

monarch of mountains is very fairly accessible from the N., and that the scenery in that direction is of singular interest. The Englishman makes it evident that the Caucasus is the real place for those who combine with the *furor scandendi* those tastes so compendiously described in the immortal sentence, 'It's a fine day, let us go and kill something.' And when we unite to these varied advantages the charms of a really wild life, and the fact that the shores of the Caucasus can be reached almost as soon as Iceland, I think the Alpine Club must confess it to be rather discreditable that a country so admirably suited for the playground of Englishmen should have received so little attention, and pronounce it to be the bounden duty of somebody, possessed of the requisite leisure, to go and see how the crown that has been stolen from our dear old friend Mont Blanc fits the head of his upstart supplanter Elbrouz.

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THE MAURIENNE.—THE DENT PARASSÉE, AND THE GRANDE MOTTE. By THOMAS BLANFORD.

OF the various groups into which the Alps are divided, the Graians have, perhaps, attracted a smaller share of general attention, in proportion to their merits, than any other. With the exception of members of the Alpine Club, few seem to care to explore them, or even to visit those parts that have been already made known. This may, perhaps, be partly accounted for by the absence of inns or any decent accommodation in most of the valleys. It certainly is not the fault of the mountains themselves, or of the valleys which intersect them. Many of the former exceed 12,000 feet in height, are exquisitely beautiful in form, and enclose extensive fields of hitherto untrodden glaciers, while some of the latter are unsurpassed either for picturesque or savage scenery.

In the years 1860 and 1863, I became practically acquainted with the principal valleys and ranges immediately south of Aosta. Wishing to explore other parts of the same group, I decided to spend a portion of the season of 1864 in the mountains north of the Cenis, and to commence by an attack on the highest of them, the Dent Parassée. With my friends Messrs. Rowsell and Cuthbert, I reached Modane on Monday, August 1st, and found our old guide, Joseph Victor Favret of Chamouni, waiting for us at the Lion d'Or. In the evening we sent Favret to find a chasseur who knew something of the mountains, and a porter to carry some of the provisions. He came back with

two men, Alexandre Deymoniez and Jérôme Gizioz, who stated that they were both chasseurs, and intimately acquainted with the neighbourhood. But they demanded ten francs a day each, and one would not go without the other. The next morning (August 2nd) we tried to find some one else, but without success; chasseurs were evidently at a premium in Modane. We then tried to send our knapsacks over the Cenis, and by way of Turin to Aosta, intending to dispense with chasseur and porter too; but the woman at the diligence office informed us, that unless the guard would take charge of them, the knapsacks could not cross the frontier: they might indeed go by the *petite vitesse*; but that by this very appropriately named conveyance it was quite uncertain when they would reach their destination. Rather than wait to see the guard, and perhaps waste the whole day, we decided to give the men their ten francs a day each, and to make them carry good loads for the money.

At 12.15 we started for Aussois and the châteaux of Fournache. Instead of taking the Cenis road, and then ascending 'the almost interminable zigzags' Mr. Mathews mentions in his account of the Col de Rosu  , we went up a mule-path that mounts gradually by the slopes on the north side of the valley to the higher works of the now ruined fortress of l'Esseillon. The heat was almost tropical, and continued so for the next ten days; but as this was the result of an uninterrupted succession of brilliant days, we could scarcely complain of a little extra baking in the valleys, when we had almost perfect weather for the mountains.

We reached the little inn at Aussois at 2.15, had the nearest approach to a dinner that the limited resources of the house could produce, and at 4.15 left again for the châteaux. We soon began to suspect that our chasseurs had scarcely so intimate a knowledge of the district as they had wished us to give them credit for. Soon after leaving Aussois, they led us up through a large pine-forest, and then up steep grass-slopes to the east, until at last we arrived at some châteaux; but they were those of Grasse Combe, and not Fournache. Upon enquiry, we found that we were too high, and not far enough to the north; and as it was quite evident that these châteaux were not conveniently placed for our ascent the next day, we walked on, crossed a lateral ridge, and then descended a couple of hundred feet to our destination.

