

twelve. Fortune favoured us with no distant view from the mist-capped peak of the 'Maiden,' and even in our happy state of self-satisfaction it was difficult to remain more than a quarter of an hour on the top. We then waded again through the deep snow down to the saddle, arriving there at 1.30. After a protracted halt at this point we plodded down the long slopes of the Aletsch, which proved to be as hot, as grand, and as unending as ever, and reached the *Æggischhorn* at 7.15, having effected the passage of the *Roththal Sattel* and the ascent of the *Jungfrau* from *Lauterbrunnen* in precisely eighteen hours.

**MOUNT ELBROUZ, AND THE ATTEMPTED ASCENT OF IT BY
A RUSSIAN EXPEDITION.** Read before the Alpine Club,
May 2, 1865. By H. B. GEORGE, M.A.

THE House of Commons is very frequently accused of neglecting its own business, when it has any, to discuss the affairs of our neighbours, and lecture foreign powers on their behaviour towards their subjects or one another. I could wish that it had carried out this self-imposed task a little more fully, and remonstrated against the wanton injury which has been inflicted on the oldest and most venerated of European sovereigns. There is, I fear I ought to say there was, an ancient monarch—crowned so long ago, that even the poet who records the ceremony cannot fix the date—who never went to war for an idea, nor seized material guarantees, nor incurred a gigantic national debt to keep up a useless army, nor imposed protective tariffs, who, in short, has never been guilty of the common regal crimes and follies; and yet this reverend prince has been deposed without a word of remonstrance. When Russia crushed the Poles, Lord Russell lectured her; when she expelled the Circassians, a chorus of denunciation was raised; when she attempted to swallow up Turkey, all Western Europe rose in arms; but she has been allowed to dethrone *Mont Blanc*, and even the Alpine Club has been silent.

The boundary line between Europe and Asia has varied considerably at different periods; in fact it may be said never to have been defined at all, until the Russians thought proper to fix a line, which was probably chosen as much to suggest that by a 'natural frontier' theory Circassia belonged to them, as from any considerations of abstract propriety. The *Oural* mountains had always been reckoned part of the frontier, and Europe had gradually been made to encroach more and more

on the shores of the Caspian ; but it was not until some fifteen or twenty years ago that the range of the Caucasus was considered to touch on Europe. And though, geographically speaking, the Caucasus is the most convenient and clearly marked frontier, yet other considerations of race, language, religion, are in favour of leaving Circassia annexed, as it always used to be, to Asia. However, we are well aware how potent an instrument a natural boundary can be made in imperial hands ; and it must now, I fear, be taken for granted that the Caucasus is included among European mountains, and Mont Blanc irrevocably superseded.

The Caucasus possesses some attractions of its own, independently of mere mountaineering considerations. Mount Káf figures in the Arabian Nights and other Eastern tales as the proper home of all manner of marvels ; even now the natives regard the central chain as the abode of the Sultan of the Genii and all his court ; and the heroism of the Circassian struggle against Russia has thrown a halo of romance over their country. All travellers also concur in describing with enthusiasm the charms of scenery and sport, and the scientific interest of the Caucasus both as regards formation and natural productions. Considering further the vast extent of this mountain range, the great height of its peaks, and its entirely unexplored character, I think no further apology is necessary for trying to attract to it the attention of the Alpine Club.

The Caucasus consists of a central backbone some 800 miles long (which alone seems to be snow-covered), running nearly E. and W. from the Black Sea to the Caspian, and of numerous secondary ridges, running more or less parallel to the main chain. But the country lying N. of the central chain (for of that to the S. I can find no description) is apparently of a most singular character, resembling a gigantic mould in which a mountainous region was cast. The general surface is level and of very great elevation, intersected by extremely deep valleys with precipitous sides, so as to suggest the idea that the gradual process whereby, according to Professor Tyndall and other eminent men, mountain ranges are formed by the long erosion of water, has been a comparatively short time at work there, and that in a few million more years the country will look very like Switzerland. Of the great central ridge the highest peak is commonly called Mt. Elbrouz ; but this name is misleading, as the term simply signifies any snow-covered mountain, and is actually applied to several others, including the Persian range of which the Demavend is the chief summit. It has as many names as there dwell peoples

within sight of it, and perhaps the Circassian name of Osha Makhua, or Holy Mountain, has the best claim to be adopted. Upon this peak an attempt was first made in 1829, by a party of *savans* attached to the suite of a Russian general who was sent to make a military promenade in the Caucasus. If one may believe their reports, one of their native followers reached the summit: but mountain exploration was then in its infancy, and the miserable failure of the report to give any of the information we should now most naturally look for, is to be regretted rather than condemned. The expedition started from Garetchevodsk, a little town sixty or seventy miles N. of Elbrouz, which has grown up around some hot mineral springs: it comprised a considerable number of foot soldiers, several cannon, and all the warlike array which was supposed likely to convince the Circassians of the paternal affection of the Czar. Having spent some time in marching about the valleys, with purposes as much political as explorative, they at length arrived at the head waters of the Malka, a stream which descends from the very foot of Elbrouz and flows into the Caspian, and encamped at 8,000 feet above the sea. From this point I translate the narrative of M. Kupffer, the chief of the *savans*, with a few slight abridgements.

