

3. THE COL DU SONADON FROM ST. PIERRE TO THE TOP OF THE COL, WITH THE COL DE LA MAISON BLANCHE.

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SUBSEQUENT to the opening out of the Col de la Valpeline, other intermediate links of the "High Level" route from Chamounix to Zermatt were supplied by the passages of Cols now described. It remained, however, to force a passage between St. Pierre, or Orsières, and Chermontane to the south of the Graffeneire, by the Glacier du Mont Durand, and the route would then be complete.

Accordingly, on the afternoon of Monday, the 5th August, 1861, Mr. W. Mathews and I walked from St. Pierre up to the Great St. Bernard, in order to compare our barometer with the one at the Hospice, so that with that test, another made a couple of days previously at the observatory at Geneva, and a subsequent one to be taken at Turin, a tolerably safe basis for calculations might be obtained.

We returned to St. Pierre late in the evening, and at 3.45 A.M. on the following morning left its "*Hôtel du Déjeuner de Napoleon,*" charitably hoping that the hostelry had afforded for the consular repast better specimens of Egyptian flesh-pots than it had furnished us. We were accompanied by our two guides, Jean Baptiste Croz and Michel Croz, of Chamounix, two capital icemen, and worthy fellows. Our object was to ascend, by the Col de la Maison Blanche, to the snow-basin forming the head of the Corbassière glacier. To the south of this

basin, and south-west of the Graffeneire, lay apparently a snow Col, which Mr. Mathews, in his ascent of the Graffeneire in 1857, had conceived would connect the Corbassière either with the Mont Durand glacier and Chermontane, or with the valley of Ollomont. If the former, it would constitute the wanting link in the "High Level" route; and therefore its investigation had now an additional interest. If the latter, it would give us, instead of the hackneyed and uninteresting track by the St. Bernard, a new mode of access to Aosta.

Climbing the slopes behind the village, we passed, on our right, a picturesque gorge, whence the torrent of the Valsorey or Vassorey issues in a considerable fall, and soon afterwards reached the upper level of the valley. At the expiration of an hour and a half we gained a point where the valley turned south-east, whilst a tributary stream rushed down the slopes from the north-east. A little beyond the bifurcation is the last châlet. We went north-east, up the side of the tributary stream, and, ascending steeply, at 6.25 A.M. halted for twenty-five minutes for the second breakfast, and obtained, to the west, a glorious view of Mont Blanc and his attendant aiguilles, and, to the south, one equally fine of the Vêlan's snowy summit.

Rocks, interspersed with small couloirs and snow-slopes, occasionally requiring the use of the axe, succeeded; and at 9.15 A.M. we reached the top of the crags, and a quarter of an hour later the snow Col de la Maison Blanche itself. The barometer was immediately set up, protected from the sun by a plaid stretched over a couple of alpenstocks, and at 10 A.M. was carefully observed. The height of the mercurial column, compared with the corresponding observations at Turin, Geneva, and St. Bernard, gives the following results, the calculations

having been made by the tables of Delcros and Guyot, based on the formula of Laplace :—

Turin . . .	11,226 feet
Geneva . . .	11,193
St. Bernard . . .	11,218
Mean . . .	11,212

Southwards from the basin a snow-slope stretched up to the depression under the Graffeneire, which Mr. Mathews had supposed would afford a pass to Chermontane or Ollomont. Fifty minutes took us up the slope, when, to our great disappointment, we found that there was no practicable passage on its further or south side; in fact, that the Col was a myth altogether. The scene was peculiar. A steep ice-slope fell away from our feet to a secondary glacier below. This slope continued in a semicircle to the east, sweeping round a kind of bay under the Graffeneire, and forming a huge crater, its sides lined with precipitous ice-slopes, furrowed with the passage of débris to the glacier filling the basin below. It was obvious that no communication forwards in this direction existed, and that it would be no use cutting our way down; for the rocky ridge forming the further side of the semicircle was an effectual barrier to progress under the Graffeneire, and descending the glacier would lead us more in the direction of the Valsorey and Vélán than either of Chermontane or Ollomont.

