## The History of the Buet, with some Notes on Early Mountaineering in the Pennine Alps. By the Editor.

THE curious little monument to the founders of the Love of the Alps, which stands opposite the inn on the Montanvert,* and is now devoted to the orgies of Chamonix mule drivers, still bears on its front the original dedication 'à la Nature.' It was originally proposed that on the other three sides should be placed the names of De Saussure, Bourrit and De Luc. De Saussure is still known throughout the world; Bourrit's fame survives only among students of the Alpine literature of the last century, and, although it has recently been burnished up by Mons. Durier in his admirable book on Mont Blanc, it is still dull in England; De Luc is even less known.

It is a sufficient reason for choosing a peak in some respects so insignificant as the Buet for the subject of the first chapter I add to Mr. Longman's papers, that it enables me to vindicate the fame of the two early mountaineers who were the less known members of this mountaineering trinity. But the history of the Buet also claims attention in its relation to that of Mont Blanc, to which the lesser mountain served as a stepping-stone; and the narratives in which the first attempts on it are recounted are exceptionally characteristic and amusing in themselves.

In dealing with the mountains of Savoy, we do not have, as in central Switzerland, to look into remote authors. There is scarcely any mention of the Mont Blanc range in books prior to the seventeenth century, and maps show that so small was the knowledge of this region that Mont Blanc and the Buet were often lumped together as 'Les Glacières,' and that nobody knew exactly whether the great mountain seen from Geneva was north or south of the valley of Chamonix. The history of early mountaineering in this region is the history of the little band of explorers of whom De Saussure was, by his accomplishments, the most prominent, and Bourrit the most persevering.

The Buet was, I believe, the second glacier peak in the Alps to be climbed, its predecessor being the Titlis. Its first ascent deserves to be followed in detail, for it was the beginning of mountaineering in Savoy; and it is recorded in a very picturesque and detailed contemporary narrative.† It was made in 1770

* I follow the usual incorrect spelling. Mont-en-vers, the pasturage at the back, is the derivation.

† 'A Relation of a Journey to the Glaciers in the Dutchy of Savoy,'

from the Sixt side by the brothers Jean André and Guillaume Antoine de Luc. They were the sons of a Geneva watchmaker, known by his religious and political writings, and a friend of Rousseau, whose influence is constantly evident in their writings. Guillaume was the author of a few scientific tracts. The eldest brother, Jean André, was an adherent of the popular party, and was sent as envoy to Paris in 1768, and on his return elected a member of the Great Council of his native city. His inclinations led him, however, to give up politics for physical science. In 1762 he submitted to the Paris Academy his 'Researches on the Modifications of the Atmosphere,' which was recognised at once as the best work which had yet been produced on the use of meteorological instruments. De Luc, however, spent ten years more on his book before publishing it. He now entirely gave up his trade, and coming to England was made a member of the Royal Society and obtained a permanent post as reader to Queen Charlotte. One of his works, a series of 'Lettres physiques et morales sur les Montagnes et sur l'Histoire de la Terre et de l'Homme,' was dedicated in 1778 to the Queen of Great Britain. It is described in the preface as the outline of a work on cosmology, or nature and man's place in it. The letters describe the Lake of Geneva, Interlaken, Grindelwald, and Lauterbrunnen—the descriptions being interspersed with many reflections on the happiness of a country life, and the simplicity of Swiss peasants. Rousseau, who is often quoted, is evidently the source of most of M. de Luc's cosmology.

De Luc died at Windsor, at the age of ninety, in 1817. As a scientific student he would appear to have deserved respect, but he was also a courtier and a universal philosopher, and in consequence he sometimes rather amuses than edifies the modern reader, particularly when he is led by the 'ecstasies in which he often finds himself on the mountains,' into a long assault on materialism, and apologises in a proportionately long foot-note for introducing 'discussions too far removed from the objects of attention of a QUEEN.'

It was in August 1765 that the two De Lucs started to attempt the Buet for the first time. From the neighbourhood of Geneva, Jean had observed to the north of the 'pikes in the form of obelisks' which rose in a forbidding fence round the mighty dome of Mont Blanc, a mountain whose summit, although always covered with ice, seemed to him accessible and proper for his experiments.