‘Next morning (July 21) the general ascended one of the hills surrounding our camp, to reconnoitre the route which we should have to take in order to arrive, if possible, at the summit of Elbrouz. Assembling round him the Cossacks and Circassians who were to accompany us, he promised considerable rewards to whichever of them should be the first to attain the summit: that the first should receive 400 roubles, the second 200, and if it should prove impossible to reach the actual summit, that all who should ascend halfway up the snow cone should obtain a reward. We started at 10 a.m., and after crossing the Malka were obliged to send back our horses, as it was necessary to scale a pile of rocks of such a nature that one could only advance on foot, climbing and leaping from rock to rock. The soldiers and Cossacks who formed our escort were laden with our baggage and a little firewood. After six hours’ march, at 4 p.m., we reached at last the edge of the snow. Imagine a long plateau, with an elevation of eight to ten thousand feet, torn in every direction by deep and narrow valleys, and traversed throughout its length by a picturesque crest of scarped rocks, whose summits are covered with eternal snow. This crest forms during nearly half its length a wide and shallow arc, whose centre is occupied by a two-pointed cone entirely covered with snow, upon which the projecting points of the un-

derlying rock show like small spots. This cone is Elbrouz, and overtops all the surrounding summits by three or four thousand feet. We passed the night at the foot of this cone, in a hollow sheltered by immense blocks of black trachyte, in the midst of which was a small pool of snow water. This spot was about 100 feet below the line of perpetual snow.* I seated myself under a rock, and contemplated the snowy cone, which divides into two points near the summit. Singular masses of ice and compact snow have accumulated in the cavity which separates them; these have probably been detached from the summit, and fallen into the hollow. These snows cover precipices; the streams which issue from the sides of the mountain, or which collect in the cavities of the rocks, undermine and remove the lower portions, so that there remains merely a light crust forming a species of ridge over abysses that are not visible, and whose depth is exaggerated by the imagination. The action of an atmosphere continually in agitation, the rapid changes of temperature, the alternate melting and freezing of the water which penetrates into the clefts of the rocks greatly accelerate their disintegration: enormous blocks are detached, and roll over the precipices, shattering everything they meet in their fall. Furious winds—whirling guests of snow which not only threaten to bury the traveller, but also, while hiding from him all sight of the valley towards which his course is to be directed in returning, destroy at the same time the footprints which would serve to show him the way—steep and slippery slopes of snow, not to be traversed without cutting steps, a single false step sufficing to precipitate one into the abyss—such were the dangers awaiting us. On the other hand the season was favourable, the opportunity might never recur again. The bright moonlight promised a fine morning; and the enterprise could only be attempted once, for the general could not have allowed his little army to be exposed any longer to such dangers and privations. We knew that the way to Elbrouz would be closed, after us, for a long time, the sacrifices required for such a journey being too great to be encountered often, and that we should be exposed to merited reproach did we not profit adequately by an opportunity as brilliant as transient.

‘Fired by these thoughts, we arose at 3 a.m., and armed with

* In this, as in other passages, M. Kupffer speaks as if he thought that the limit which the snow happened to reach at the date of his expedition was necessarily the line of perpetual snow. But one may fairly infer from the narrative that the snow-line is considerably higher than in the Alps, as might be expected from the difference of latitude.

a spade, iron-shod poles, a rope and some provisions, started on our march, having given orders for the soldiers and most of the Cossacks to attend us. In a quarter of an hour we reached the snow; at first the slope was not steep, and we advanced easily with the occasional aid of our bâtons; but soon the ascent became so severe that we were obliged to have steps cut in the snow, which was still firm enough to support us. Although the valley behind us was still shrouded in mist we enjoyed perfectly clear weather; the moon was at the full, and her white disk contrasted beautifully with the blue of the sky, which at this height appears so deepened in fine weather as to approach nearly to the colour of indigo. In spite of the keen wind which blew down from the mountain, the mists in the valley, instead of dispersing, rose slowly behind us: they had already covered the hollow where we had passed the night and threatened soon to envelop us. But presently the sun's rays, which rapidly increased in power, tore the veil of mist apart in several places, and the forms of the mountains which compose the first chain of the Caucasus were disclosed to our view. The highest summits of this chain are ranged in a line nearly approaching to a semi-circle, of which Elbrouz occupies the centre. Towards the north these mountains sink into the plain, whilst on the other side facing Elbrouz they form precipices, the disorder of their shapes increasing towards the centre, so as to suggest the idea of part of a gigantic crater, with a conical mass of volcanic rock rising in the centre to a height far exceeding that of the edge of the crater. While enjoying this sight, we advanced steadily sometimes in a straight line, sometimes in zig-zags, according to the difficulties of the ground. The haste we were in to reach the summit, before the snow should be much softened by the sun, overtaxed our strength, so that we were at length obliged to stop for breath almost at every step. The rarefaction of the air at this height is so great that respiration no longer suffices to restore the force expended; the blood is in violent agitation, and causes inflammation in the weaker parts. My lips burned, my eyes suffered from the dazzling brightness of the snow, though by the advice of the mountaineers I had blackened with gunpowder the parts of my face round my eyes. All my senses were bewildered, my head became giddy, and at times I felt an indefinable sinking which I could not conquer.