Fournache consists of some dozen châteaux, scattered over a large alp, about 1,500 feet above the Val d'Aussois, or Val du Fond, and at the entrance of the upland valley leading to the

Dent Parassée; its position in regard to which is correctly given on the large Sardinian map, sheet 43; but the mountain mass of the Dent Parassée is entirely incorrect—in fact, unrecognisable.

We left Fournache at 3.40 a.m. on the 3rd of August, and crossing the pastures, ascended in a north-eastwardly direction, by the side of a stream and on the left of a high knoll, to the upper part of the valley. The place was a wild cirque or amphitheatre, partly occupied by two or three small glaciers from the avalanches of the Dent Parassée, but principally by débris and moraines, old and new, some of considerable height. In the north-east corner rose the Dent Parassée itself, with tremendous precipices towards the valley, and huge projecting buttresses that bristled with rocky teeth. Above were two towers of rock, each appearing to terminate a great spur, and to be connected by a curtain of snow that rose to a sharp ridge above. At first I thought that the higher and more distant tower was the real summit of the mountain. Rowsell differed from me, and the telescope showed that he was right, and that in fact both towers were only buttresses, behind which the snow arête continued to rise to some higher point beyond. The ridge to our right was a branch from one of the main spurs of the mountain. In it there was a col of no great height, leading probably in the direction of Thermignon. It would have been easy enough to ascend this, and we might perhaps have reached the main spur above; but this was so serrated and broken in parts, that we doubted whether it would prove practicable; and it was evidently longer than the western spur, of which the ridge to our left was a prolongation. In this, also, there was a col, though higher and more difficult of access than that opposite. Deymoniez and Gizioz had recommended the direct ascent of the rocks to our left, then to work along the summit of the ridge, and so gain the western end of the snow arête. But fortunately we had not taken their advice, which must have been given in ignorance of the existence of any depression or col. We continued the ascent on the left side of the cirque up to a small glacier, then turned to the left, crossed the ice-slope that fed the glacier, and finally, by a steep couloir, reached the col at 7 a.m.

I had been led to expect that we should find ourselves somewhere at the head of the névé of the Glacier de Vanoise. Mr. Mathews' advice had been, to try and find a pass over the Dent Parassée to the Col de Vanoise, and so reach Entre deux Eaux. I was not a little surprised, therefore, at finding that although we certainly stood above a large basin filled with névé, the direction of the glacier, instead of flowing north towards the Col

de Vanoise, was almost north-east at first and then east, while on the other side was a splendid glacier-covered ridge with three mountains certainly above 10,000 feet, and which entirely separated us from the Glacier de Vanoise. Our pass, which we afterwards decided to name the Col de l'Arpont, does not lead to the head of the glacier, but to the corner formed by the junction of a western spur of the Dent Parassée with a ridge which passes round the head of the glacier, and then rises to form the glacier-covered ridge already mentioned. The Sardinian map is as indistinct in this as in other glacial districts: but certainly the glaciers above Fournache are greatly exaggerated in size, and quite unrecognisable. The Dent Parassée, the highest mountain in this part of the Maurienne, is not marked at all; nor is there any glacier-covered ridge such as we saw. It is true there is a mass of glacier drawn with dabs of rock *à discrétion*, and these we did not see. But I had placed much more reliance on the small map called 'Topographie de Roche Chevière et de ses Environs,' in the 'Opérations Géodésiques et Astronomiques,' by the Austrian and Piedmontese Engineers in 1821, to which my attention was directed by Mr. Mathews. This is beautifully executed, and in most parts, I believe, correct; but I cannot say as much for it with regard to the glaciers north of the Dent Parassée. The mountain itself is marked; but the névé of the Glacier de Vanoise is placed close against it, and the separating ridge is altogether omitted. Our chasseurs had never heard of the large ice-field below us; but we afterwards found that it was known to the inhabitants of the Val de la Leisse as the Glacier de l'Arpont—a name that is given on the Sardinian map to a much smaller glacier, only the lower end of which corresponds with our glacier in position.

