

## DR. HAMEL, IMPASSIVE SCIENTIST

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THE early adventurers on Mont Blanc were not inevitably mountaineers, since for most of them this was their one incursion above the snowline. However successful they may have been in other walks of life, their very names might have been forgotten save for this fleeting notoriety, and the individual emerges only through encounter with the mountain. One of these is Dr. Joseph Hamel, who passes as a sinister shadow through the annals of the great white mountain, forever linked with the first fatal accident.

He was born in 1788 at Sarepta, on the lower Volga, in Russia.<sup>1</sup> In 1807 he obtained notice through the invention of an electrical machine, and, after finishing his studies in 1813, was named by the Emperor Alexander I member of the Academy of Medicine. Soon afterward he visited England, travelling over the country and becoming familiar with it. He was appointed to accompany the Grand Duke Nicholas (later Emperor) during his tour of England in 1815, and also conducted the Grand Duke Michael in 1818. His reputation for learning was established. Intensely interested in the physiology of heights and depths, he corresponded for a number of years with Prof. Marc-Auguste Pictet (1752-1825), of Geneva.

Although Mont Blanc pioneers such as Beaufoy, Montgolfier and Albert Smith also went aloft in balloons, Dr. Hamel enters remembered time from the floor of the sea. In 1819 he sent Pictet his observations<sup>2</sup> made in a new type of diving chamber in which he descended with two workmen to a depth of thirty feet at Howth, near Dublin, during the construction of a stone jetty for shipping between England and Ireland. He was surprised by the amount of light that filtered down, enabling him to write; he noted pressure in his ears, which he would later remark on the Dôme du Goûter, and concluded that the diving-bell might cure deafness caused by the occlusion of the Eustachian tubes.

In the next year, animated by De Saussure's books, he visited Pictet at Geneva and secured scientific instruments which he intended to use on Mont Blanc. It is almost certain that his mission was by command of the Czar.<sup>3</sup> In 1819 Joseph Zumstein had ascended the peak of Monte Rosa that bears his name and proclaimed that the highest point probably overtopped Mont Blanc. So Geneva scientists were eager to assist Hamel in restoring the pre-eminence of the Chamonix monarch.

<sup>1</sup> Obituary notice in the *Gentleman's Magazine*, December 1862, p. 788. This might be one basis for the alleged Russian discovery of electricity, the invention of the locomotive, and possibly of Mont Blanc.

<sup>2</sup> *Lettre du Dr. Hamel au Prof. Pictet, sur la cloche des plongeurs*; *Bibliothèque Universelle* (Geneva), March 1820, p. 230.

<sup>3</sup> A. Dumas, *Impressions de Voyage* (edit. 1851), I, p. 145.

His first attempt at an ascent was from St. Gervais, as the proprietor of the newly erected inn at Bellevue advertised that this could be accomplished in a single day without bivouac. Starting on August 3 (De Saussure's anniversary) and sleeping out at the loftier position of Pierre Ronde (Tête Rousse), he and two local curés and their guides gained the Dôme du Goûter on the following morning, where they were seen through a telescope by Maria Edgeworth and Prof. Pictet from the Flégère.<sup>4</sup> Pictet had visited the Edgeworth family in England in 1802 and was now conducting them on their excursion from Geneva to Chamonix. But extreme fatigue caused Hamel to return, convinced that only the strongest guides could gain the summit and return in one day by this route.

Dr. Hamel went back to Geneva, there coming in contact with the Chevalier Bourdet de la Nièvre, who had independently, and also from reading De Saussure, decided upon an ascent of Mont Blanc. M. Selligie, an expert mechanic who had invented a barometer, was also included. They agreed to join forces, or perhaps as Bourdet says, Hamel asked to join them. Selligie was to be in charge of experimental physics, Hamel of physiology, and Bourdet of geology, mineralogy and botany. Two young Englishmen, Joseph Dornford and Gilbert Henderson, students at Oxford, were added to the party, and departure was set for August 16. Bourdet, however, was prevented from starting until next day, when he left accompanied by M. Castan, a Geneva pharmacist.