‘Toward the summit Elbrouz presents a series of naked rocks, forming a sort of staircase which greatly facilitates the ascent. However, MM. Meyer, Ménétries, Bernardazzi and I felt so overcome by fatigue that we resolved to rest an hour or two in order to regain strength for resuming our march. Some of

the Cossacks and Circassians, who had accompanied us to this point, followed our example. We found shelter from the wind under a huge block of trachyte, which forms the first rung of the rocky ladder I have mentioned. At this spot was a small space free of snow, and I secured some fragments of rock for my collection. We were here 14,000 feet* above the sea; it required a farther ascent of 1,400 feet to reach the summit of Elbrouz. I wished to make some pendulum experiments, but the Cossack who carried my instruments had not yet arrived; and now the sun, whose rays darted almost perpendicularly on the inclined surface of the snow, softened it so much that it would no longer bear our weight; and the longer we delayed our return, the greater was the risk of our falling through into the abysses concealed beneath it.

‘ However, this first attempt had succeeded beyond our hopes. On entering the Caucasus we had believed Elbrouz inaccessible, and in a fortnight we were on its summit. Was it not enough to have brought back from the top of Elbrouz a fragment of the same rock of which Pichincha in the Andes is composed, to have observed the most important geological features of the Caucasus, to have ascended as high as Mont Blanc. I hoped that M. Lenz, who had gone on before us, might still reach the summit and determine its height with the barometer he carried. Accompanied by two Circassians and a Cossack, he proceeded to scale the ladder of rocks before referred to. On reaching the top of them, he found himself still separated from the summit by a tract of snow which must be crossed, and which was so softened by the sun that they plunged in up to the knees at every step, and ran the risk of being entirely buried. His companions seemed determined to go no farther, and the danger of proceeding alone was too great to be encountered; besides, it was past 1 p.m., and it became necessary to think of returning, so as not to be overtaken by night before arriving at the camp. M. Lenz therefore decided to turn back, without having reached the summit, which however, as we afterwards saw, was only about 600 feet higher than the farthest point he attained. The descent was very laborious and dangerous: the snow which had supported us some hours before now gave way under our feet; holes had been formed by which we saw into the terrible depths of the chasms which yawned beneath. Our Cossacks and Circassians were tied together in pairs, so as to be able to give mutual assistance. I was so much weakened

* These are French feet; but the numbers here given are inconsistent with the measurements afterwards recorded.

by fatigue that I leaned in walking, so as to get on the faster, upon two men who passed their arms round my body, and when the descent grew less steep I lay down on a felt mantle and was drawn along by a Circassian. Everyone thought only of himself, of how to escape as quickly as possible from among the dangers which threatened us; we separated into parties, and in the desire to reach the camp as soon as possible, forgot that we were surrounded by Circassians of doubtful fidelity. However we had no reason to repent of our confidence, as they led us to the camp by a way shorter than that by which we had ascended. M. Lenz, who had began his descent later, arrived just before nightfall by another route, with the greater part of our escort.

‘ During this eventful day the general, seated before his tent, had watched our progress with an excellent telescope I had left at his disposal. As soon as the morning mists disappeared he saw us ascend the snow cone, and reach the foot of the rocks, where we separated into two groups, one of which advanced towards the summit, while the other halted. But suddenly he observed a single man far in advance of the rest, who had already almost crossed the track of snow between the summit and the head of the rocky staircase. This man was seen to approach the scarp of rock which forms the actual summit, walk round it, disappear for a moment against the dark-coloured rock, and then vanish behind the mists which again filled the valley, cutting off the view of Elbrouz. This took place at 11 a.m.: the general could no longer doubt that one of us had reached the summit; he could see by the colour of the dress that it was a Circassian, but the distance was too great for his features to be distinguished.