On the top of the col, the wind was so strong and keen that we were forced to return a few steps to get under some rocks for shelter. Here we breakfasted, or rather went through the uncomfortable ceremony of trying to eat when you don't want food, and when every morsel almost chokes you. The knapsack is unpacked, and the tempting viands are spread before you; the said tempting viands consisting of very dry, tough mutton, drier bread, and hard-boiled eggs, to be washed down with thin wine more or less sour. Fortunately, it was the latter in our case; but then a wonderful bottle (with which we were experimenting), a compound of macintosh and string, imparted a delicate india-rubber flavour to the wine, which was scarcely grateful to men fresh from England. It is only fair to add, that this bottle (very similar in appearance to the game-bag

carried by monsieur when he goes to *la chasse* of little birds) was copied from one invented by Mr. George, and when seasoned was a most useful affair: it would hold six bottles of wine, and avoided all the risk and weight of glass. All ate something from a stern sense of duty; and as we expected to have a tough but not a long climb (having given up all hopes of making a pass the same day to the Glacier de Vanoise), we determined to leave the knapsacks and the greater part of the provisions on the col, so as to have as little to carry as possible.

At 8 a.m. we left the col, and girding up our loins, prepared for the attack. The western spur of the mountain rose steeply above us—too steeply to be ascended in front; so we performed a manœuvre, as well known to mountaineers as to soldiers—that of turning his flank. To accomplish this, we crossed the col, and, without descending, reached a rapid slope of débris on the northern side of the spur—this was covered with ice below—and finally descended to the Glacier de l'Arpont. We then came to a series of buttresses with intervening couloirs, partly filled with ice, and partly with broken rocks; but we decided to ascend by these if possible, to gain the desired ridge. Some of the couloirs proved rather difficult, and several steps had to be cut in queer places; but by crossing some, ascending others, and occasionally going up a buttress for the sake of variety, we got on. The buttresses would indeed have been preferable, had they consisted of sound rock, instead of some of the most rotten I have ever seen. Débris had to be cleared from every ledge and foothold, while many a tempting rock-handle broke away at the touch, and sent down a shower of stones for those below to dodge. Favret's 'Prenez garde en bas!' or my 'Look out, you fellows!' was generally succeeded by phrases more or less expressive, from which I gathered that moving stones had come in contact with human shins.

At last, by dint of scrambling, struggling, and slipping, we managed to reach the top of the ridge, whence we looked down on Fournache, Aussois, and the greater part of our morning's work. It was not so difficult to get along here, as the ridge, although broken, did not rise rapidly. Further on it made a turn to the right, and went up towards the nearer of the two towers seen from below. Beyond we could see nothing but parts of a long and very steep ice-slope, sweeping from the top of the upper arête down to the glacier. I believe that as each of us came in sight of this, he halted involuntarily, and relieved his feelings by a prolonged whistle. We knew that such a slope would probably have an ice cornice for its crest, and if long, meant much step-cutting. However, there was still something

to do before we could get to it, and a nearer survey might show that it was neither so long nor so difficult as it appeared from here. So on we went up the rocks until our ridge terminated at the edge of the ice-slope. To avoid this, and to reach the arête above, we turned sharply to the right up a steep ledge of rock, so narrow in some parts that there was only just space for us to ascend between the precipice overlooking Fournache on our right, and a bank of ice rising 30 to 50 feet above us—the edge of the great ice-slope, in fact—on our left. Reaching the arête, we turned to the east again, our original direction; passed the rock tower, now considerably below us; and then there were no more rocks to do—nothing between us and the summit, which now came in view, but a long thin edge of ice, curling over in places to the south, and forming an exquisitely fringed cornice. A portion of the south side of this was the curtain seen from above Fournache, while to the north the great ice-slope went down to feed the Glacier de l'Arpont. 'But what is that pile of rock over there, nearly on a level with us, just under the summit?' asked some one. 'Why, confound it! it is a stone man—a regular, well-developed cairn. But who can have had the impudence to come up and rob us of the honours of a first ascent?' Then Gizioz, who had before asserted that the mountain had never been attempted, suddenly woke up, and remembered that some nine or ten years previously, or it might be longer, two chasseurs of Modane had been employed by a colonel of engineers to ascend the Dent Parassée, and build a signal. They had made several attempts, but he had never heard that they had succeeded in reaching the summit. We thought it strange that they had known nothing about this ascent either at Aussois or Fournache, but this was accounted for afterwards. Here was a 'sell;' but we would go and have a look at the stone man, at all events.

