

## SIR JOHN HERSCHEL AND THE BREITHORN

BY CLAIRE ELIANE ENGEL

THERE is a tradition according to which the Breithorn was first climbed in 1813 by a completely unknown Frenchman, Henri Maynard<sup>1</sup> and later by Sir John Herschel. F. F. Tuckett incidentally mentioned the fact that Sir John Herschel had told him he had ascended the Breithorn from the Theodul in 1821; Tuckett had never heard of Maynard.<sup>2</sup> Lord Minto, who went up the mountain in 1830, called it *Monte Rosa* and said, it was the summit ascended in 1822 by Sir John Herschel.<sup>3</sup> His authority was either Sir John himself, or Joseph-Marie Couttet who had been the first guide of both parties. Coolidge accepted 1822 as the date of Herschel's climb.<sup>4</sup> According to Tuckett, no Zermatt guide had ever reached the summit before him, in June 1859.

Now it is obvious that there is some missing link in this story, and I endeavoured to find it. Thanks to the great kindness of the Rev. Sir John Herschel, the astronomer's grandson, I am able to give the complete story of the second ascent of the Breithorn by Sir John Herschel in 1821. His travel-diaries are kept in Slough Observatory House, the family seat, and his grandson allowed me to read them and to have his drawings photographed. I found a few more details in Sir John's letters to the Genevese astronomer Alfred Gautier which are kept in the Bibliothèque Publique et Universitaire in Geneva. The story of the Breithorn climb is related in the 1821 travel-diary. The first part, up to Herschel's coming to Como, is in Sir John's handwriting; the second is a later copy done by his son William James.

John Herschel was Sir William Herschel's son. He was born in 1792; he studied at Eton and Cambridge. In 1801, his father took him to Paris. Later, when he was 23, he trained him as an astronomer—in Cambridge, the young man had been reading law. His travel-diaries show that his French was quite fluent, colloquial and almost slangy.

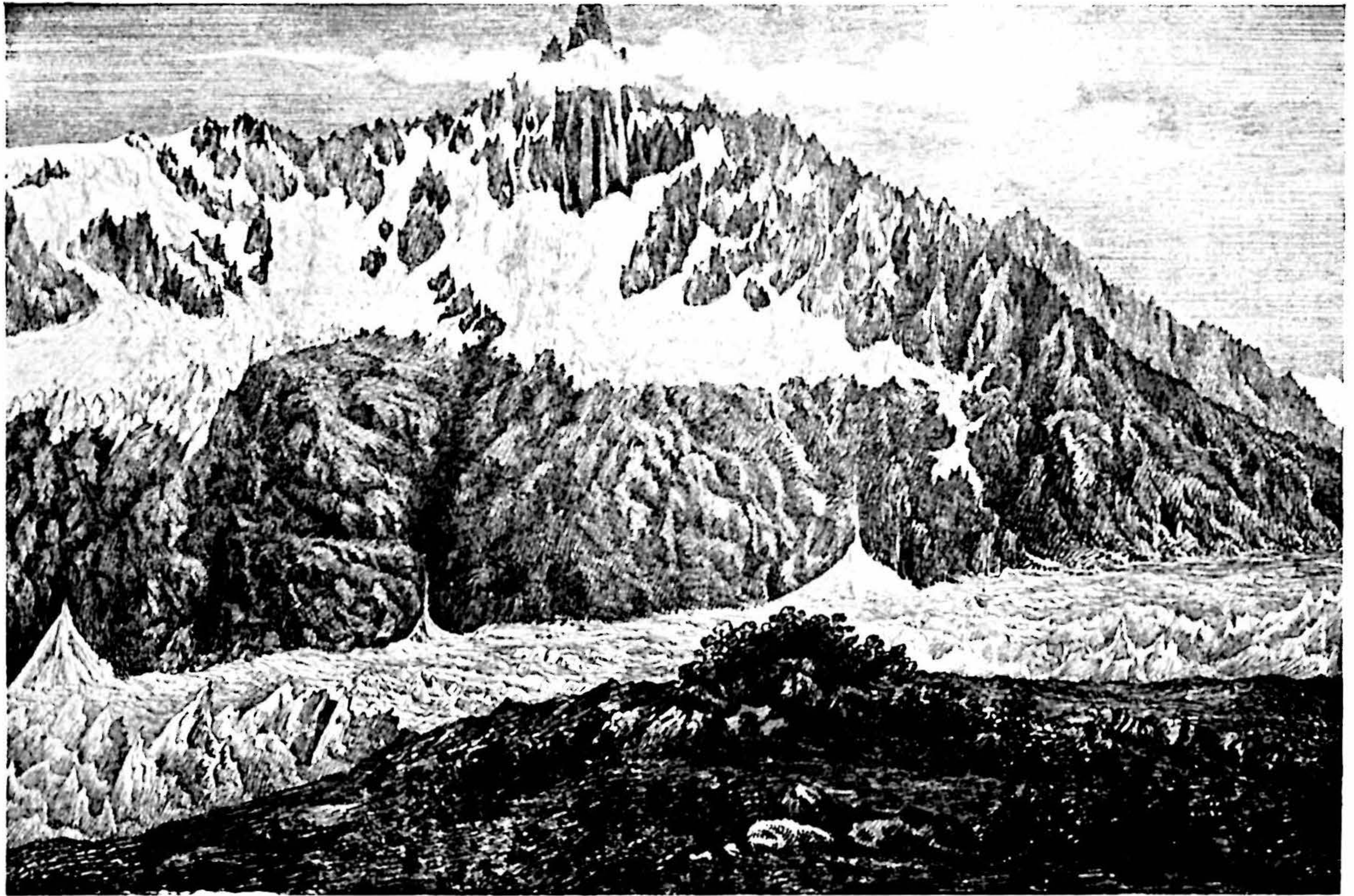
In 1821, John Herschel was travelling with his friend and fellow-astronomer Charles Babbage. They landed in France on July 21. After a few days in Paris, where they met Arago, Berthollet and Humboldt, they proceeded to Geneva which they reached on August 8. John Herschel was then 29 and was well known in Continental scientific circles. Accordingly, in Geneva he was met by most of the local scholars, Marc Auguste Pictet, Romilly, Alfred Gautier. Pictet had

