

4. THE COL DES JUMEAUX.

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AFTER the opening of the Col de Lys, I had frequently speculated on the possibility of making the corresponding pass from the Riffel to Gressoney, on the opposite or western side of the Lyskamm. I was therefore much interested at hearing from my friend, Mr. Tuckett, that he had ascended from the Riffel to the depression between the Lyskamm and the Twins, and that he concurred with me in the opinion that the descent upon the Italian side would be quite practicable. Mr. Tuckett had reached this spot on the 16th of July, 1860, in the course of an attempt to reach the summit of the Lyskamm by way of the western arête; but finding the arête very narrow, and the snow extremely insecure, he was obliged to return without accomplishing his object.

It was not until 1861 that an opportunity occurred of testing the accuracy of our conclusions. My friend, Mr. F. W. Jacomb, and myself had been making rather a long stay at Aosta, at the excellent hotel of Jean Tairraz, which had been our head-quarters for exploring some of the little-known and picturesque recesses of the Graians. We were bound to Turin and Monte Viso; but being anxious to make a diversion to Zermatt before journeying southwards, we resolved to attack the supposed pass. Mr. Tuckett, having established the practicability of the northern half of the excursion, it was clear that Gressoney

was the proper starting-point, especially as, in case of a successful passage, we had an easy return route by the St. Théodule.

On the evening of the 20th of August, we settled our accounts with Tairraz, and ordered a carriage to be ready on the morrow to take us to Chatillon,—Jacomb cruelly insisting on an early start, in order that we might have the cool of the morning for the enjoyment of the charming scenery of the Val d'Aosta. At 4.30 A.M. on Wednesday, the 21st, we had quitted Jean's hospitable roof, and in that dreamy, semi-conscious state which results from slumbers prematurely broken, were rolling out of Aosta, leaning lazily back in the carriage, with our two guides—Jean Baptiste Croz and Michel Croz, of Chamounix—sitting on the seat before us. Doubtless the spiritual nature of my companion, set free from the gross influence of the flesh, drank deeply of the beauty of the lovely valley; for in a few minutes he became quite insensible, and only recovered his consciousness as the carriage drove up to the door of the Hôtel du Palais Royal at Chatillon.

It was eight o'clock when we arrived, and we stayed an hour and a half for breakfast. Leaving a part of our baggage behind, but retaining a mercurial barometer by Casella, which I had already compared at Geneva and St. Bernard, and which I subsequently compared with the Academy instrument at Turin, we quitted Chatillon at 9.30, and walked down the high-road as far as St. Vincent, where we struck into the track which leads to the Col de Jou. It was pleasant walking enough while under the shade of the noble chestnuts which clothe the mountain-side; but when we got among the villages and open fields above, the heat was fearful, and diminished the pleasure with which, from time to time, we looked back upon the broad and fertile valley which lay stretching

many a league behind us, the winding Doire and white villages shining beneath the burning sun. At 12.20 we reached the summit level, which is covered with pine forest, intersected by open sweeps of lawn; and it was with no little satisfaction that we extended ourselves upon the softest of couches, under the refreshing shade.

Half an hour soon sped away, and we commenced the descent into the Val d'Ayas towards Brussone, one of the most picturesque villages on the Italian side of Monte Rosa. The principal auberge at that place is the now well-known Lion d'Or, said by Professor Forbes to have afforded but indifferent accommodation when he stayed at it in 1842; but I entertained so grateful a recollection of my reception there in 1859, that it required very little pressing to induce me to assent to the proposal that we should rest and take lunch before continuing our journey. We entered the inn at 1.30, and in less than half an hour were seated at table, with a bowl of soup before us and sundry savoury dishes. We were then tempted with all sorts of delicacies in the way of fritters, which were replaced by a pile of fruit. More than one bottle of wine having been consumed, and the hottest period of a cloudless day in a broiling Italian valley not tending to produce activity, it is scarcely surprising that it was 4 o'clock before we began to realise the fact that we were going that night to Gressoney. Now, however, not a moment was to be lost, and we tore ourselves away from the Lion d'Or. I recommend both it and its proprietor, Jean Alexandre Vuillermet, prince of *cuisiniers*, to the patronage of the members of the Alpine Club.