From this point our progress was very slow: we cut steps along the top of the northern ice-slope, in the worst parts some 4 or 5 feet below the cornice. The ice was so hard, that it took several blows of the axe to make a single step; but Favret stuck to his work well, and, for more than an hour, would not allow anyone to relieve him. He is a remarkably strong fellow, and his steps are some of the best I have ever seen; indeed, it would be almost impossible to slip from them; they are just the right distance apart, and hold the foot well. In some few places we were able to get on the top of the ridge; and then the work was easier, though the style of walking was decidedly à la Blondin. We halted for a minute or two only, at a little pile of rock that cropped out of the ice about 30 feet below

the summit. This, I believe, was where a short northern spur branched out, that confined the ice-slope lower down, and formed its eastern bank.

We now turned to the SE. ; and some fifty steps up a snow-ridge, placed us on the highest point at 12.20 p.m. This was rather singularly formed. The ridge was very narrow, and fell away rapidly to the SE. ; so that there was only room on the top for one at a time, the others holding the rope below to prevent him from falling over, or from carrying away the top of the mountain bodily. Though the air was perfectly clear and the sun shone brilliantly, the wind was rather cold, and blew in sharp gusts, so that a very hasty survey was all that we could get. However, as we leant over, we had the SE. arête below us ; and there was the stone man on a ledge some 200 feet down, while, from its position, we were quite satisfied that it marked the highest point reached by those who erected it. The wind was so strong and keen that it was as much as I could do to take readings of my aneroid and thermometer, and get a general idea of the formation of our mountain ; while Rowsell took the bearings of some of the Pennine giants with a prismatic compass. The Dent Parassée is not a mountain of what Mr. Stephen calls the writing-desk form, with a slope on one side and a precipice on the other. It is, as its name implies, a true peak, with three main spurs radiating to the west, south-east, and north-east. Of these, I believe the west spur will be found to afford the only practicable route to the summit. That to the north-east is much shorter than the others, running down steeply to the Glacier de l'Arpont, which grinds away its lower portion. The south-east spur, by which, as I suppose, the previous ascent had been attempted, was longer, and went down in the direction of Thermignon.

Besides the wind and absence of proper sitting accommodation, there were other inducements to cause us to hasten our descent. There was the uncertainty as to what difficulties the Glacier de l'Arpont might present, and where we might find a *châlet* for our night's quarters ; also a hankering after the provision-knapsack and wine-bottle below, which we had not calculated on leaving for so long a time. At 1 p.m. we commenced the descent, and almost without halting returned by our old footsteps down the arête, and then by the rocks to the col. This we safely reached at 3.15 p.m., or in little more than half the time the ascent had taken, and sat down to a dinner considerably more successful than our breakfast had been. Leaving the col, we had first to descend a short slope of *débris* ; but this soon changed into an ice-slope, the surface of which was in a rotten,

half-melting condition. To save time, we tried to get down without cutting steps; and this was easy enough for those who had axes to hold on by; but Gizioz, who had a miserable apology for an alpenstock, twice lost his footing, the second time losing his bâton too, and bringing down Cuthbert after him. Rowsell, however, the next on the rope, fortunately held them up by driving his axe well in, getting at the same time a firm foothold against a large stone. Had it not been for this timely check, we might all have rolled down the remaining two or three hundred feet, over a surface of ice in which numerous stones were half imbedded. Not being at all desirous of trying the effect, we cut steps down to the bergschrund, from the upper edge of which a good jump took us on to the smooth surface of the great snow-basin at the head of the Glacier de l'Arpont.