<sup>1</sup> W. A. B. Coolidge, *The First Ascent of the Zermatt Breithorn*, *A.J.* 15. 112.

<sup>2</sup> P.P.G. II, 1862, *The Hunting-ground of Victor-Emmanuel*.

<sup>3</sup> *Zermat and the Breithorn in 1830*, *A.J.* 16, 231.

<sup>4</sup> In his edition of Forbes' *Travels Through the Alps*, p. 17.



*Drawing by Sir John Herschel]*

AIGUILLE DE DRU.

*[To face p. 298.*



*Drawing by Sir John Herschel]*

THE WEINHORN. VALLEY OF ST. NICHOLAS.

been H. B. de Saussure's pupil ; an Inspector General of the University under the French rule, he was a keen meteorologist, working for weeks in the Saint Bernard. Gautier, who was just one year younger than Herschel and had taken his degrees at the Sorbonne, was the leading Genevese astronomer. He had met the Herschels in England in 1819 or 1820. He called on John on August 13 and they had breakfast together. That very day, Herschel and Babbage left for Chamonix. Herschel was much impressed by the 'romantic character' of the landscape and he admired the beauty of the large waterfall near Sallanche, the Nant d'Arpenaz : 'All the mountain torrents are in their glory . . . The water, long before it reached the bottom, divided into the finest dust and in the act of separating assumed the most beautiful feathery shapes and seemed to hang suspended in the air.' One can't help remembering Shelley's description of the same waterfall, written five years earlier.

Herschel and Babbage slept in Sallanche and left in the morning for Chamonix in a *Char-de-côté*, the rough sketch of it is scrawled in the diary. The road kept going from 'one mauvais pas to another' in a strikingly beautiful landscape with 'exquisite foregrounds.' When leaving Servoz, they had a 'noble view of Mont Blanc.' Herschel noticed Eschen's monument near the Diosaz gorges and the ruins of the Château de St. Michel. When reaching the upper part of the valley, he descried Mont Blanc and what he called the 'Aiguille du Dromadaire.' The party crossed the Tacconnaz Glacier—an interesting deviation from the usual visit paid to the Bossons Glacier. Herschel was much impressed and thought of *Paradise Lost* : 'It is like Satan's passing through Chaos . . . Large and small, hard and soft, moist and dry, stone and ice, all jumbled together.' They reached Chamonix and put up at the Hôtel de Londres.