‘ Killar, as the Circassian was named who had attained the summit of Elbrouz, had known how to profit by the morning’s frost better than we had. He had crossed the limit of eternal snow long before us, and when M. Lenz reached his highest point, Killar was already on his return from the summit. As the snow did not begin to soften till eleven, he found it firm to the very top, and only in the descent encountered the same difficulties with us. A bold hunter, and well acquainted with the country, he had before ascended to considerable heights, though he had never tried actually to reach the summit. He returned to camp a good hour before us, to receive from the general the reward due to his courage: but the general waited for the arrival of the whole party, in order to render the ceremony more solemn. Having spread out on a table the reward which he had promised to the man who should first reach the

summit, he handed it to him in sight of all the camp, adding a piece of cloth for a caftan; and we all drank to his health in certain bottles of champagne, which our Mussulmen, not to infringe the law of the prophet, consumed with great satisfaction under the name of sherbet.'

I leave my readers to judge for themselves whether Mont Elbrouz found its Jacques Balmat in this Circassian, or whether the sole ascent was made in the imagination of the general. Obviously it was not Killar's interest to deny having reached the summit when he could obtain 400 roubles by holding his tongue; and at any rate none of the *herrschaft* made the ascent. In this, as in all other respects, the Russian narrative is meagre, vague, and entirely unsatisfactory both to the geographer and the mountaineer, in spite of the high scientific acquirements of the author. He evidently did not know a glacier when he saw one, and was so much occupied in frightening himself about the cracks in the névé, which suggested to his benighted mind *abîmes profondes* and all manner of other horrors, that he omitted to observe even the general aspect of the great chain of the Caucasus. He seems to imply that Elbrouz projects from the central ridge, like the Dom and Weisshorn ranges from the main line of the Pennine Alps; but the geographical writers in general represent the contrary, and even this very simple question must be left in doubt.

Partly because the natives have not troubled to name them, partly from the reprehensible indifference to mountains displayed by all writers on the Caucasus, I cannot marshal in detail the tempting array of high peaks and super-alpine passes which only await the arrival of some English *vates sacer* to receive their due meed of honour. The Simplon of the chain is the pass anciently known as the Caucasian Gates, now called the Dariel Pass, which crosses the range near its centre, and has been made by the Russians practicable for carriages. This route, which attains a height of some 8,000 feet, passes through a defile somewhat resembling the Via Mala, but exceeding it both in length and in the height of its precipitous sides. Immediately above it towers Mount Kasbek, distant about 80 or 100 miles E. of Elbrouz, the only other article in the Caucasian bill of fare for which I am able to vouch; and even of this peak I can only discover that he is considerably higher than Mont Blanc. The value of the Russian measurements, even of Elbrouz which they did partly ascend, may be inferred from the following *naïve* statement of their method of calculation.

'When one is at a great distance from a very high mountain,

it is easy to form a just estimate of the proportion of the several parts, so that if the vertical distance between any two points on the same slope is given, the vertical distance between two other points on the same slope may be calculated by comparing the respective visual angles. In this manner we compared at the hot springs, the height of the summit of Elbrouz above M. Lenz's last station with the height of that station above the point where I and my companions halted. According to very exact measurements, taken with a *lunette micrométrique* three feet long, the arc subtended by the first distance was almost exactly half of that subtended by the second. Barometric observations, taken on the same day and almost at the same time, gave 1,250 feet for the height of M. Lenz's halting point above ours; therefore, the height which M. Lenz left unscaled, could not be far from 600 feet.'

The distance of the hot springs from Elbrouz being at least sixty-five miles, this was not one whit less absurd than if one were to calculate the height of Mont Blanc by taking angles from Geneva. All authorities however concur in representing Kasbek as over 16,000 feet, and Elbrouz still higher, though the elevation assigned to the latter varies from 16,500 feet to nearly 18,500 feet.

I must not omit to mention one more worthy, an English officer on leave from the Crimea, whose attempt on Elbrouz was even less successful than that of the Russians; for they did at least go part of the way up the right peak, whereas the Englishman went by mistake up a miserable hill at least 3,000 feet lower, whence Elbrouz was utterly inaccessible, and then did no more. There was good ground for his withdrawal from the enterprise, in the circumstance of one of his followers having died from exhaustion on the mountain; but the fact of his failure is none the less patent. The Englishman's real tastes seem to have been purely slaughterous, and mountain-climbing a mere passing fancy. For though he is minute in describing the exact ammunition with which he murdered each miserable deer or bear, he never condescends to explain even the route by which he approached Elbrouz. One satisfactory fact however he does mention, that a huge glacier lay between his hill and Elbrouz; but as he despises any such mere refinements as points of the compass, it is impossible even to guess its situation relative to the peak.

There are countervailing advantages to the manifest defects of these, the only two existing narratives of approaches to Elbrouz. There is more left for the properly qualified explorer to discover. He may gather from the Russian that the new

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.

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