We had examined the glacier well from above, and had decided that the left side was the proper course, to avoid the more crevassed portions. As a good deal of time had been lost on the slope below the col, we set off at a trotting pace,—but had not gone more than half a mile, when Favret went clean through the surface, and disappeared in the neatest manner possible. I halted instantly, of course, and held on with my axe; but the rope cut through the snow, and let Favret down very gently another three or four feet. Perhaps this may account for the very slight strain on my belt, which I scarcely felt. Rowsell was at my side in a moment—Cuthbert keeping the rope well strained behind—and, together, we pulled Favret up, till the point of his axe, and then the top of his head, appeared. The poor fellow, being in an unpleasant state of suspension, was unable to help himself at all, until we could make the chasseurs, who were in mortal fright (to judge from their appearance), understand how to crawl along and reach out an axe to him. Then a heave all together, and he was dragged out safe and sound, and hauled ignominiously on his back. I crawled up afterwards, and looked into the hole he had made: he had been walking over an arch, the key-stone of which had given way under him, and the depth of the crevasse was considerable. However, we had with us 100 feet of the Club rope (that made of Italian hemp); and it was satisfactory to see that it bore so well a strain about as sudden as usually occurs on a glacier.

Further on, the glacier presented no unusual difficulties. It widened considerably after receiving confluent from the Dent Parassée and the mountains to the left, and was much broken up in parts. At 7.30 p. m. we left the glacier before it turned to the south-east, climbing the rocks at its side to reach some

high pastures. Here, seeing something higher up to the left that looked like a *châlet*, we sent a *chasseur* to explore. In half-an-hour he returned with the pleasant information that it was only a sheepfold, and deserted. The sun had now set, and it was rapidly getting dark: there was no track of any kind, so we went down almost due east towards the *Val de la Leisse*. Neither *Deymoniez* nor *Gizioz* knew where we were, or could tell us anything about the *châlets*; and the only visible light was miles away down in the valley. The ground became steep and broken, rank grass hiding many a nasty hole. At first it was a scramble, then a climb; and at 8.30 it became so dark, that we deemed further progress dangerous, and decided to halt for the night. *Favret*, ever active, went off and found some water close by; and I discovered, near at hand, a splendid series of caves under a great overhanging boulder. The smallest of these was perfect: it had a soft moss floor; and if you did not tumble out or knock your head against the roof, nothing better for a night's quarters could be desired. We made a capital supper off dry bread, chocolate, and the remainder of our wine eked out with a good deal of water. The night was deliciously warm at first; but I was very glad, nevertheless, that we had brought our *plaid*s, and with these we proceeded to make the best arrangements that experience and a natural love of comfort suggested. First, *Rowsell*, who was rather more tired than either *Cuthbert* or myself, was tucked up snugly in the single-bedded cave. The next suite of apartments consisted of two double-bedded rooms, paved with loose stones. *Cuthbert* and I occupied one of these, and the other was made over to the *chasseurs*. *Favret*, too good a fellow to care for his own comfort, must, I fear, have passed rather an unpleasant night. At first he appears to have taken *Rowsell*'s head for a piece of rock, and proceeded to make a pillow of it; but, curiously enough, *Rowsell* did not take the same view, and poor *Favret* had to look for another lair. *Cuthbert* and I were packed like sardines, head to tail; the floor of our chamber having a gentle inclination outwards. *Cuthbert*, who was outside, had been cunningly wedged up with large stones; but I passed the greater part of the night in vain struggles to retain my position on my back. Every now and then, as gentle sleep did

. . . weigh my eyelids down,  
And steep my senses in forgetfulness,

I was most ungently roused by rolling over and bringing my nose into smart contact with *Cuthbert*'s boots. Between 1 and 2 a.m. it was bitterly cold, and the first indications of dawn at

3.30 were most welcome. At 4, there was light enough for us to find our way down and look out for châteaux; so we gathered up our numbed bodies, shook ourselves by way of toilet, and departed. After half-an-hour's scramble down the rocks, just as we were beginning to forget our stiff joints and to remember our empty stomachs, we found a faint cattle-track. This led to a group of châteaux in a little green pasture called Combe de l'Enfer. The châteaux were tenanted by a head berger, his wife, family, and two or three herdsmen, who brought us a pail of delicious new milk, which was immediately absorbed. The principal châtlet had a very 'ancient and fish-like smell;' so we preferred to take our milk outside, and were then conducted to a large hay-shed which fortunately stood some yards away from the other buildings, and was half full of clean new hay. Shaking out a large truss, we threw ourselves on it, and the next six hours were passed in as deep a sleep as I ever enjoyed.