The next day, August 15, it was raining : the usual break of the weather by the middle of August. Yet Herschel went to the Flégère with two guides, Joseph-Marie Couttet and his brother-in-law. Couttet deserves a short notice ; he was to be the best-known Chamonix guide between Jacques Balmat and Auguste Balmat. He was born in 1792 in the village of Les Pélerins, and his father had been one of Saussure's guides. When he was twenty, he was called up and fought in the French army as a *chasseur à cheval*.<sup>5</sup> In 1815 he went back to his valley and became a guide. In 1818 he went up Mont Blanc for the first time with Count Matczeski ; two years later, he barely escaped being killed when several members of Dr. Hamel's party were swept into a crevasse by an avalanche. Couttet had two more accidents and yet kept climbing. He ascended Mont Blanc twice in 1819, first with J. van Ransselaer, and then with Undrell. He acted as first guide in many subsequent expeditions<sup>6</sup> and he eventually became Ruskin's

<sup>5</sup> Albert Smith, *The Story of Mont Blanc*.

<sup>6</sup> Clissold 1822 ; Jackson 1823 ; Charles Fellows 1823 ; Markham Sherwill 1825, John Auldjo 1827, Wilbraham 1830, Martin Barry 1836 ; Mme. d'Angeville 1843 ; Dr. Ordinaire, Woolley and Hunt 1846, J. D. Gardner 1850.

guide in 1844. He had not yet given up climbing, but he did not try to make a mountaineer of Ruskin; he saw at once that it was hopeless. Auldjo mentioned his 'intrepid courage,' Lord Minto his 'indomitable courage,' Markham Sherwill—in French—his 'courageuse persévérance et son goût pour la vie des montagnes.' Couttet was one of the few Chamonix men who travelled out of their valley; he went five times to Zermatt, the second time with Lord Minto, twice with Ruskin and lastly with Sir Robert Peel, the minister's son.<sup>7</sup> Ruskin took him all over Italy.