When Bourdet reached the Lac de Chêde a Chamonix guide informed him that the others had already departed from the Priory with twelve guides. Bourdet and Castan secured three additional guides and spent the night of the 18th at Pierre-à-l'Échelle. The following day being stormy they went down to the Chalet de la Para in driving rain. At seven in the evening two guides came down from the Grands Mulets for provisions, the main party remaining above.

On the 20th, weather having improved, Bourdet's group started up at 5.00 A.M., and at 9.00, having passed most of the crevasses, they were surprised to meet Selligie and two guides descending. He reported that at 2.00 A.M. the sky appeared clearer and Hamel insisted on departure. The summit of Mont Blanc was uncovered, but snow had fallen and the guides wished to delay, although making ready. Selligie, ill and filled with misgivings after two wet nights, decided to descend. The guides consulted irresolutely after this, only confirming Hamel in his intention to proceed. Henderson demanded a decisive answer, abetted by the doctor. The guides remained silent until their chief, Joseph-Marie Couttet, arose and said: *Eh bien, partons nous, n'y laisserons pas tous notre peau.* They left at 6.00 o'clock with eight guides.

Selligie and his guides continued down, but Bourdet and Castan and their guides, after the encounter on the glacier, proceeded to the

<sup>4</sup> *The Life and Letters of Maria Edgeworth*, edited by Augustus J. C. Hare (2 vols., New York, 1895), p. 325.

Grands Mulets, arriving at noon. Bourdet through his telescope espied on the higher slopes Henderson, Dornford and four guides, and at some distance Hamel and another guide, three being missing. Two hours later the parties joined at the Grands Mulets.

Despite many variants the story of the misadventure is too well known to require repetition, except as it bears on Hamel's character. Much of the foregoing is derived from an unpublished manuscript written in 1823 by Bourdet and sent to the Linnean Society of Paris.<sup>5</sup>

Hamel himself wrote two accounts of the event. The first, at Pictet's request, apparently to dispel rumours circulated by Selligie, was *Relation de deux tentatives recentes pour monter le Mont-Blanc*,<sup>6</sup> the editor apologising for his contributor's imperfect knowledge of French and the speed with which the article was put together. A German translation appeared in Basel<sup>7</sup> soon afterward. Bourdet's quotations follow the first text precisely in many parts, but other compressed paragraphs suggest that he may have worked from Hamel's original notations.

Later in the same year Hamel was in Vienna and arranged an elaborated version entitled *Beschreibung zweyer Reisen auf den Mont Blanc*,<sup>8</sup> in which he adds a number of incidents not mentioned in the earlier account, for the apparent purpose of showing his resourcefulness and presence of mind, as well as to dissociate himself from censure. He supplemented this by a summary of the earlier ascents of Mont Blanc, described the death of Eschen on the Buet, and summarised physiological observations made at high elevations in other parts of the world.

The guides had obtained from a woman assistant in the pharmacy of Chamonix what was thought to be syrup of vinegar, to be mixed with water for thirst. This was entrusted to Julien Devouassoud, who tried it at Favret's chalet only to find it was sulphuric acid, burning him so badly as to cause vomiting. Dr. Hamel at once prepared a decoction of wood-ashes, the alkaline antidote immediately restoring the guide to his normal self.

Hamel lists the various scientific apparatus brought along and the intended experiments. He had alcohol for fuel, expected to measure carbonic acid in the air and obtain sealed specimens of the summit atmosphere. He took a closed pot to demonstrate cooking at high levels, an electrometer, a table and camera lucida for the panorama. From Pictet he obtained instruments for measuring temperature, electricity and humidity; there were azimuth-compass, sextant, level, hygrometer and Bengal fire.

<sup>5</sup> *Relation d'une Tentative pour monter au Montblanc en 1820*. From the Montagnier collection in the library of the American Alpine Club. Bourdet probably also wrote the account appearing in the *Moniteur Universel* (August 31, 1820); there was a further notice in the same periodical for September 29, 1820.