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translated from the French of M. Bourrit, Precentor of the Cathedral Church of Geneva, by Cha. and Fred. Davy. 2nd Edit. Norwich, 1776.

'He endeavoured then to inform himself of the name of this mountain, the place where it was situated, the road necessary to be taken to arrive at it, and whether or not it was to be ascended; but no person could be found that knew it, nor could he gain the least intelligence with respect to any of his questions; he was obliged, therefore, at all events to take a journey in search of it and endeavour to find it himself.' Such a passage and the following narrative give a curious idea of the state of ignorance in which Geneva lived of objects within its daily horizon, even after 'the discovery' of Chamonix. With many doubts as to the right road, anxiously looking out for any glimpse of the snows, and seriously disquieted when they lost sight of them, the two De Lucs arrived late at night at Sixt, where 'their guide gave them no hopes of finding any accommodation.' Fortunately, despite the lateness of the hour, the convent opened its gates and received them most hospitably. The peasants of the village could still give no information as to the snow mountain they were in search of, but offered to lead the travellers to some châlets, where a hunter who knew more might possibly be met with. This plan was carried out, the châlets reached, and the hunter secured. But they followed him with uneasy minds, for their frozen summit had entirely disappeared. When after some rough scrambling they reached the ridge of rocks known as the Grenier des Communes, which had long formed their skyline, 'they perceived themselves upon the brink of one of the most frightful precipices, which separated them from the summit they came in search of.'

There was nothing for it but to return, after having gazed 'with admiration as well as horror' at Mont Blanc, which appeared before them in all its majesty. An accident which happened to the most important member of the party, the thermometer, compelled them to return to Geneva.

It was not till 1770 that the De Lucs again attempted to carry out their design. Led by an 'apprentice to a hunter' they climbed 'from one jutting point to another up the clefts of an immense wall of stone which was almost perpendicular,' only to find themselves 'upon the very same precipice they had been five years before.' They consoled themselves by scrambling to the highest point of the ridge, the Grenairon, although at one place they had to take the lead from their poor-spirited guides. The conduct of one of these men was most reprehensible. 'Fatigued with the labour he had undergone, and in a fit of laughter at the folly of taking all this trouble to boil a little water, he threw himself unluckily with all his weight on Jean De Luc's foot and badly sprained it.' The 'author of the mis-

fortune' then abandoned his employers, in order to go down and milk his cows. De Luc was equal to the occasion both as a philosopher and as a mountaineer. He candidly imputed the man's behaviour to his mistaken sense of duty to his master (the owner of the cows) rather than to want of feeling. Further, he contrived to slide upon his back 'down 1,500 perpendicular feet.' Night then came on, and they were compelled to sleep out, making a barricade to prevent themselves from rolling down the steep. Next morning De Luc's foot was less painful, and he was able to descend to Sixt.

On the following day the village fair was held, and the De Lucs learnt from some of the assembled peasants that the snow dome they were in search of was known as the Buet, a name derived, they were told, from Bovet, an upper pasturage near the snow.

A month after, in company with a hunter, they ascended to Les Fonds, now well known from the description of Mr. Wills, who has built himself a house in this lovely spot, and has written of it with an owner's appreciation. No raptures, however, can exceed those of De Luc on this 'most superb amphitheatre,' 'delightful plain,' 'romantic solitude,' which 'they could not cease admiring.' Rain drove the brothers back to Sixt, but at the instance of the monks they waited until a fine day enabled them to return with better prospects to Les Fonds. Next morning they were off at daybreak, and by 7 A.M. had reached the 'Plain de Lechaud,' where they saw three of the 'native burghers' of the country, that is to say, chamois. Proceeding, 'they enjoyed for two hours this sensible succession of new subjects without any other inconvenience than that of walking up an exceeding steep slope, which was nothing to their spirits and resolution.'

In plain language, they were drawing near the snow, and the upper slopes were still hard from the night's frost. Having before experienced the inconvenience of crampons, 'which were apt to turn upon the foot and deceive them,' they had provided themselves with thick woollen socks to put over their shoes, by means of which, and their staves pointed with iron, they 'presumed it possible to step with the utmost security. Their shoes, however, were absolutely improper for such an undertaking.' Happily the guides had broad soles and hobnails, with which they crushed footsteps through the frozen crust. It was about noon when they gained the summit of the glacier, 'which commanded in a manner at one view all the straightes of the Alps, of whose pikes there were but few which raised their points above them.'