The ascent to the Col de Ranzola from the Val d'Ayas is rather tedious; but the view from the summit is amply repaying,—embracing the northern slopes of the Graians, and the Italian side of Mont Blanc. To see Monte Rosa,

which is not visible from the col itself, it is necessary either to descend towards the Val de Lys or to climb to the top of the Combetta, a grass-covered mountain to the south of the col, and rising some 700 or 800 feet above it,—an excursion of which the Rev. S. W. King has given a charming description in his “Italian Valleys of the Pennine Alps.” As we did not reach the col until 6.15, the Combetta was out of the question; but I delayed a quarter of an hour to take a barometer observation, which gives the following results:—

Compared with	Turin	7034	English feet
„	Geneva	7203	
„	St. Bernard	7134	
	Mean	7123	

Professor Forbes gives the height at 7136 feet, a very near coincidence with the St. Bernard determination.

We had not been descending many minutes before the Vincent Pyramid came suddenly into view, and then the whole chain as far as the Twins,—a glorious expanse of mingled snow and rock. The depression by which we proposed to effect the passage across the ridge was clearly visible,—the western arm of the Lys glacier, which led up to it, looking particularly difficult. There was, however, no time for anything but the most cursory examination. Quitting the path, we descended the extremely steep grass slopes by a series of glissades, an amusement in which our guides were more proficient than ourselves: they were soon out of sight in front, while we, missing the proper turn to Gressoney, arrived at the bottom of the valley some distance below the village. It was now very nearly dark, and no path to be discerned. We scrambled across the bed of a torrent strewn with great stones, and then happily came upon a foot-bridge over the Lys. The large lighted building on the opposite side was, I felt convinced,

the Pension Delapierre; we walked straight up to it, the conjecture was verified, and at 7.15 we stepped across the threshold. Our guides did not arrive till an hour later, having waited for us on the road, expecting to be overtaken.

The inn was full of Turinese, driven out of the city by the scorching heat which had prevailed for several months, and every bed-room was occupied. But Delapierre was equal to the occasion. He received us with the greatest cordiality, and had a large room in the roof, hitherto unfurnished, hastily fitted up for our accommodation. On entering the *salle* we found it crowded with visitors all seated at supper; among them several very good-looking ladies, evidently members of some of the wealthier families of the valley. They wore the picturesque costume of the Val de Lys, consisting of a skirt, a highly ornamented bodice, and white linen sleeves.

As we had nothing to do on the 22nd but to walk up to the highest châteaux, there was no necessity for starting until the afternoon, and I employed the welcome leisure of the morning in making the sketch which forms the vignette to this paper, and in considering the best route for our expedition. The principal feature in the views from the neighbourhood of Gressoney is the snowy mass of the Lyskamm which occupies the head of the valley, supported on this side by the great buttress ending in the Nase, and dividing the two branches of the Lys glacier. It is not easy to choose a point of view which commands the whole chain between the Vincent Pyramid and the Twins; but that which I selected, a few hundred yards westward of the river, very nearly does so. The snow-peak on the extreme right of the sketch is the Vincent Pyramid, and the mountain in the centre is the Lyskamm. The hollow between the two is probably a part

of the glacier a little to the south of the actual Col de Lys, or Grand Plateau. Immediately to the west of the Lyskamm lies apparently the col we wished to cross; but the actual point at which we made the passage is the next depression on the left. The summit of Castor is still more to the left, and is hidden by the mountain in the foreground. The western arm of the Lys glacier appearing very steep and broken, we agreed with our guides that the wisest course would be to climb up to the comparatively level snow-field which covers the ridge separating the Val d'Ayas from the Val de Lys, walk along it towards the base of the Jumeaux, and then select the easiest point for crossing the main chain.

The next steps to be taken were to prepare the commissariat, engage a porter to go with us at least half-way, and settle where we were to pass the night. At so good an hotel the first was a matter of no difficulty, and Delapierre having announced that we wanted assistance in carrying the provisions, two men presented themselves for selection. We chose the stronger looking of the two, and acceded to the request of the other that he might go with us *en amateur*. Our porters were of little use beyond the mere carrying of their burdens, as they had never been upon the ice, and proved remarkably ignorant of the topography of the upper part of the valley. Delapierre recommended us to sleep at the ch[^]alet of Cour de Lys, which is close to the end of the glacier, but we were anxious if possible to find some higher camping-place.