<sup>6</sup> *Relation de deux tentatives recentes pour monter sur le Mont-Blanc*; *Bibl. Univ.*, August 1820.

<sup>7</sup> *Reisen auf den Montblanc*; Basel, 1820.

<sup>8</sup> *Beschreibung zweyer Reisen auf den Montblanc*; reprinted from three issues of the *Conversationsblatte* (Vienna, 1821).

The weather became the provenance of the leading guide. 'Couttet thought,' says the doctor, 'we would have a clear day but it would be well to postpone departure until sunrise. At 5.00 o'clock of the 20th the peak shone in the sun, the sky was clear and wind had died down. The guides were unanimous that one could now start.'

At the foot of the Ancien Passage they sat down to rest. Hamel's pulse was 130. He wrote two notes, leaving the time of arrival blank, to be sent by carrier pigeon from the summit to Sallanches. They saved a bottle of wine with which to drink a toast to De Saussure's memory. *Die Allmacht Gottes erfüllte mein Inneres* was the record of the doctor's feelings, which now seem questionable, these being coupled with anticipation of chipping fragments off the highest rocks for the mineralogic cabinets of Geneva and St. Petersburg. The snow yielded under their feet at a point near the Rochers Rouges from whence they could begin to see the plain of Lombardy. Three guides lost their lives.

J. J. Cowell (A.C.)<sup>9</sup> writing in 1864 mentions that Joseph-Marie Couttet was still living and had discussed the accident with him. 'It is certain that it was not an avalanche which *fell* on them. Couttet says: "The snow was crusted hard to the depth of half an inch, but all soft below, being only twelve hours old. The surface cracked all along the line of men, just where we stood." ' The mass of snow below the crack slid down, followed by that above entering the space and forming the whole into an irresistible avalanche, finally arrested in a huge crevasse which it filled to the brim and heaped over. The lost guides were in the lead on the steepest part of the slope, the accident being similar to that on the Haut de Cry in February, 1864, when the guide Bennen was killed.

Hamel states that it occurred to him that high altitude air might be a poor conductor of sound, and therefore sank their longest alpenstock in the snow filling the crevasse. He lay down and held the end against his teeth while he shouted, hoping for a response that never came.

According to the doctor, Dornford was willing to sacrifice his life if those engulfed could be saved, but the remaining guides urged departure, took possession of Dornford and refused proffered money to stay longer. They left with Henderson, only Couttet and Hamel being behind. Couttet had lost his alpenstock in the crevasse, but Hamel states that 'He inquired, half furtively, whether I still wished to go to the summit.' They were strangely calm, enough so to sit and eat chocolate and meat (the victims so near), and only regained their companions at the Grands Mulets.

There is little question but that the guides, with the exception of Couttet, an old soldier, were panic-stricken,<sup>10</sup> and Henderson had an attack of nerves. Only Hamel, Dornford and Couttet were capable of rendering assistance, and these three entered the snow-filled crevasse to search for the victims. Dornford always credited Dr. Hamel for his courage.

<sup>9</sup> *On Some Relics of the Guides lost on Mont Blanc*; A. J. 1, p. 332.

<sup>10</sup> C. E. Mathews, *Annals of Mont Blanc*, pp. 225 ff.

At 3.00 P.M. all continued from the Grands Mulets, reaching the Chalet de la Para at 7.30. Bourdet and Castan remained overnight, the others arriving in Chamonix at 9.00. Selligue had gone on to Geneva. Hamel gave a coldly scientific explanation of the snow conditions which produced the accident, and next day (21st), having given their depositions<sup>11</sup> to the Chamonix authorities, left for Geneva.