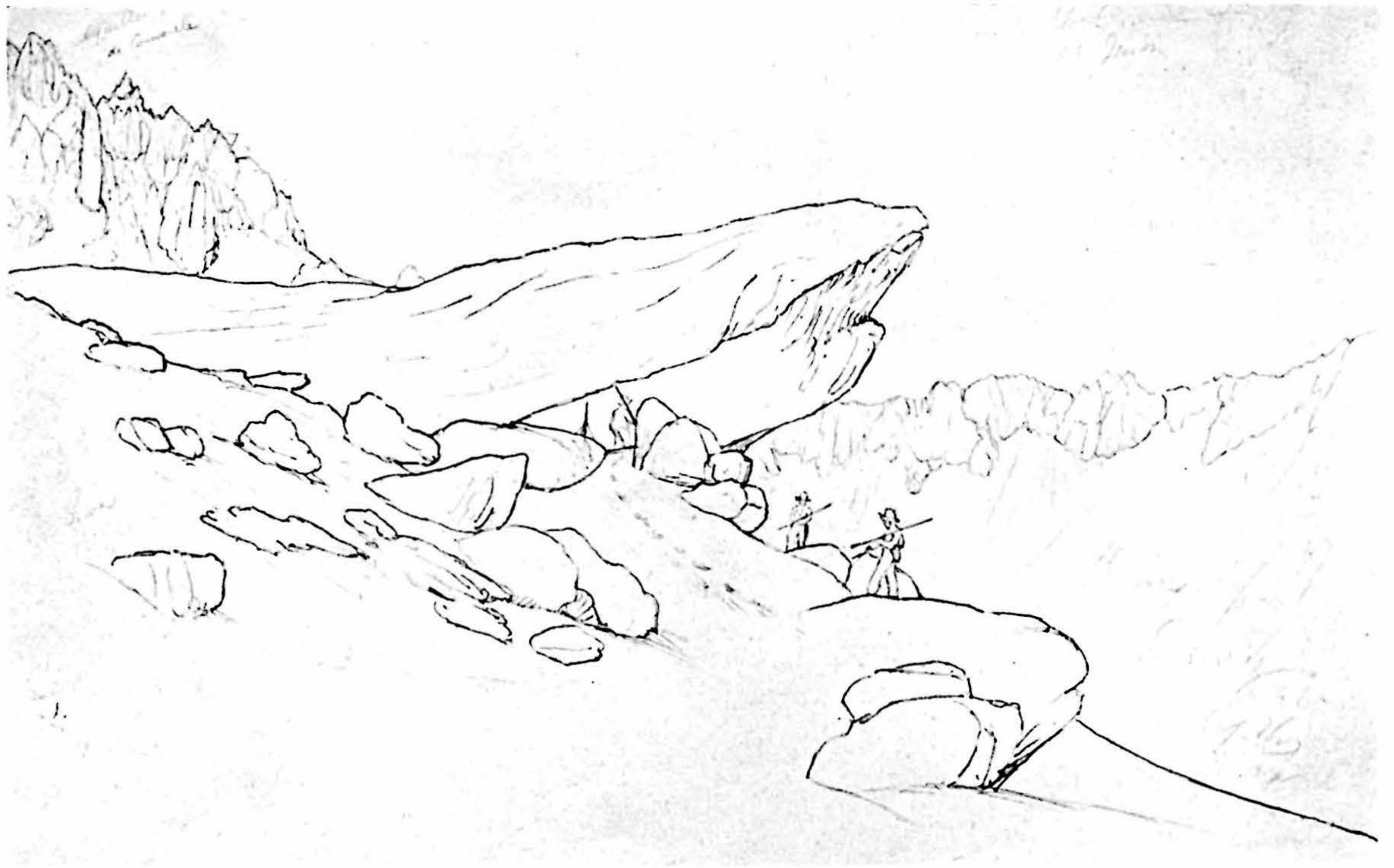
Herschel immediately liked him. While looking at 'a sublime spectacle, the Aiguille Verte and Aiguille du Dru shooting up like ghosts from the vapour stratum,' he planned an expedition to the Jardin de Talèfre with Couttet. They went back to Chamonix, collected blankets, food for two days, and left early in the afternoon of the 16th. The dilapidated hut known 'as if in mockery' as the Temple de la Nature was their shelter. Herschel went down on the glacier: 'Surface not far from formidable.' He was deeply impressed by the beauty of the three glaciers converging at L'Angle, by the tapering Aiguilles and he wondered whether the temperature was uniform through the whole depth of the glacier: 'The deep and lonely silence was only broken at intervals by the roar of the avalanches echoing like distant thunder from below and only a single sharp bell gave notice to the neighbourhood of a living thing. Far across the glacier at the foot of a black cliff shooting perpendicularly from it, affording the only shelter on that side, some solitary chamois hunter had made his lair and the fire he had kindled gleamed like a bright red star from the impenetrable gloom surrounding it, calling up a mixed train of ideas of desolation and comfort, or solitude and social intercourse.' Going up from the glacier proved rather hard. They spent the night in the stone hut.

On the morning of the 17th, the guides screwed nails into the soles of their shoes and they all left for Talèfre, noticing dead butterflies on the ice. The Jardin was buried under snow. Herschel made a drawing of the big boulder of the Couvercle and picked up crystals in the moraines. He wrote in his diary: 'The Courtes afford a specimen of the most difficult and dangerous climbing in the Alps. None but Chamois hunters by profession have any business there'; a rather surprising statement. Who, in 1821, had ever thought of ascending the Courtes? By nightfall, the party was back in Chamonix, having come down by the Chapeau.