We quitted the hotel at 2.50 P.M., Delapierre, on wishing us *bon voyage*, adding to our stores, by way of present, a bottle of *vin blanc de Chambave* to drink the health of the new col. In the course of the afternoon we were discussing the feasibility of ascending the Lyskamm, which looked irresistibly tempting, when we saw before us

a single traveller with his guide walking in the opposite direction to ourselves. It proved to be my friend Mr. Nichols, who had come from Zermatt by way of the Théodule and Cimes Blanches, and who asked us if we had heard the news. On our replying in the negative, he said, "Tyndall has done the Weisshorn and has gone to try the Matterhorn, and Hardy and a large party have just been up the Lyskamm." The last-named mountain looked far less interesting now that its prestige was gone; but we were all the more anxious to make the new pass and join our friends in Zermatt. At 5.30 we reached the Cour de Lys, and, perceiving that there was no higher châlet in the direction we were going, resolved to make it our quarters for the night.

This châlet must be extensively patronised by excursionists to the Lys glacier, as it is furnished with the most effeminate luxury. It actually contains a bed and a deal table and benches, to say nothing of a stock of cooking and other utensils of superior quality and workmanship. While the guides were superintending a brew of hot chocolate and milk, I secured a barometer observation with the following results:—

Time, 6 P.M.	Turin	6511 English feet
	Geneva	6621
	St. Bernard	6582
	Mean	6571

Zumstein's determination is 6778 English feet, but it is probable that his observation was taken somewhat nearer to the glacier.

There was a good deal of cloud about in the evening, but by midnight it had disappeared, and when we left the châlet at 2.20 on the morning of the 23rd, we had a clear sky and a brilliant moon. Passing at once from the east to the west side of the Lys by a wooden foot-

bridge, we turned our faces northwards, and in a few minutes arrived at an ancient lateral moraine of the Lys glacier, now completely stranded and grass-grown. Just within it, however, was a moving moraine, with several blocks of prodigious size riding down upon it. We walked along the crest of the older belt of rocks, looking across the glacier to the Nase, and more distant outlines of the Hohelicht and Telschen, and watching the approach of dawn. At 4.20, the shadows cast by the moon had become very faint, and at 4.30 had entirely disappeared; at this time the sky between the Telschen and Hohelicht was light orange, and between the latter peak and the Vincent Pyramid a pale violet of the most exquisite loveliness. We followed the moraine until we had passed on our left the base of the Felikhorn and reached a ravine beyond it, which appeared to afford an easy means of climbing on to the snow plateau extending from that peak to the Jumeaux, and so enabling us to avoid the ice cascades of the western arm of the Lys glacier. We struck into the ravine, climbed the rocky slopes that enclose it, gained the plateau exactly at 6, and rested for breakfast.

At 7 we were off again, and the remainder of the ascent proved perfectly easy and entirely devoid of incident. Our route lay along the gently ascending snow-slope until we entered a broad corridor, with the snow-ridge separating us from the Val d'Ayas on our left. We walked along the corridor nearly to the foot of Castor, where it turns at right angles, and following the lead thus indicated were making for the head of the Lys glacier, when we came upon a steep slope on the left, leading up to a depression in the main ridge, and walled in on either side by vertical cliffs of snow, bristling with stupendous icicles. A crevasse circled round the top of the slope and ran down alongside the eastern snow-wall; but we descried a bridge,

cut our way up to it, and in a few minutes were looking on the Gorner glacier.

It was not without surprise that we discovered that we were upon the true col, the apparently lower level of the part of the chain nearer the Lyskamm, as seen from Gressoney, being merely an effect of perspective. During the ascent Jean Croz had been indulging a favourite propensity of predicting difficulties,—a bad habit in guides which ought always to be discouraged, and for which we were obliged to rebuke him. Refusing to place reliance on my unsupported assurance that the Glacier des Jumeaux was particularly easy, he went forward to pioneer the descent. We, on the other hand, knowing that the Twins were as yet unclimbed, had resolved to bag them both, and Michel was already at work with his axe cutting steps along the ridge. It was 9.45 when we gained the col; we left the porters to take care of themselves, and hastened forward after Michel. There was a strong north wind blowing, and it was bitterly cold,—circumstances which make walking along a knife-edge and poking one's toes carefully into foot-holes not the pleasantest of recreations. The way is short, however: we climb one peak, descend into a hollow, mount again, and finally, at 10.45, stand on the top of Castor, the highest point between the Lyskamm and the Matterhorn, fully convinced that we have at last both the Twins in our pockets.