It was an instance of when an enterprise succeeds, felicitations are mutual; when it fails each evades responsibility. Durier points out that De Saussure also used his authority to make his guides proceed. Dr. Paccard noted in his diary<sup>12</sup> that Couttet blamed Dr. Hamel, affirming that he was the cause of the disaster, as he insisted on making the ascent although the weather was unfavourable. But in 1820 even a leading guide would have hesitated to oppose such a tourist. Durier thought that the guides, despite their protestations, after the storm and seeing the clearing weather, were disposed to continue the ascent, without considering that the fair day guaranteed nothing and that the real danger came from the weather which had preceded (*le temps qu'il avait fait*). But Couttet revealed to Stephen d'Arve<sup>13</sup> years later that Hamel (who doubtless was accustomed to the obedience of serfs) called the guides cowards. Couttet told Durier<sup>14</sup> in 1874 (when Couttet was then the sole survivor) that *Nous avons monté de colère*. Probably the blame should be shared: by Hamel for his rash persistence; by Couttet and his co-leader, Mathieu Balmat, for not making their opinion prevail. In any case, the name of Dr. Hamel was ever afterward execrated in the valley.

Maria Edgeworth<sup>15</sup> wrote to her mother from Geneva in September that Dornford<sup>16</sup> appeared at a breakfast given by M. Prévost to M. Arago (who had been with the Edgeworths and Pictet at Chamonix) a few days after the accident. Many scientific and literary people were present, discussing whether it was Hamel's fault or all the guides.' Dornford asked permission to state the plain facts, as he heard they had been told to Dr. Hamel's disadvantage. 'He, Dr. Hamel, Mr. Henderson, and M. Selligue, a French naturalist, set out; the guides had not dissuaded them from attempting to go up Mont Blanc—only advised them to wait till a threatening cloud had passed. When it was gone, they all set out in high spirits; the guides cutting holes in the snow for their feet. This it is supposed loosened the snow newly fallen, and a quantity poured down over their heads. Mr. Dornford had pushed on before the guides; he shook off the snow as it fell, and

<sup>11</sup> P. Payot, *Au Royaume du Mont-Blanc*, p. 245.

<sup>12</sup> H. Dübi, *Paccard wider Balmat*, p. 271.

<sup>13</sup> S. d'Arve, *Fastes du Mont-Blanc*, p. 62.

<sup>14</sup> C. Durier, *Mont Blanc* (edit. 1877), p. 411.

<sup>15</sup> *Edgeworth, loc. cit.*, p. 348, quoted by D. W. Freshfield in *A. J.* 17, p. 368.

<sup>16</sup> Dornford wrote an account for the *New Monthly Magazine* (1821) which is quoted in part by Albert Smith in his *Story of Mont Blanc*, and by Whymper in his *Guide to Chamonix* (edit. 1911, p. 50), and was reprinted in *Baltimore Federal Gazette* of July 29, 1821, possibly at the instigation of Dr. Howard, of that city, who had been on Mont Blanc in 1819. There was a further account in the *Annals of Philosophy*, January 1821.

felt no apprehension : on the contrary he laughed as he *pawed* it away, and was making his way on, when he heard a cry from his companions, and looking back he saw some of them struggling in the snow. He helped to extricate them, saw a point moving in the snow, went up to it, and pulled out Marie Couttet, one of the guides : he was quite purple, but recovered in the air. Looked round—two guides were missing : looked for them in vain, but saw a deep ravine covered with fresh snow, into which they must have fallen.'

The three guides who were lost were Pierre Carrier, Pierre Balmat and Auguste Tairraz. Hamel says that they had not been on the mountain before and were laden with the provisions and instruments. Carrier had been Harriet Edgeworth's guide on the Flégère, and predicted his own end, scratching his initials on the rocks of the Grands Mulets and writing that he would not return.

Three years later an anonymous children's book was published in London, *The Peasants of Chamonix*,<sup>17</sup> containing an account of the Hamel disaster, the reading of which so aroused Albert Smith's interest in the mountain.

Hamel, chagrined by failure, hoped later to make other high altitude studies, possibly on Kasbek in the Caucasus, but nothing seems to have come of this intention. In 1821 he returned to Russia, and was attached to the suite of the Governor-General in Moscow. He became a Privy Councillor and a Knight of the Order of St. Anne. His election to the Imperial Academy took place in 1828. It was through him that the Lancasterian system of education (public schools) was introduced to Russia.