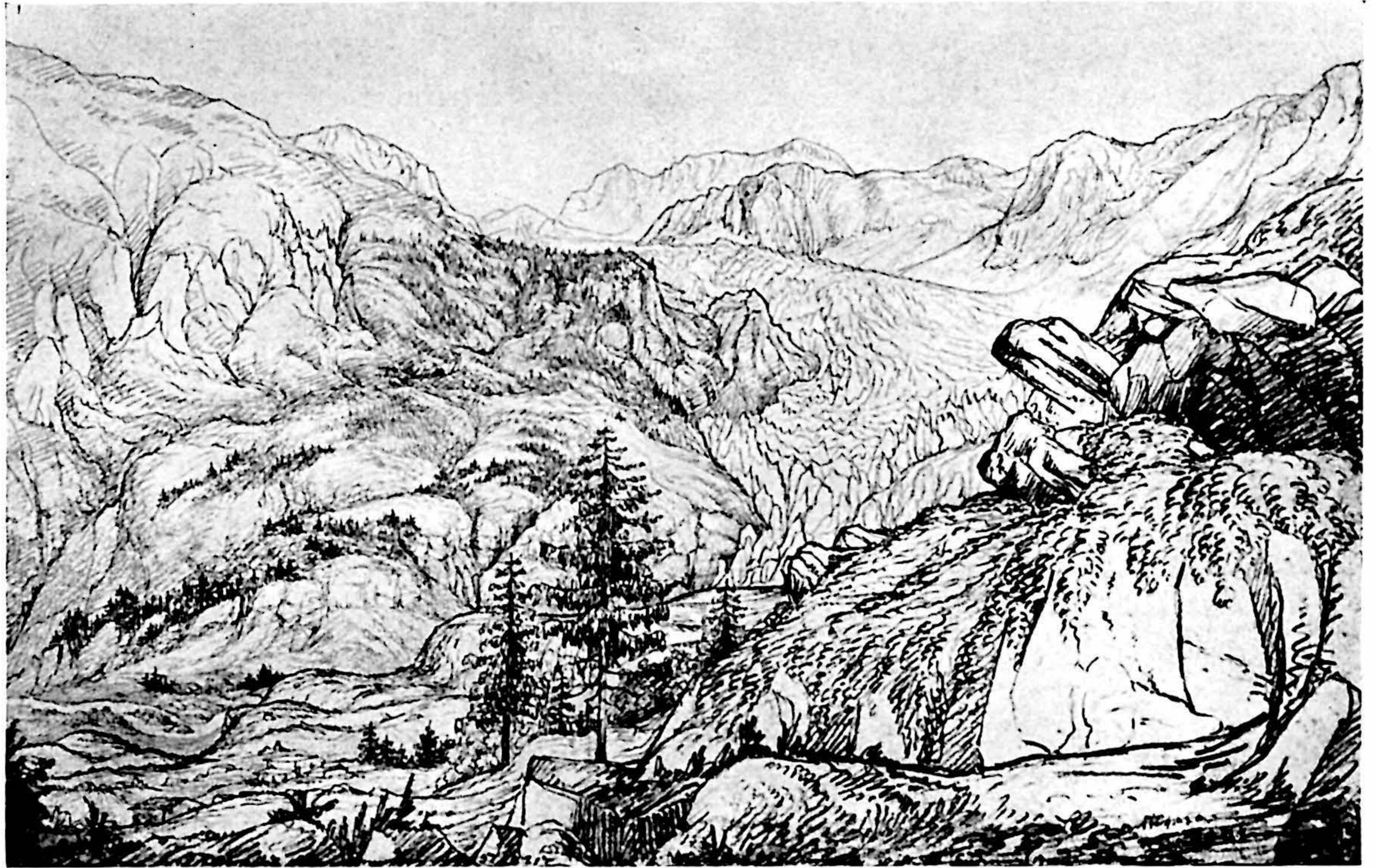
The next day, Herschel catalogued his geological specimens; he had found titanium near the Courtes and molybdenum at St. Martin. Then he went to visit Couttet at his chalet of Les Pélerins. The chalet still stands at the lower end of the village. The guide died there in 1872. 'Couttet is an ingenious fellow who turns his hand to everything,' including wood carving.

He told Herschel several stories about Mont Blanc. No one had

<sup>7</sup> 1851.



THE ' COUVERCLE ' A GRANITE BLOCK ABOVE THE JARDIN, MONT BLANC.  
(An original sketch by Sir John Herschel.)



' VALLEY OF ZERMATT WITH SUMMIT ASCENDED.'  
(An original sketch by Sir John Herschel.)

been up that year. The Hamel accident had taken place the year before and young Dornford, the Oxford student who had had a narrow escape when the avalanche overwhelmed the party, was Charles Babbage's cousin. 'Couttet who was one of (Hamel's) chief guides was dragged out black in the face and insensible: "Ma foi, j'ai dit à moi-même: c'est fini—je suis perdu—Voilà!"' He gave an identical account to Clissold and Markham Sherwill.