The summit we have gained is bare of snow, and consists of mica schist, very rich in mica, and split up into a quantity of thin slate-like pieces. While Michel is engaged in the erection of a stone man we look round upon the prospect. Switzerland is quite clear, and the view not materially different from that afforded by Monte Rosa, which has been described so often. On the Italian side we look across to the Graians, no longer an unknown land,

and can distinguish the Ruitor, Mont Pourri, Grivola, Grand Paradis, Tour St. Pierre, and Punta Lavina. More to the left, with the Viso proudly preeminent, is the noble amphitheatre of the Cottian and Maritime Alps, circling round the plain of Piedmont, and blending into the distant Apennines east of Genoa, and we clearly discern the gap in the chain, over which lies the road to Nice by the Col di Tenda. The great plain itself is not the least interesting feature in the panorama: its towns and rivers are just visible, but very indistinct, and it is covered all over with small white clouds, similar in size and shape, and at equal distances asunder.

The barometer was now set up on the southern side of the peak, about twenty feet below the summit, so as to be sheltered from the wind. At 11 A.M. I carefully observed the height of the mercurial column, the detached thermometer at the same time indicating an air temperature of -1° Cent. The following are the results:—

Turin	13,857 English feet
Geneva	13,880
St. Bernard	13,836
Mean	13,857

Adding twenty feet to the mean, we get for the height of Castor by my barometrical determination 13,877 feet, a result very nearly identical with that obtained trigonometrically by M. Bétemps, who gives "Zwillinge, Sommité occidentale," 13,879 feet.* The barometer having been replaced in its case, we deposited two minimum thermometers in a hole in the southern face of the cairn and closed up the opening with a stone. The first was an Alpine minimum, marked A. C., No. 376, and the second a

* "Extrait de la Triangulation Fédérale exécutée en 1859, par Bétemps, Ingénieur Géographe."

thermometer with a Fahrenheit scale, and the spirit coloured pink. Mr. Casella had made me a present of the latter instrument when I left England, saying that he thought it would be less likely than the others to catch the bubble complaint. The two instruments at the time of deposit registered respectively 3° and 38° . It was now 11.30, and our hands being completely benumbed by handling the instruments, we retraced our steps along the arête, and regained the col at noon.

We found the porters exactly in the position in which we had left them two hours and a quarter before, and Jean Croz returned from his investigations. The latter, on being asked if he had discovered the difficulties he was in search of, replied that he had not, but that he had no doubt they would be met with lower down. The wind still continuing decidedly unpleasant, we descended into the crevasse, and entering a beautiful snow-grotto which afforded us complete shelter, unpacked the provision-knapsacks and turned our attention to dinner. Delapierre's *vin de Chambave* was promptly uncorked and pronounced admirable, and the health of the Twins and the new col, not forgetting that of the donor, were drunk with considerable enthusiasm.

I deeply regret to have to confess that, partly from laziness, partly from the inconvenience of the position, and partly from the dislike of again benumbing my fingers against the cold metal, I neglected to make a second observation with the barometer, so that I am unable to contribute any materials for determining the height of the col. Mr. Tuckett, as usual, supplies us with the required information, which he has kindly placed at my service.

In his expedition of July 16, 1860, he observed the barometer at the spot in question at 11.45 A.M.; the

mercurial column reduced to zero stood at 467·66 millim. and the air temperature was 7·5° Cent.

Comparison with Geneva, Aosta, and St. Bernard, give the following results :—

Geneva	13,580 English feet
Aosta	13,577
St. Bernard	13,393
Mean	13,517

Here, as is frequently the case, the altitude deduced from St. Bernard is less than that resulting from a comparison with lower stations, but the difference is unusually large, even for a time of day when we should expect it to be a maximum. Considering that it took us an hour to climb from the col to the summit of Castor, I estimated the difference in level at about 500 feet; if this be correct, the St. Bernard determination must be nearer the truth than the others, and we may in round numbers put the height of the col at 13,400 feet. The doubt introduced by the discrepancy makes it desirable that the observation should be repeated, and it is the more to be regretted that I neglected to do so myself.