Our intention had been to try and find a route from the north side of the Dent Parassée over the great fields of névé which intervene between it and the Col de la Vanoise, so as to reach Entre deux Eaux in the Val de la Leisse. This we had been unable to do, partly from the time occupied in the ascent, partly from the unexpected glacier ridge right across our route. I have no doubt that this might be crossed, and am sorry now that we did not pass the night higher up the Glacier de l'Arpont, and then continue our intended route the next morning.

To return was not so easy: our provision-knapsack was almost empty; but one small loaf of bread remained, and there were six ravenous men to eat it. Ambition pointed back to our unfinished work; but hunger suggested Entre deux Eaux, and was considered to have much the best of the argument. The berger, a very decent old fellow, told us there was no occasion to descend into the Val de la Leisse in order to reach Entre deux Eaux, as a rough but more interesting path led from one pasture to another, high up above the valley.

For some distance beyond the Combe de l'Enfer, our path ascended rapidly as we passed round the eastern flank of the ridge N. of the Dent Parassée. We then came into an upland valley near the terminal moraine of a large glacier which some herdsmen told us was a part of the Glacier de l'Arpont: with this it can have no more connection than the upper glacier of Grindelwald has with the lower. The châteaux of Arpont are between the two glaciers; these have therefore, perhaps, an equal right to the name. The stream from the upper one is

called Revez on the map; and the large mountain above, the Pointe de Chasse Fôret.

Below, the river flowed in a narrow gorge; while on the opposite side there were some irregular peaks of no great height, one of them bearing the appropriate name of Le Grand Roc Noir. Passing another buttress, we came to a small tarn called Lac de Pelvoz, near a glacier of the same name, and soon after reached a large open space of marsh and pasture, La Côte de la Frè. The path now descended rapidly, the valley was reached, and we saw the châteaux of Entre deux Eaux on the opposite side of the torrent.

The great man of the district, the owner of numerous flocks and herds, is a veteran of the old Sardinian army. We had been advised to seek him out instead of going to the inn, and found him a fine old fellow, over six feet in height, and a thorough *ancien militaire*. He had seen a good deal of service under King Charles Albert, including the battle of Novara, and loved to talk of his old campaigning experiences, using plenty of strong expletives, after the manner of old troopers generally.

On Friday, the 5th, we left our kind but profane host at 3.30 a.m., and started up the Val de la Leisse. This is one of the most dreary in the Maurienne, closed in on either side by dark and barren cliffs, not sufficiently approaching each other to give the grandeur of a gorge or defile, and yet contiguous enough to shut out any view of the now sunlit peaks. The traces of a much-frequented pass in former times, when this was the principal connection between a wine-growing and a cheese-producing country, were constantly apparent. The path, in some parts still good, was often overgrown with stunted herbage, and sometimes completely obliterated by boulders and débris torn from the cliffs above. Through this scene of desolation we ascended gradually until the snow-crest of the Grande Motte, whose conquest was the principal object of our day's work, rose above the dark precipices on the north side of the valley. As soon as the glacier looked practicable, we crossed the moraine, and, bearing to the left, made for the lowest of a series of broad snow-slopes which swept upwards in graceful curves, contracting to a sharp point above. It was 6.35 a.m. when a convenient spot was found, well provided with glacier tables of various sizes, some of which were like large mushrooms and made capital seats. A second breakfast was speedily despatched, and followed by the usual pipe, while the mountain underwent careful examination. There was apparently no difficulty whatever; it looked almost too easy; first a slope, then a plateau just to take breath before

you attempted the next slope, and so on to the top, the delicate point of snow, which we threatened to flatten presently.