Disappointing as this was, in necessitating our return to St. Pierre, yet the excursion had neither been without its use, in establishing the fact that there is no connection between the glacier of Corbassière and either the Durand or Ollomont, nor without an interest, in disclosing around us so magnificent a scene. Westwards stretched the whole chain of Mont Blanc. To the south, on either side of the Vélán, were the singular peak of the Grivola

and the vast snow-slopes of the Ruitor, whose nearer acquaintance we were soon after to make; whilst towards Dauphiné rose a curious mountain, with its top cleft in twain, so as to resemble a pair of wings. The Glacier du Valsorey ran up, eastwards of the Vélán, to a tempting looking Col in the direction of St. Rémy or Etroubles; but, as the further side of it had not been examined, it was impossible to judge whether it was practicable to force a passage in that direction. Facing round, the huge mass of the Graffeneire towered up close above us on the north-east, the slopes of its lower part torn into magnificent snow-cliffs; whilst due north stretched the great basin of the Corbassière glacier, with the peak of the Grand Combin, or Combin de Corbassière, rising in front, and concealing the Petit Combin. This basin on the west elongated into two bays,—the one partially inclosed by the slopes of the Maison Blanche, and the other leading to the Glacier de Bouveire, and the passage effected in that direction to Alève by M. Studer. It appeared to us that the point which we now occupied was about 500 feet above the Maison Blanche. This would give it a height of about 11,712 feet.

After a fifty minutes' halt, we left at noon, and glissaded down the slopes to the Maison Blanche again. Mr. Mathews seemed so delighted to renew his acquaintance with the scene of his explorations in former years, that he skidded down with all his wonted agility. From the Maison Blanche we rapidly descended the rocks and couloirs to our halting-place of the morning, which we reached at 2.30 P.M. Here we made a vigorous attack upon the now useless provisions, got under weigh again at 3.40 P.M., and gained our former quarters at the "*Dé-jéûner*" at St. Pierre, at 5.30 P.M.,—the latter part of the walk being in rain. The resources of the establishment

for an evening meal proved so meagre, even in these enlightened days, that we fully understood why Napoleon had had enough of the inn in his morning refection, and had passed on to smoke his pipe with the jolly brethren of St. Bernard.

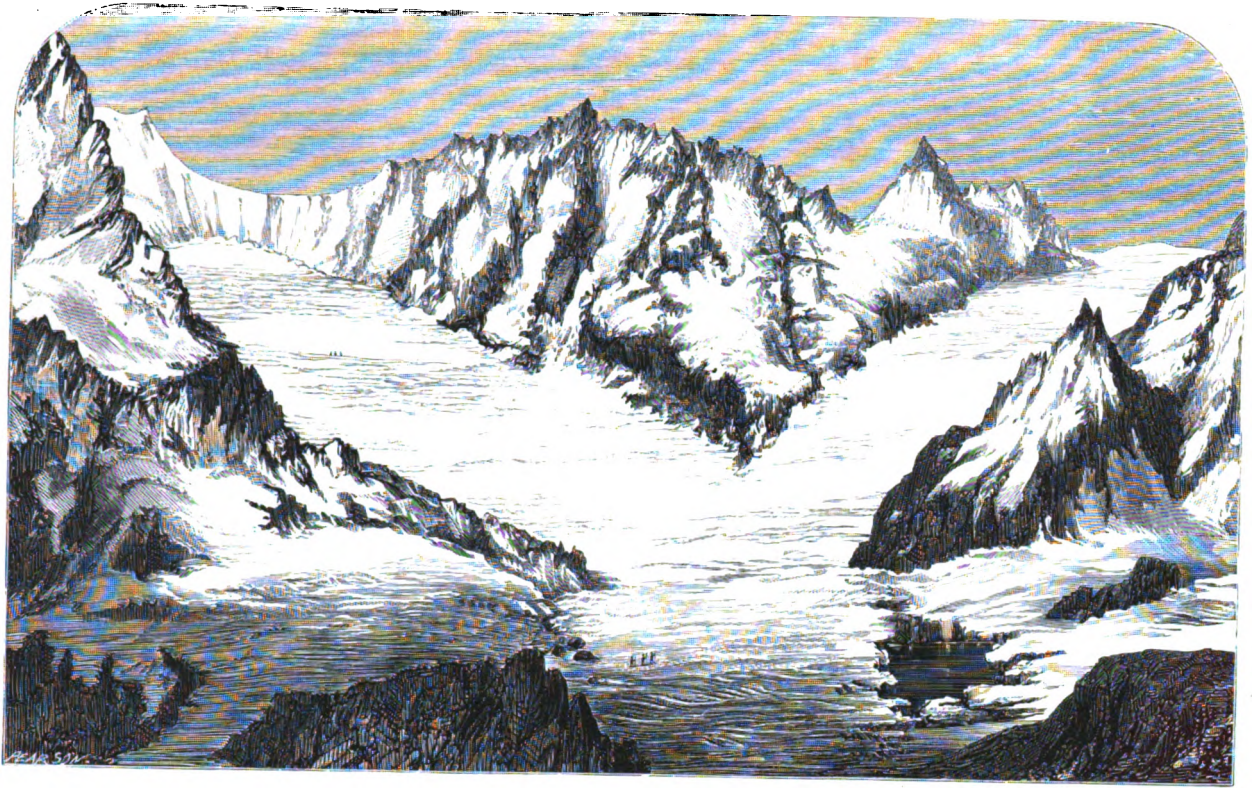
In the evening, Mr. Mathews feeling unwell, it was decided he should go quietly over the St. Bernard next day to Aosta, whilst I should take the two men, and endeavour to force a passage, under the Graffeneire, on to the Glacier du Mont Durand, and thence, by the châlet of By, to Ollomont and Aosta,—ascertaining, when on the Glacier du Mont Durand, whether it was feasible to traverse it down to Chermontane, and so complete the “High Level” route.