Herschel liked the man and before going back to Geneva, he made an appointment with him: Couttet was to meet him in Brig early in September to lead his party up to what he took for Monte Rosa. Then the two Englishmen left for Geneva where they arrived on the 20th.

They went next day to Bonneville, on their way to Chambéry, traversed the Mont Cenis, visited Turin, Milan, Como, and Lago Maggiore, and reached Brig on September 3. From that day on, the diary is far less detailed and is written in an almost telegraphic style.

In Brig, Herschel apparently met Couttet and collected the things he required for his climb: an ice-axe, a barometer and food. It seems rather extraordinary that a good barometer could be found in Brig at that time. On September 4, the party left Brig, passed Visp and entered the higher valley. 'Savage scenery of the Valley of St. Nicolas.' At Randa they noticed the remains of the huge landslide which had swept the place in 1818. By nightfall, they reached Zermatt and went to the house of the Curé Ignaz Gottsponen, who put them up. Everything has been said about the dirt of the place, and yet Herschel provides a few more details on the subject. On the 5th, the party, with the addition of a few local guides, left for Breuil: 'Matterhorn at end' (of the village, apparently). 'Eat bread and cheese, drank wine at the side of the chain—i.e. frontier to Breuil.' They reached the Italian village and looked for lodgings. They were eventually 'turned into a cow house, with some difficulty to prevent all the carbonari from being locked in with us.' The carbonari were in hiding after the crushing of the Piedmontese rebellion and they were probably waiting for an opportunity to escape into Switzerland over the Theodul.

On September 6, at 6.40 they left for the big climb. Owing to the outstanding interest of the following passage, I think it best just to copy Sir John Herschel's diary—the abbreviations are his, of course:

'Sept. 6, 1821—Thursday

6h. 40m. Attd. Therm. 43.3

23.846.

Detached 42.3

8h.  $\frac{3}{4}$ . Stopped to take sketch of the Mte Rosa. Sun vertical over the large pente de neige<sup>8</sup> in middle of the sketch on the mountn.

Rode on mule back up to the place where we supped last night arrived at 10h. 5m morning. 10h. 20 m. Barom. 20.3605

Att. therm. 46.2—Therm. in snow 32 $\frac{1}{3}$ .

<sup>8</sup> In French.



Magnificent view of Alps on Alps. Matterhorn to right, forming North extremity of a long ridge of snowy (peaks?) sharp as needles.

These are crossed at right angles at a great distance by another higher ridge among which the pic de Marbori<sup>9</sup> is prominent.

Superb sky indigo blue. 10h. 25 m. Therm. 45°—20.354.

1h. 30 m. Arrived at the amphitheatre of Monte Rosa and set up barometer in middle at max. of the plain. Att. therm. 46.0

1 h. 40. 19.084 1 h. 50 m. 42.0 19.0753

Summit of Monte Rosa arrived at 4½. Therm att. 46. 18.313

Matterhorn 3° 21' altitude

Traces of a white lapin<sup>10</sup>.

Att. 42.5 18.300 precise.

Dead and torpid bees and ephemeris on snow in descent. Descended and after a long fatiguing march accompanied with some danger in the steepest places arrived at the cross of Mont Cervin, here waited for mules. Sun setting. Waited till half an hour after sunset and then walked, the mules having arrived but demanded 21 frs + 15 frs. Walked. Moonlight over snow.

Arrived at Zermatt at 11¼. Gave Babbage some Madeira whey and some eggs and milk. Obsd. Barom. after 15' exposure. Time 12 h. 36'. Att. therm. 61, my bedroom. Bar. 24. 983 + corren of lower level. Detached out of window 47.5''

It is easy to imagine how the attempt at blackmail of the mule drivers exasperated Sir John at the end of a long day.