Although Mr. Hardy had forestalled us on the Lyskamm, and we had consequently abandoned all idea of attempting it, we had none the less attentively scrutinised the western end of its Italian face. Our examination convinced us that there was a perfectly easy way to the summit from the head of the Lys glacier, a few hundred feet below the col, and that if Mr. Tuckett, instead of attempting to cut his way along the arête, had descended to that point before his final attack, his enterprise in all probability would have succeeded. It is not, however, likely that this route will ever become a favourite. If Gressoney be taken as the starting-point it necessitates an immense detour, unless, indeed, the direct ascent of the western arm of the Lys

glacier should prove easier than it looks. If, on the other hand, the expedition be undertaken from the Riffel, it involves descending the col on the upward journey, and what is much worse, ascending it in returning,—a waste of labour which would be extremely disagreeable.

At 12.45 we dismissed our porters and commenced the descent of the Glacier des Jumeaux, keeping on its eastern side under the Lyskamm, where it appeared but little broken. Glissade followed glissade in delightfully quick succession, and we thought a few minutes more would bring us without an obstacle down to the main stream of the Gorner, when our guides suddenly pulled up. On joining them we found ourselves on the edge of a cliff of névé about a hundred feet high, and a wilderness of seracs below us. However fond Jean might have been of prophesying difficulties, he was never backward in grappling with them when they arose, and after retracing our steps for a short distance, he and Michel diverged to the westward and tried to discover a lead. Eventually we had to cross the whole of the glacier from the foot of the Lyskamm to the Schwarzberg, and then double back again nearly to the point we started from, but on a lower level. This part of our journey was entirely among the seracs, which consist here of gigantic cubical blocks of stratified snow, and are, I think, the finest in the vicinity of Zermatt.

At 2.30 the difficulty was conquered and the Gorner glacier gained; and the exertion having given us a fresh appetite, we rested to consume the remainder of the provisions. In the course of our descent we had made a most unwelcome discovery. Having been firmly convinced that we had climbed both the Jumeaux, and assuming—although I ought to have known better—that the western summit was the higher one, it was with no little surprise that we saw the familiar form of Pollux gradually rising into view

westward of his taller brother, and still unclimbed. The fact is that, being only about the same height as the col, we had entirely overlooked it from the top of Castor, and what we had taken for it was only a small protuberance of Castor himself.

What is the exact relation which Pollux holds to his twin brother and the Schwarz Thor I am unable to say, and it requires further investigation to decide; but I believe he is quite invisible from the Val de Lys. I have, however, no hesitation in pointing out an inaccuracy in the map of Schlagintweit, who has placed Pollux where Castor ought to stand, and not given space enough between Castor and the top of the Lyskamm,—an error which unduly narrows the western arm of the Lys glacier as compared with the eastern one.*

At 3.15 we commenced the passage of the Gorner, and had not taken many paces before we arrived at one of the longitudinal canals which form part of the drainage system of this glacier. It was some ten feet deep, far too wide to jump, and the water rolling along it was a positive river. All at once our company became separated, Michel starting off down the glacier and Jean and Jacomb up it, trying to find a place where the stream was either bridged or narrow enough to leap with safety. Not liking to make a detour, and seeing a spot where the channel was wider and its banks somewhat lower than elsewhere, I jumped in and waded through, and Michel, having crossed farther down, he and I raced one another across the ice, a contest in which it is no disgrace to say that he had the advantage, as he is the fastest walker in Chamounix. Exactly at 4 I stepped upon the Riffelberg, whose soil I had last trodden on the way to the Col de Lys in 1859. At 5 I entered

* The 23rd sheet of the large Sardinian map, in which this part of the chain is depicted, is altogether beneath contempt.

the Riffel hotel, and a few minutes after the other half of the party came up. We left again at 6, and at 7.20 reached Zermatt, where I received a cordial greeting from a circle of Alpine friends.

The entire expedition thus occupied seventeen hours, including stoppages of four hours and a quarter, the passage from Cour de Lys to the Riffel having been effected in ten hours of actual walking. The excursion is an interesting one, both in itself and as completing the tour of the Lyskamm; but its charms are certainly inferior to those of the companion route by the Col de Lys. It only remains to give a name to the new pass; I propose to call it the Col des Jumeaux.

Two idle days at Zermatt sped pleasantly away. On the 26th we crossed the St. Théodule to Chatillon, drove on the same evening to Ivrea, and early the next morning arrived in Turin.