'For long they were absorbed in contemplation of the scene

before them. When their attention returned upon themselves they found that they were standing only upon a mass of congealed snow which jutted over a most frightful precipice.' Their first impulse was to retreat with all speed, 'but soon reflecting that the addition of their weight to this prodigious frozen mass which had been supported thus for ages could have no effect to bring it down, they laid aside their fears and went again upon that horrid terrace.' After a halt of three-quarters of an hour, and two experiments, they retired to some rocks a couple of hundred feet below the top for another hour and a half. During this prolonged stay, 'they were forced by the absence of any disagreeable sensation to remark what a wonderfully adaptive machine is the human body, whose equilibrium remains undisturbed within while the atmosphere without is so changed in density.'

The descent was easy. The De Lucs observed with envy, but did not venture to imitate, the mode of progression of their guides who glissaded, as we now say, that is, slid leaning on their poles down the slopes. They found out, however, another method which they thought very agreeable. It consisted in a series of jumps, made 'with regularity and due deliberation,' and would seem to have been modelled on the gait of a kangaroo. At the foot of the snow they were saluted by the whistles of marmots, which suggested the signals of banditti. Sixt was regained after nightfall.

A second ascent* of the Buet was made in 1772 by Mons. De Luc, his brother, and M. le Ministre Dentan, from the châlets of Anterne by a different route, recommended by their guides. De Luc's object was to make further observations. Unluckily, in the châlets he broke his thermometer. The account of the accident is a specimen of the naïve enthusiasm of these early observers. 'I looked with emotion for my thermometer; it was broken. I gave a cry which shook the cabin.' Happily, the hygrometer survived to reach the summit, and afterwards to be honoured with a place in Queen Charlotte's apartments. The climbers took eight hours to reach the top, and on their return they were benighted and caught in a thunder-storm among the cliffs of the mountain. From this unpleasant situation they were rescued by the mistress of the châlet in which they had passed the previous night. Her courageous conduct and refusal to accept any recompense suggest to De Luc some of his usual reflections on the virtues

* 'Lettres sur les Montagnes,' De Luc, Geneva: 1778, in which a published account of the expedition by M. Dentan is also referred to.

of the mountaineer, and he concludes his story with the exclamation, 'Je me reprocherois toujours si Anterne pouvoit devenir un lieu fréquenté!' Elsewhere, however, with a not uncommon inconsistency, he pronounces the Buet to be 'the most 'engaging to a man of taste of all the mountains of the Alps,' and expresses a hope that some of his readers may undertake it.

The history of the Buet now brings a new person on the stage, the enthusiastic Bourrit. De Luc was an enthusiast in his love of the mountains, but he was a cool and somewhat affected lover in comparison to Bourrit: his homage, if genuine, is scarcely spontaneous, and his roar was always made up somewhat in Rousseau's vein. He indulges in long and shallow generalities about the plan of the universe or the virtues of the mountaineer; while Bourrit gives a truly-felt picture in words or a few homely touches. By the side of the in every way larger intellect of De Saussure, the rich man with the finest house in Geneva for his home and unlimited means at his disposal, the man of scientific grasp who used his advantages to attain definite and worthy aims, and wrote with the calm and measured precision of a man of science, if with some lack of imagination, Bourrit, perhaps, is no imposing figure. Yet in his own day he was a well-known character; his works obtained for him the title of the 'historian of the Alps;' and his enthusiasm drew from De Saussure the avowal that 'M. Bourrit mettait encore plus d'intérêt que moi à la conquête du Mont Blanc;' and from Goethe the description, 'Ein passionirter Kletterer.' His 'Voyage aux Glaciers' was translated into English and German, and every visitor to Chamonix was familiar with his name. Brought up at Geneva as a miniature painter, he does not seem to have found his vocation till the age of twenty-two, when a visit to Les Voirons suddenly awakened in him a passion for the mountains. Portrait-painting was henceforth given up. He obtained through his friends a post as precentor in the cathedral, which gave him enough to live on, and his abundant leisure was spent at the feet of his beloved mountains. He painted and sold his pictures, or illustrated his books with them, remarking complacently on their fidelity as compared with those of Gruner, whose artists 'were rather men of *taste* than draftsmen;' or with 'a plate of Mr. Vivaré, in London, representing the icy valley of Montanvert, in which there is hardly so much as one stroke taken from nature.' Bourrit dropped now and then his mite of observation into the hand of science. But in truth his pictures and his science were a pretence, or at least secondary. He goes to Chamonix and wanders up and down the flanks and side of