We roped and were off again at 7.25, the snow being in first-rate order, the crevasses large and few in number; our course, therefore, was tolerably direct, and our progress proportionately rapid. On one of the plateaux we halted for a few minutes to look down into one of those huge rents in the ice, such as frequently occur in large fields of *névé*. At each end, and under its upper margin, were grottos fringed with icicles, the pale blue and white of those outside forming an exquisite contrast to the deeper colouring of the inner recesses. Such fairy cells as these are very different from the sloppy, miry caves, exhibited at so much a head, at the lower end of a glacier. Dame Nature very properly reserves her choicest beauties for those who take some trouble to go and look for them. Let the lazy folk, who now pooh-pooh mountaineering, and think high mountains are only made to improve the view from an hotel window, get good ropes and strong ash alpenstocks as soon as possible, and seek some alpine friend to introduce them to the ice-world. If one visit does not render them supremely grateful, they will deserve to spend the remainder of their days in Holland, where, as a native once boasted, the highest mountain is about eight feet below the level of the sea.

As we approached the *bergschrund*, it became necessary to bear to the left towards the main eastern *arête*, the final slope in front being too steep for ascent. The lower *bergschrund* was easily passed, and the greater portion of the last slope ascended by zigzags, when we found further progress cut off by a queer little crevasse, which seemed to have no business at all up there, and was certainly very much in the way. It was one of the undecided sort, which commence anywhere and terminate nowhere; yet cross it we must, somehow, to gain the *arête* a few feet above. Favret, who had been leading all the way up, soon decided the matter by springing up, burying the point of his axe in the snow above, and then hauling himself on to the top of the ridge, the rest of the party scrambling after him with the help of the rope.

We had gained the *arête* at exactly the right spot, some 20 feet above the precipices which rise from the *Val de la Leisse*, and near the foot of the snow-crest seen from that valley. A little lower down the ridge would have been more difficult, as pointed rocks broke its continuity in many parts. And now the real summit of the mountain comes in view, very different in form to the fine point seen from our breakfasting-place on the

glacier, which turns out to be only the end of a long thin ridge rising gradually to the west.

The slope, as we ascended diagonally, was perfectly easy ; a few steps were cut here and there, some caution being necessary out of the respect to the precipices below, towards which a slip might prove awkward. At 10.20 we were as near the summit as we thought it prudent to go. By creeping up cautiously, we could just look over it one at a time ; but the end of the cornice leant over to the north-west, and looked altogether too frail a structure to stand upon : its principal support was apparently a large icicle. It was not, therefore, the sort of top that you can knock off and pocket, to exhibit afterwards to your friends as a proof of your prowess. A little way down, the arête did not curl over ; the slope under this was therefore chosen as the place for a halt. But hard snow inclined at an angle of  $40^{\circ}$  cannot be considered, even by the most imaginative, as a luxurious seat.

While we were engaged in taking down the readings of aneroid and thermometer, Favret amused himself by cutting out a large notch in the ridge. To reach this, I tried to rise from my seat, but found myself fixed to the slope like Theseus to his rock in Tartarus ; though the separation was scarcely so painful in my case, as it was a portion of the seat that came away with me. The view from Favret's look-out was very fine. The first object upon which the eye rested was the Pourri, a glorious cluster of peaks at least five miles away to the north ; though, in this bright clear atmosphere, it did not appear to be a quarter of the distance.

A steep slope beneath us, so steep that it was wonderful the snow rested on it, terminated in a large spread of glacier, separated from that by which we had ascended by a northern spur of the Grande Motte ; while portions of the valleys of Prémou, Pesey, and of that containing the Lac de Tignes, were seen beyond. To our right we looked across the main valley of Tignes to the great chain running southward from the Sassièrè. In this were many friends whose acquaintance I had made the previous year from the Grand Apparei ; but this peak itself was concealed by the higher summit of the Ste. Hélène. We entertained some thoughts of trying the latter, though the rocks on this side appeared as steep and inaccessible as the ice-slope on the other. Earlier in the season, when there would probably be more snow on the north side, I think this might be easier ; and the mountain would certainly repay the trouble of an attempt.

Returning cautiously down the slope to the point where the

arête was crossed, we completed the descent by a series of glissades, wherever this exciting amusement was practicable, and by running down the softer and more level parts of the glacier to our halting-place amongst the tables, where we arrived, out of breath, at 11.48 a.m., in little over an hour from the top.