Accordingly, at 4.30 next morning (August 7th), I started with the two Croz', though a short night between two *grandes courses* is rather poor preparation for exploring a series of unknown Alpine passes; but it was important to try and complete the route. As far as the bifurcation before mentioned, which we reached at 5.40 A.M., our line of march was the same as that of the preceding day. From this point, instead of turning off towards the Maison Blanche, we now continued along the Valsorey torrent, and in ten minutes more passed the last châlet. Ten minutes further brought us to the foot of a rock jutting out into the valley, and apparently cutting off further progress. A passage over it, however, was effected in fifteen minutes, by means of a track cut up its face by the herdsmen. We emerged from the top into the upper reach of the valley, which we followed for half an hour, high above the Valsorey glacier.

At 6.45 A.M. we reached a point north-east of the little glacier lake of La Gouille, which nestles under the precipices of the Vêlan, on the further side of the Valsorey gla-

cier, and at its junction with another glacier, called Tzeudey on the Federal sheet. Here we halted for a few minutes to reconnoitre. The structure of the Valsorey glacier was well defined, and at its lower part were some small glacier tables. Looking a little to the east of the lake, the eye rested on the depression, under the east shoulder of the Vélan, and at the head of the Valsorey glacier, which we had, when on the Maison Blanche the previous day, supposed to be a Col, over which a passage in the direction of St. Rémy or Etroubles might possibly be made, if the further side of it should be practicable. Its north side, however, on which we were now looking, appeared much broken up. North-eastwards from it towards the Graffeneire, stretched a serrated line of black precipices, seamed with small couloirs and ice-slopes. Under the west side of this ridge flowed along the Valsorey glacier towards us; whilst in the opposite direction came to meet it, from the Graffeneire and the Col which we hoped to make, the Glacier du Sonadon, very dirty in its lower part, and bearing a large lateral moraine.

We were almost at the bifurcation of the two glaciers, and it was clear that, if any communication with the Durand glacier and Chermontane was to be effected, it must be in the direction of the Sonadon glacier, and by a kind of depression in the ridge, which we could see at a great height beyond, under the shoulder of the Graffeneire. But the lower part of the Sonadon glacier was cut off from its upper portion by a vast ice-fall; it would therefore be necessary to scale, almost to a level with the Col, the precipices running down from the Graffeneire, and bordering the glacier on its north-western side, and then drop down on to the glacier, and work up it and the névé beyond to the Col.



THE COL DE SONADON.

Away, therefore, we started up the mountain steeps, across an old moraine, and then up rocks, interspersed with the usual snow and ice-slopes. After some time occupied in this amusement, we came to the conclusion that the second breakfast was a necessary prelude to further conquest; so at 8.10 A.M. we sat down to feed by the side of a stream rushing over the rocks from the snow above. As we did so, Mont Blanc wished us good morning and success by taking off his night-cap of mist, and standing out, with his attendant aiguilles, in unsullied splendour. It was late in the day to get up; but perhaps the hoary veteran had been the preceding day much bored by tourists visiting him, up the well-marked, chicken-bone-and-sandwich-paper-strewn route from Chamounix.

Already young avalanches were beginning to disengage themselves from their parent snows on the eastern ridge, and on the Vélán opposite us. The halt lasted half an hour, and at 8.45 A.M. we were again breasting the rocks, which we found in some parts very steep. At one point we had to clamber, for a considerable distance, up a kind of waterfall, which did not tend to keep us dry. Beyond this we passed up a couloir, which seemed to have been chosen, with most praiseworthy pertinacity by falling rocks, as the course by which, when tired of dignified solitude and elevated quiescence, they seek a lower level and society of less pretension. I had sent Jean forwards to reconnoitre, and as he dislodged a perfect shower of rocks and stones, for the most part large enough to give us no further trouble in making new passes, Michel and I were put to divers straits, much ingenuity, and unwonted agility, in dodging the lively missiles. Animated by this hostile fire, we worked up the couloir, and emerging higher up at a gap in the ridge, found a shale-bank of

easy slope, down which we quickly shot to the Sonadon glacier below.