Mont Blanc, because to him high mountains were a feeling. In spirit he is the type and ancestor of the modern climber, who feels a passion which he can hardly explain for the free air of the heights and the glories of the eternal snows. He was the first victim of the true mountain mania, which has of late years become so common a disease. In the flesh, perhaps, Alpine clubmen would scarcely acknowledge him as a forerunner. Despite his six ascents of the Buet, Bourrit was clearly no great climber. His guides seem more than once to have made some excuse for leaving him behind. On the Chermontane Glacier he and his dog Loulou were sadly put out by some commonplace crevasses. Despite all his endeavours, he never stood on the crowning ridge of Mont Blanc, although, if we may believe his own estimate in such a case, he came within ten minutes of it. His disappointment was aggravated by the fact that one of his companions, an Englishman, Mr. Woodley, afterwards Governor of the Leeward Islands, reached the top. The third traveller was a Dutchman named Camper, who gave up before Bourrit, after having been nearly blown away. According to his own story it was only the skill of his twenty-two guides and the stoutness of his coat-tails which saved him from being carried up to heaven at once in a whirlwind. Bourrit's chief feat was the discovery of the Col du Géant, unknown to the Chamoniards of his time. The contradiction between Bourrit's own feelings and the language in his day hallowed by custom leads him constantly into amusing phrases. We hear of 'horribles beautés.' At one moment rocks are 'beautiful' and glaciers 'superb'; at the next we are told of the head of Val de Bagnes, the meeting-place of three glaciers, 'L'aspect de ce lieu est horrible.' In his own enumeration of the pleasures of the Alps we recognise his capacity to appreciate them, while elsewhere we smile at the imagination which ascribes the sentiments of a disciple of Rousseau to the shepherds of the Rheinwald.

In another matter Bourrit was, let us hope, a worthy forerunner of the Alpine clubman. Petty rivalries had but a small hold on his soul. So long as Mont Blanc is ascended, so long as his beloved mountains are visited and worshipped as he would have them, he is content not to be himself the first conqueror. Once only do we find traces of jealousy in his writings. A certain Mons. Bordier, on the strength of having seen one glacier, ventured to publish a 'Voyage Pittoresque' while Bourrit's was in the press. This was too much for the good man, and in his list of the men of scientific renown at Geneva poor Bordier only comes in with some others

as an author of works not worthy of particular mention. It is perhaps owing to this quarrel that the earliest statement of the glacier theory subsequently known as Rendu's was so effectually passed over that it escaped for many years the notice even of Professor Tyndall, generally an eager rehabilitator of neglected merit, and was not published at all in England until it appeared recently in his 'Forms of Water.' Yet Bordier's one glance had taught him more than the 'historian of the Alps' learned in all his rambles.

The motion of the ice was a problem rather shirked than explained in the old Swiss school of Scheuchzer and Hottinger. These physicists had marked the advance of the ice as shown by the progress of glacier-tables, the different layers of snow, less compressed, as they lay nearer the upper surface, the moraines. But they made little progress in putting together these scraps of observation, or in forming on them a reasonable theory, though here and there a half haphazard guess reads like a start on the right track. Sometimes we are told that the body of the glacier is formed by a collection of many winter coats, frozen one on the top of the other. We must assume that some wonderfully hard winter at some unknown date supplied the foundation. If this does not satisfy the inquirer, he is asked to bear in mind that the freezing of water in the crevices will increase the volume of the mass and lead to its extension, and also, that in consequence of the diminished pressure of the outer atmosphere, the air shut in the hollows of the ice will expand. Other writers, Altmann and Cappeller, tell us that the advance of the whole body is due to the weight of the upper snow-fields pressing upon what lies below, which is loosened from the rock by the constant melting of the under surface. But the nature of the advance, its steadiness, and, with certain qualifications, its uniformity were still undiscovered.