There are few mountains of equal elevation so easy to ascend as the Grande Motte. The slope near the summit is the only part requiring any particular caution, and this is neither steep nor long. The distance from any châlet is perhaps a drawback, as a certain amount of uninteresting climbing has to be accomplished before the glacier is reached. When the Graians become fashionable, as they certainly will be some day, when large Hotel Companies (Limited) have taken possession of the valleys, and processions of mule-mounted tourists daily cross the now unfrequented passes, the Grande Motte will become as popular as the Cima de Jazi now is, and no one, with his mountaineering instincts properly developed, will think of crossing the Col de la Leisse without allowing the four or five hours necessary for this scramble.

On reaching Tignes, our first care was to seek out the inn kept by Constant Arnaud, described in Mr. Ball's Guide, as rather less extortionate than the other. To our dismay, we learnt that it no longer existed, and were forced to trust ourselves to the tender mercies of Florentin Revial, at the Auberge de St. Roch. This worthy thoroughly deserves the bad character Mr. Mathews has given him. There was an upper room in the house, with two beds in it, a shade cleaner than the 'den' below; but the food has not improved in any respect. We had to wait two long hours for dinner; and then the soup was simply gruel flavoured with tallow, and the trout, though fine fish, were quite spoiled by the quantity of bad grease in which they had been fried. The following is an exact copy of the bill presented to us the next morning:—

| Notte de Monsieur les anglais. |             |
|--------------------------------|-------------|
| vin 2 litre . . . . .          | 3'00        |
| pain . . . . .                 | 1'00        |
| homillette . . . . .           | 3'00        |
| thruite . . . . .              | 12'50       |
| Dejeuno . . . . .              | 5'00        |
| chambre . . . . .              | 6'00        |
|                                | <hr/> 30'50 |

I have not given my aneroid readings, as the instrument is a most unsatisfactory one. I had it carefully tested the day I left London, and again on my return; but, after making every allowance for the considerable index error, my readings are all

too low, and consequently make the mountains appear too high. The height of the Dent Parassée given by Von Welden is 12,137 English feet. My reading, corrected and compared with an almost simultaneous observation by M. Carrel at Aosta, gives as a result 12,409 feet. The Grande Motte has been estimated at 11,500 feet; my observation makes it 12,268 feet. But in this case I believe the estimate to be too low, and that the real height is nearer 11,900 feet.

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THE MOMING PASS. By A. W. MOORE. Read before the Alpine Club, on June 6, 1865.

ON Saturday the 16th July, 1864, Almer and I crossed the Zmeiden Pass from Gruben in the Turtman-thal to Zinal, where we were engaged to meet Mr. Winkworth, for the purpose of trying a pass to Zermatt, over the Moming and Schallenberg Glaciers.\* The Zmeiden Pass is tolerably well known, and my only object in alluding to it, is to recommend anyone who may cross it to follow our example, and make a detour of about half-an-hour from the col, in order to climb a rocky point immediately to the north of it, which, in addition to the Fletschhorn and Mischabel ranges, and a large part of the Oberland, commands a view of the peaks and glaciers at the heads of the valleys of Turtman, Anniviers, and Erin, superior probably to that from the loftier, but more distant, Bella Tola.

On arriving at Zinal, I found myself in solitary possession of the little inn, Winkworth, as it afterwards appeared, having been taken ill at Zermatt, and consequently prevented from keeping his appointment. On Sunday morning, however, to my infinite satisfaction, I was joined by Mr. Whympfer and Michel Croz, fresh from a series of successful expeditions in the chain of Mont Blanc, and was thus relieved from the unpleasant necessity of attacking the proposed pass alone. Mr. Ball, in 1859, first suggested the possibility of effecting a passage between Zinal and Zermatt over the Moming Glacier; but, strange to say, no one took up the idea, and the long ridge connecting the Weisshorn and Rothhorn remained unscaled and untried. Of the probabilities of success in such an attempt, we could get no

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\* On sheet 23 of the Federal map, the name 'Hohlicht' is given to the glacier hitherto known as the 'Schallenberg,' but I have preferred adhering to the old and familiar name.