He supervised the first industrial exhibition in Moscow, and was employed in other Russian exhibitions, visiting the Great Exhibition in London, and others in England and France, as well as the one in New York, 1853-4. He published histories of the steam engine and of the electric telegraph, which are said to be of considerable scientific interest.

While in England Dr. Hamel was employed by his Government in furnishing them with information relative to the progress of science and arts. He worked at the Bodleian Library and the Ashmolean Museum at Oxford, and, having access to the archives of St. Petersburg and Moscow as well, published a book in 1846,<sup>18</sup> in which he offered his researches on early English voyages to the White Sea, and advocated a jubilee for 1853 to commemorate three centuries of unbroken friendship between England and Russia. His intentions were frustrated by the outbreak of the Crimean War.

On January 21, 1854, Albert Smith held a festive gathering at Egyptian Hall,<sup>19</sup> preceding his Mont Blanc entertainment. A Swiss girl in cantonal costume led a St. Bernard through the room, and among the guests, in addition to the host, were Dr. Hamel, François Favret, the

<sup>17</sup> Baldwin, Cradock and Joy, 1823 ; 2nd. edit., 1826.

<sup>18</sup> Joseph Hamel, *England and Russia* (1846 ; translated by J. S. Leigh, London, 1854).

<sup>19</sup> J. M. Thorington, *Mont Blanc Sideshow*, p. 182.

Chamonix guide, John Auldjo and John MacGregor. One would give much for a record of their conversation.

Francis Wey<sup>20</sup> says that Dr. Hamel remained silent and never returned to Chamonix, but David Charlet told Durier<sup>21</sup> that a few years after the catastrophe a stranger entered one of the hotels without giving his name and had himself conducted to the Flégère. For a long time he gazed silently at the Grand Plateau, with such fear in his eyes that the guide later imparted his suspicion to the village elders. The description fitted Dr. Hamel. The stranger, finding himself the object of attention, vanished on the following day.

It is of interest that guides who accompanied Hamel continued to make ascents of Mont Blanc. Clissold (1822), Jackson (1823), Sherwill and Clark (1825), all ascended by the Ancien Passage, saw the site of the accident, and noted the guides' terror in crossing the fatal crevasse.

When J. D. Forbes paid his last visit to Chamonix (1858) he predicted that within thirty-five or forty years after the event relics of the accident would reappear. The first were found in 1861 and more came to light for several years. It is believed that the travellers were carried down 1200 ft. to the crevasse, and Cowell estimated that the relics moved  $4\frac{7}{8}$  miles. Some of these were taken to England and presented to the Alpine Club, others remained at Chamonix, while another group was for some time exhibited in the Annecy museum, where they are no longer to be seen (1949).

Auguste Balmat was deputy-mayor of Chamonix when the first remains were discovered. Four months later he visited the British Museum<sup>22</sup> with Prof. Tyndall and was introduced by the latter to an old man, whereupon the following exchange took place. 'You are from Chamonix, Monsieur Balmat?' 'Yes, sir.' 'You have not yet discovered the bodies of my three guides? I am Dr. Hamel.' 'Alas, no, doctor.' 'Well, you will find them sooner or later. It is the opinion of Messrs. Forbes and Tyndall that the glacier will sooner or later give up the poor victims. Certainly, and a good thing for Chamonix. You will establish a most interesting museum which will attract tourists.'

But Dr. Hamel did not live to see his callous prediction come true. Fate caught up with him in his rooms at 21 Duke St., St. James's, where he died at the age of 74 on September 22, 1862, his memory still evoking a chill of horror in Chamonix. On the day of his death *The Times* printed a letter stating that further relics, among them a human arm, had been extruded by the Bossons glacier.

<sup>20</sup> F. Wey, *La Haute Savoie* (edit. 1866), p. 69.

<sup>21</sup> Durier, *loc. cit.*, p. 414.

<sup>22</sup> S. d'Arve, *loc. cit.*, p. 72.