At the root of the old writers' difficulties, keeping them far from the right track, lay the firm conviction expressed by Sebastian Munster in 1543, and repeated constantly afterwards, that glacier ice 'is not very different from crystal.' He stated that 'glacier ice is neither snow nor ice, but hardened ice, which never melts on the mountain-tops, but, having for two or three thousand years clothed the heights and filled the hollows, has grown almost as hard as stone.'*

* This remark, I may point out, is some evidence against the supposed sudden growth of the glaciers, and the consequent destruction of the Viescherjoch and other passes.

In 1618, it is true, a sceptical Frenchman, encouraged by the retreat of the glaciers in his time, attacked the prevailing belief in some exceedingly dull verses:—

'Ecrivains qui couchez dans vos doctes esprits
Le crystal être glace, où l'avez-vous appris?
Si le crystal est tel, pourquoi dans les vallées
Les montagnes de glace en ce temps écroulées
Fondent-elles au feu?'

And so on for many pages. But the superstition was too strong to be slain by such a blunt weapon as his verse.

Yet if the old authors were ignorant of some of the properties of 'glacies inveterata' to which we attach most importance, they had an eye to its practical uses. Wagner, a Zurich doctor, who was inspired by the teaching of the Inductive Philosophers, 'inter quos magnus ille Angliæ cancellarius Franciscus Baconus Baro de Verulamo facilè principem obtinet locum,' to put together a medley of facts about the geography and natural history of the Alps—including, of course, some Phenomena and Lusus Naturæ—tells us 'nonnulli eâ refrigerant suum potum æstivo tempore.' It was also used medicinally in fevers and dysentery, and, according to the personal experience of a certain Schrœder, was proved efficacious 'in odontalgiâ pertinacissimâ.'

When we turn from such gossip as this to Bordier's little pamphlet we find ourselves in a completely changed atmosphere:

'Au premier aspect des monts de glace une observation s'offrit à moi et elle me parut suffire à tout. C'est que la masse entière des glaces est liée ensemble et pèse l'une sur l'autre de haut en bas, à la manière des fluides. Considérons donc l'assemblage des glaces non point comme une masse entièrement dure et immobile, mais comme un amas de matière coagulée ou comme de la cire amollie, flexible et ductile jusqu'à un certain point.'

There is a gulf fixed between such language and the old talk about ice being a form of rock-crystal, or even the crude theory of the dilatation of the ice (started by Hottinger and Scheuchzer, afterwards named after its expositor Charpentier, and lately recalled from the dead by the distinguished French architect Mons. Viollet-le-Duc), which rather shirked than explained the advance of the glaciers.

Mons. Bordier's sentences quoted above may only be the statement of an unproved hypothesis. But at a date when De Saussure and all his contemporaries were hammering along the old track he boldly started off in a new direction. He dis-

covered in a moment of happy inspiration the direction in which the key of the problem was to be sought, and gave a suggestion, which was worked out by Rendu and Forbes, and has deservedly gained him a place and a name among the questioners of Nature.

As an Alpine artist Bourrit deserves, in my opinion, our high esteem. He was the first draftsman of his time to draw mountains as they are. His predecessors, like the 'high æsthetic critics' of the present day, looked on them as rude masses, whose lines require to be reduced to simplicity and symmetry by the 'Man of Taste.' I know not whether any of his paintings still exist; they were numerous, and one of them was in the 'cabinet' of Louis XVI. at Versailles. The fourteen sketches intended to have been etched as illustrations to the English edition of the 'Journey to the Glaciers' are said to have passed into the hands of a gentleman in England. All we know about them is from Bourrit himself, who in the preface to the English edition of his 'Voyage aux Glaciers' tells us how they came to be made.

He observes 'that the first time he went into this romantic country the number and immensity of the objects which struck his sight at the same time presented difficulties it was impossible for him then to surmount, not having formed the least idea of them before he set out. His second attempt was more successful, when he not only determined his choice of the prospects, but was enabled to invent a new method of taking them with greater exactness.