It was now 9.40 A.M., and from that time up to 11.10 A.M. we were rapidly pushing up the glacier and the névé above leading to the Col. Throughout the day we had walked fast, in order to have more time for investigating the unknown ground on the further side. We passed under some superb seracs, which, lower down, formed a kind of corridor, ending in two enormous pillars, entrance gates to an avenue fit for giants to traverse. Some of the crevasses through and around which we wound were very imposing, especially one which exhibited a vast crater, or circular grotto, from the roof of which depended icicles, like bundles of spears, bayonets, and other arms of war. Perhaps it was the armoury in which were stored the colossal weapons of the Titanic race. The whole shimmered with that wondrous ethereal blue light so often remarked by Alpine travellers.

There was, however, no difficulty whatever. It was simply a steady grind, occasionally cutting with the axe a few steps up a slope, or making a wide detour to avoid crevasses or treacherous-looking snow. As we approached the Col showers of stones were continually falling from the rocks of the Graffeneire, which rose northwards, or to our left; but they did not reach far enough over the névé to cause us much disquietude. From these rocks the Col fell away in a broad plateau of snow, with a few flat stones in the centre of the depression, whilst on our right hand, or south, the before-mentioned ridge from the Vélán, assuming the name of "Aiguilles Vertes" as it approaches the Col, ended towards the east in a huge snow-hump, shaped like a saddle. Separated from this, and still further east, a line of black rocks, called the Tête de By, ran

down at right angles towards the Durand glacier, and over them, it was clear, lay our way towards the châteaux of By and Ollomont. The actual double peak of the Graffeneire was concealed by its off-shoots in the foreground; but a little to the west lay a secondary glacier, the base of which we had passed in ascending to the Col. This glacier came straight down towards us from the south-west spur of the Graffeneire, and it seemed to us, first, that immediately on the further side of the spur lay the ice-basin or crater which had the preceding day cut off our further progress, under the Graffeneire, from the mythical Col above the Maison Blanche, and, next, that we were now nearly as high as that Col.

This latter fact, coupled with a comparison with points of known altitude, induced us to fix the height of the Col which we had just effected at about 3500 metres, or 11,483 feet. Unfortunately, we had no means of determining the elevation exactly; for the previous day's jolting on the rocks had so disarranged the internal economy of our instrument, that it was suffering from the common disorder of bubbles, which the most energetic treatment had failed to remedy.

From our feet stretched away the Durand glacier in a graceful curve, at first east, and then, tending to the north of east, bounded on its northern side by the precipices of the Tour de Boussine, spurring out from the Graffeneire, whilst the saddle-backed snow-hummock, the Tête de By, and still lower the Mont Avril, flanked the southern edge. The glacier below the névé maintained an almost uniform inclination, except towards its lower end, where, from our elevation, we could see it was broken up and crevassed. Beyond, the eye rested on the slopes and châteaux of Chermontane, while further still stretched up the vast glacier

of Chermontane, or d'Otemma, between the bounding ranges of the Pic d'Otemma on the north, and the offshoots of Mont Gélé on the south. On the further or northern side of the Pic d'Otemma, the beautiful Breney glacier streamed down towards the foot of the Durand. In the far distance Monte Rosa herself was hid, but other parts of the chain were quite distinct.

The Durand glacier appeared perfectly practicable to Chermontane; and as the Col established a communication from it towards St. Pierre, it was now quite clear that the connecting link had been supplied, and that the "High-Level" route was complete. The Col thereupon received the name of the Col Durand; but, inasmuch as the subsequently published sheet of the Federal survey thus designates the Col on the east of the Dent Blanche, it has been considered better, in order to avoid confusion, to give to our Col the appellation of Sonadon, from the glacier of that name up which we had just forced a passage. Moreover, this designation is, perhaps, the more appropriate of the two, as previous observations had almost established the practicability of the lower part of the Durand glacier, whereas the Sonadon glacier had hitherto been a *mare incognitum*.

To prevent any doubt of the route being complete, and of the head of the Durand glacier being as passable as its foot, we resolved to descend the névé a little before turning off for By; for, though we could not yet tell with what difficulties we might meet in getting to By, yet the day was still young, and the establishment of the route too important to allow us to neglect the present chance of examining the head of the Durand.

After twenty-five minutes' halt on the Col, during which we drank to its perfect preservation in a sip from my

whisky-flask—an unwonted excess, which made Michel intensely jocose—at 11.35 A.M. we started down the névé, and found full confirmation of our speculation from the Col above, as to the practicability of the glacier. Mr. Hardy, who crossed the pass three weeks later, gives the following narrative of his excursion.