at that time; the record remained unchallenged by competent authority till 1894, when Sir Martin Conway in his preface to 'Climbing in the Himalayas' said that for the present the ascent of Kabru 'cannot be accepted as authentic,' his reasons being that Graham did not take a barometer with him to measure

* Emil Boss and Ulrich Kaufmann.

† *Alpine Journal*, vol. xix. pp. 48-54.

the height, neither did the party appear to suffer from altitude so much as was to be expected. It was in answer to Sir Martin Conway that Mr. Freshfield wrote to the 'Journal' in 1899, and showed that these objections were not of any great weight, and that Mr. Graham's story was still credible; but he goes on to say, 'Even if it be proved—as I claim it to be—that Mr. Graham's story is not *a priori* incredible, it of course by no means follows that it is true. It remains perfectly open to serious argument that he was mistaken in his identification of the peak attained, or that Emil Boss and he deliberately conspired to deceive the public in claiming to have reached a point within 50 ft. of the top of Kabru (24,015 ft.). Let it be remembered that here there is no other question than that of identification. The height is trigonometrically fixed and not dependent on any traveller's measurement.' At present, therefore, the matter stands thus: Mr. Graham before he attempted to climb Kabru had already been at least five times above 20,000 ft., and had shown that he was capable of climbing to nearly 28,000 ft. on Dunagiri without suffering very greatly from the altitude. There was nothing, therefore, highly improbable in his having reached 24,000 ft. on Kabru, and if he did reach that height it did not matter whether he had instruments with him or not: the peak has been triangulated, which gives its height far more accurately than any barometrical reading. The question of misidentification of the peak, I think, can be easily disposed of by either Mr. Freshfield or Mr. Garwood, both of whom have been under Kabru and could at once tell whether Graham's description of the ascent was correct.

One objection alone remains—namely, that of deliberate deceit—and it is naturally a subject not pleasant to discuss, but certainly until something definite can be brought forward it is one quite unworthy of notice. It would be a most hazardous course to disbelieve in any record ascent till such time as more evidence was forthcoming in its favour than merely the statements of the mountaineers themselves. On the evidence, therefore, Mr. Graham's statement that he climbed Kabru is a perfectly credible one, and his ascent may fairly claim a place among those acknowledged to have been made; and until something definite has been proved to the contrary I prefer, like Mr. Freshfield, 'to run the risk of being proved too credulous to that of having been needlessly sceptical'; also I am certain that there are many others who think the same.

J. NORMAN COLLIE.

October 23, 1905.

To the Editor of the ALPINE JOURNAL.

University College, London, W.C.: November 3, 1905.

SIR,—I notice that in his paper on 'Himalayan Mountaineering,' published in the August number of the 'Alpine Journal,' Mr. Workman describes his ascent to a height of 23,394 ft. on Pyramid Peak as a 'Record Ascent,' stating, in a footnote on p. 506, that

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the word 'record' is used as referring to the highest substantiated ascent yet made in mountaineering, adding, 'The contention that Mr. Graham reached an altitude of 24,000 ft. has on various grounds, whether rightly or wrongly, been so strongly disputed that it must be regarded as far from proved, and therefore the altitude mentioned cannot properly claim a place among those acknowledged to have been made.' Without wishing in any way to detract from the splendid perseverance shown by Mr. Workman in attempting to reach a 'record' height, I should like to enter a protest against the tendency of certain recent Himalayan writers to dispute Mr. Graham's ascent of Kabru on what seem to me to be quite insufficient grounds.

During my visit to Jongri and the Guicha La in 1899 with Mr. Freshfield we had ample opportunity of examining the mountain from different points of view and camped for several days in its immediate proximity. We both of us read Mr. Graham's account of his ascent and compared it with the appearance of the mountain on the spot. We agreed that there was no special obstacle to an ascent having been made, and that Mr. Graham's account showed that he had not mistaken the mountain for a lower summit. We discussed the advisability of attempting the ascent ourselves, and only abandoned the idea on account of the weather conditions and the state of the snow. I may say that the only real criticism of value which has been brought forward against this ascent refers to the ease with which, from Mr. Graham's account, he accomplished the ascent and the absence of prostration from mountain sickness, but, as several parties have now ascended to 23,000 ft., this objection does not appear to me to be any longer a valid one. In Mr. Freshfield's absence from Europe I should like to quote what he says on this subject in 'Round Kangchenjunga.' On p. 209 he remarks: 'I see no reason to doubt Mr. W. W. Graham's ascents in Sikhim. . . . Much of the criticism bestowed on it has arisen from crass ignorance of mountaineering, while the arguments of those who have maintained it to be incredible that three fast and first-rate climbers should have been able to reach 24,000 ft. without severe suffering, is seriously impaired by the fact that Dr. Workman, with Italian guides, has this year reached a peak of 23,800 ft.'

I am yours obediently,

EDMUND J. GARWOOD.

We regret that, owing to pressure upon our space, several Alpine Notes and Reviews have had to be held over.—EDITOR, A. J.

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