'His end thus answered, he brought back fourteen sketches, which those who are pleased with these subjects, as well foreigners as natives, have judged worthy the attention of the curious.

'He takes upon him to assure the public that not only the larger masses are designed in these views, but that he has made out even the smaller, and that nothing is added from imagination only, as in almost* all the drawings of these places he has had an opportunity of seeing. That he had examined the print from a plate of Mr. Vivaré in London, representing the icy valley of Montanvert, of which he affirms there is hardly as much as one stroke taken from nature; and that another of the valley of Chamounix is equally false (he means the thirteenth plate in the account of the glaciers of Switzerland, by

* The author has excepted from this censure two views of Chamounix, drawn with great care and exactness by Mr. Jalabert. [Original note.]

Mr. Grouner); all which will not appear extraordinary, when we are informed that those gentlemen who had hitherto gone over the glaciers* were rather men of taste than draftsmen. He has experienced besides that one journey is insufficient to render drawings of this sort perfect. That he found it highly necessary to attend to the peculiar state and condition of the air and weather, of which we never can be secure, and which may prove very unfavourable to the designer upon a single visit or in one season only, though the completion of his sketches must depend upon their clearness and serenity. We go to the valleys . . . . are struck with admiration . . . . trace out some loose lines in haste . . . . add a few revising touches by way of memorandums, and at our return imagination does the rest.

'He makes no scruple to say that it is after this manner most of the views which accompany the description of the glaciers of Switzerland have been executed, and that of the seventeen plates which adorn this work there are only three to be relied on for their exactness; though he acknowledges, at the same time, they are engraved with taste.

'With respect to the species of engraving for his own drawings, he gives the preference to etchings (if they may be called engravings), as more in the style of a painter, and he apprehends the biting-in with aquafortis will have a freer effect in these subjects than the strokes of the graver. He adds another reason for the preference of etchings in this instance, which had more weight with him perhaps than the former—namely, that the etchings could be finished by himself. A love of truth and exactness seems to operate very powerfully with our author, and these could not precisely be attended to by a person who had not at least been present at the taking his designs; the engravings might have had an elegance and force, but a real connoisseur, as he very justly observes, will in this case give the preference to a plate of inferior merit in which he can depend upon the faithfulness of the representation.'

A catalogue of the sketches which were to have been etched follows this preface. One of them is oddly described as 'View particularly interesting to a Genevois, taken near the summit of one of the Needles,' probably the summit under the Aiguille de Charmoz, from which Coxe tells us 'a Genevese unfortunately fell and was dashed to pieces.'

Book illustrations are at the present day all the material we

* Glaciers are beds of ice accumulated upon the declivities between mountains. [Original note.]

have to judge from; but from these it is evident that if Bourrit was the ancestor of the tourist he was also the ancestor of the Alpine artist. As might be expected from a miniaturist the plates in his own book are laboured, and the foreground is beautified in the landscape gardener's style with 'bosquets.' He would seem to have had a failing for painting reflections in water, and in one instance he could not refrain from turning the Arve into a glassy stream. But the mountain outlines are generally firm and correct. For the period this is no slight praise, as may be seen by contrasting Bourrit's plates with the more ambitious illustrations to Albanis de Beaumont's folio 'The Pennine Alps.' In the drawing of Chamonix in that work Mont Blanc itself is ignored, and the Dôme and Monts Maudits reign in its stead. When we turn to the plates which Bourrit furnished to De Saussure we are astonished at the accuracy of topographical detail attained in such difficult subjects as the chain of Mont Blanc from the Allée Blanche, and still more at the power and vigour shown in many of the blotted-in sketches of individual peaks. The rock structure was all important for De Saussure's purposes, and doubtless the connection between them was most advantageous to Bourrit as an Alpine artist by necessarily fixing his attention on facts and forbidding any indulgence in prettinesses of the imagination.