The next day, Herschel went over his notes in bed, got up at 11, paid off his guides 'drunken and stupid' and went back to the Theodul, with Couttet to check up his calculations. They had a fine view over Gressoney. Then follow a few rough notes: "Couttet declares it is impossible to go from one to the two others (peaks) except by a man who chooses to set his life on the hazard of a die. Taeschhorn (high peak)—Schreckhorn illuminated by sun's last rays.' They reached Zermatt again in moonlight. The 'two other peaks' are probably two points of the real Monte Rosa.

Then follow a few uncomplimentary remarks about the natives with whom Herschel came in contact. Thanks to Count de Suzannet, I have been able to identify some of them.

'Franz Graunick—Joseph Brantschen—Robbed at Taesch—Stupid conduct of Curé Perren. Lucas and (?) one a drunken guide, the other a swindling mule driver. Grave(n) of Zermatt an ignorant and in-subordinate guide—The younger Graven rather better. The younger Brantsch of Zermatt is the best of a very bad set of guides but is a rogue in grain and cheated his comrades. The elder (?) Biner seems a respectable man but old and sick.'

<sup>9</sup> Alternative reading suggested by Sir John Herschel (the author's grandson): *Pic de Chambori*. It does not make much sense. Not having climbed the Breithorn, I can't supply an explanation and would welcome one.

<sup>10</sup> In French.

Joseph Brantschen was born in 1809. In 1839 he was Desor's guide, and a very indifferent guide too; he is the one who told the Neuchâtel scientists that the Weissthor could not be crossed except on a pilgrimage. 'Franz Graunick' is probably Franz-Josef Kronig, born in 1770. One of the two Gravens was possibly Peter Josef, born in 1790, grandfather of Alexander Graven, the Editor's guide.

During the last night spent in Gottsponen's house, a lively incident took place. The fleas had proved too much for Couttet and the following conversation with his employer took place, in French:

'Ah, Couttet, c'est vous qui vous levez ?'

'Oui, Monsieur, je vais donner de l'eau à mon mulet.'

'Couttet, il me semble qu'il y a beaucoup de puces ici, et très peu de sommeil.'

'Oui, Monsieur. J'ai tenu compte de plusieurs millions !'

Accordingly, he went to sleep with his mule. As to Herschel, he did not sleep at all as bells began to ring at midnight 'like a thousand coppersmiths at work on a boiler.' 'Last comment: 'Swiss kitchen—horror of !!'

The party left in the morning, went down the Rhône valley and left Couttet at Martigny, to travel back to Chamonix. In the village, they met Lord Minto, who probably saw the guide, heard his account of the climb, and conceived his first idea of the 1830 expedition. Herschel sped his guide on his way to Savoy by asking him: 'Couttet, voulez-vous aller au diable ?'

'Non, Monsieur, mais avec vous j'irai à mi-chemin.'

The astronomer went home through Berne, Neuchâtel and Paris. He was back in Slough on October 10.

How did Herschel realise that he had climbed the wrong summit? When on the top, he never doubted that he was on Monte Rosa and he had not the faintest idea what the other peaks—those Couttet thought so dangerous to climb—might be. And yet a few doubts assailed him a little later. On February 2, 1822, he wrote to Alfred Gautier the Genevese astronomer:

'From the altitude of the barometer at Geneva on September 6, [which Pictet] was so good as to communicate, the height of the W. Summit of Monte Rosa comes out by my observation 13,750 ft. or thereabout. The observations are perfectly unexceptionable but the elevation of the mountain being so much inferior to what is usually ascribed, almost make me doubt the identity of the peak we climbed; though five guides from different sides of the frontier agreed in asserting it, and by tracing our course on the best maps, the spot coincides with that laid down as the summit of Monte Rosa. One summit only of the same ridge appeared higher and that not above 2 or 300 ft., though the Matterhorn at two leagues rose at least 1,000 or 1,500 ft. above us, and this I should suspect to be the loftiest peak of the Southern chain of the Alps.'<sup>11</sup>

<sup>11</sup> Gautier Papers, Bibliothèque Publique et Universitaire Geneva.

13,750 ft. is approximately 4,191 m., a much lower altitude than that of Monte Rosa—4,638 m. for the Dufourspitze. The Breithorn is only 4,171 m. and Herschel's measurement closely corresponded with that height. The truth dawned slowly on him. When he spoke to Tuckett about his climb, he had come to the right conclusion that he had made a mistake and that his mountain was really the Breithorn.