Such was the knight who advanced to the attack of the Buet from the side of Val Orsine—the first inventor of that lately somewhat hardly-pressed resource of climbers the 'new route.' Bourrit was by no means the man to take an easy peak by surprise; his approaches were always made in due form. He summoned a council of the inhabitants of Val Orsine, which, as they did not know the name of Buet, naturally led to no result. Vexed at his failure, he rather hastily set off to make the tour by Cluses to Sixt, but meeting at Les Ouches the former curé of Val Orsine he was induced to retrace his steps. Accordingly a second council was held, and a hunter made the brilliant suggestion that possibly the peak Bourrit called the Buet, might be the Mortine of Val Orsine. Accordingly a start was made by the Valley of the Eau Noire, but a cloudy day discouraged the climbers and induced them to return. The impulsive Bourrit set off the second time for Geneva, got as far as Sallenches, and then found a clear sky irresistible, and rushed back to his mountain. This time all went well, and eight hours after leaving Val Orsine the party found themselves on the desired summit. Bourrit did not under-estimate the importance of his success, for 'from this moment he conceived the greatest hope for the history of the earth as well as for physical

science.' The view he describes with rapture; but the best proof of his enjoyment is the fact that he repeated the expedition no less than six times in subsequent years. His memory still lives in the name of 'Le Table au Chantre'—the Precentor's Table, given to a huge boulder under which he rested some distance below the summit on the side of Val Orsine.

His hopes for physical science were in some measure fulfilled by the ascent of De Saussure in the following year, 1770. This expedition does not present from the mountaineer's point of view any features worth record, although it furnished opportunity for a lengthy review of the structure of the granite peaks of the Mont Blanc chain and a digression on the rarefaction of the atmosphere.

It is worth notice that De Saussure on this occasion emphatically remarks that those only who have given themselves up to reflection on Alpine summits know how much deeper, wider, and more luminous their thoughts become on these heights than when the frame is confined within the walls of a study. Modern philosophers are inclined to take the opposite view, and M. Paul Bert, having in the course of his ingenious experiments introduced himself suddenly into a compartment of air rarefied to represent the atmosphere at 15,000 feet above the sea-level, found himself obliged to write under 7 × 13 'too difficult.'

Bourrit, whose relations with De Saussure now and then recall Boswell's with Dr. Johnson, had the satisfaction of supplying the *savant's* work with a panorama of the view from the summit. It is drawn in the old fashioned circle, but is fairly correct. The Bietschhorn is recognisable in 'la Fourche,' Monte Leone in the 'St. Gothard,' and the Weisshorn in the St. Plomb (*sic*). Bourrit very properly drew in the centre of his illustration the singular icicle-fringed wall in which the snow-dome of the Buet formerly broke away towards the north.* De Saussure thereupon went out of his way to say in a note that M. Bourrit was solely responsible for this feature, of which he had no recollection. The man of science in this instance proved himself less observant than the artist. I was inclined to think Bourrit had at any rate exaggerated the feature, but on reference to an old photograph I found he was more than borne out. Bourrit was generally, but, as I think, somewhat unjustly, accused of habitual exaggeration by his contem-

* Owing to the recent diminution of the glaciers, the cornice on the Buet has, within the last ten years, disappeared, and rocks have come to light in many places where before there was a sheet of snow or ice.

poraries. As a writer there is some colour for the accusation, though not so much as has been made out. If he saw a statue of Neptune in a crevasse on the Bossons Glacier, it does not require an exalted imagination to discover such freaks of nature. Many other people have fancied the haze of the S. horizon the Mediterranean. The first Frenchman who got up Mont Blanc went much further, and characteristically distinguished Venice floating like a halcyon on the waves of the Adriatic!

At the close of the century the Buet was the scene of a fatal accident. A young German (other accounts call him a Swede), Eschen by name, having incautiously ventured alone on the glacier fell into a crevasse and was killed. A judicious préfet, 'afin que ce malheureux accident servît de leçon aux curieux qui vont visiter les glaciers de Faussigny,' had a kind of urn or obelisk with a suitable inscription erected to his memory.

A M. Exchaquet discovered a third route to the top of the Buet starting from Servoz and passing by the Col de Salenton, which seems to have been the most used at the beginning of this century. Albanis de Beaumont in 1806 tells us that several ladies—his own wife among the number—had ascended the mountain. The ascent has now become a tolerably frequent excursion from Chamonix or Sixt. By the combination of De Luc's and Bourrit's routes travellers can pass easily in the day from one place to the other.

It has been reserved for M. Loppé to point out the best use of this noble belvedere. From no other point can the glories of sunset on a lofty summit be seen so easily. It is possible to run down in an hour to the little inn at Pierre-à-Bérard from the top, so that no one need have any fear of lingering to see the last rose tints fade off the cupola of Mont Blanc. Only those who by design or accident have reached a high peak or pass late in the day know how infinitely more beautiful the effect of the panorama grows as the shadows lengthen, and the poetry of evening supplants the prose of midday.

Mr. Longman, in his chapters on early mountaineering in the Pennines has kept his readers' eyes fixed for the most part on Mont Blanc and Monte Rosa. Considering his limits he has dealt with Mont Blanc with remarkable completeness, and his account can easily be supplemented by reference to M. Durier's excellent book by those who wish for fuller information. I may, however, take this opportunity to give a short account of the only early ascent of an Aiguille, and to say a few words as to the first glacier passes discovered in the

Mont Blanc chain, as well as to add some notes on early ascents in the less frequented portions of the Alps of Canton Valais.

In the Mont Blanc group the chronicler of early mountaineering finds his task comparatively a simple one. For the next eighty years the surprising success of Balmat and De Saussure rather confined than stimulated adventure. There are some legends of early ways across the glaciers to be sifted; but in peak-climbing it was long before the visitors to Chamonix showed any enterprise.

The 'famous Mont Blanc,'* as it soon became, was the one object of ambition to the exclusion of all its neighbours. To have climbed Mont Blanc was until quite recent days a feat in the eyes of the world. Whereas to scramble on to a lower crag, the name of which was unknown save to a few peasants, could not but appear the height of folly to men touched with 'the last infirmity of noble minds,' rather than the true scrambling mania to which self-satisfaction is a sufficient reward. If this was not enough, there remained the fact that Mont Blanc was, at least in appearance, the only one of the neighbouring peaks which was reasonably accessible. It was all very well for a party of tourists at the Montanvert to joke about the Aiguille de Dru, and pretend to start on a race for the summit;† but no serious attack on any Aiguille was made for fifty years after Mont Blanc had been proved accessible.

At last a traveller appeared who was bitten with the passion for the unknown. He fixed his eyes on the 'needle' most conspicuous from the valley of Chamonix.

Most visitors to that village must have seen in shop windows a highly-coloured picture representing a number of people scrambling with the aid of ladders about some icy rocks, and described as 'Première ascension à l'Aiguille du Midi.' At the end of July 1856 the Count Ferdinand de Bouillé, who had ascended Mont Blanc some years previously, and had, in the preceding year, explored the approaches to the Aiguille du Midi, arrived at Chamonix determined to make a serious attack on this peak. The enterprise was generally regarded in the village as hopeless. None of the Aiguilles had, at that time, been climbed: moreover Jacques Balmat, the hero of Mont Blanc, had, according to tradition, failed on this particular one. The preparations accordingly were most elaborate. The head-guide, Gédéon Balmat, was supported by three Devouassouds

* Map to Bourrit's 'Description des Alpes Pennines et Rhétiennes,' 1783.

† 'Alpine Journal,' vol. vi. p. 196.

and a Ducroz. Two porters and a miner, provided with all the tools necessary to fix irons in the rocks to serve as steps, were added to the party. Having passed the séracs of the Glacier du Géant with the help of their ladders, they reached the upper snowfields. No rock was attainable which could shelter them for the night. Accordingly they encamped in a broad and shallow névé crevasse. After drinking much and eating very little, they tried to sleep, but the fire lit on the snow kept melting the hearth, and had constantly to be attended to.

At 3 A.M., on August 5, they set off. In half an hour the Aiguille came into sight. At 5.30 they were at the base of the rocks. The description which follows is, like the familiar drawings which illustrate it, in the most thorough Prealpine style.

The ladders and the miner proved practically useless. The large party (eleven in all) clambered desperately up the perpendicular crags, above bottomless abysses, into which the least false step would have precipitated them, constantly harassed by the stones they threw down on one another. They arrived at last at a point only 80 feet below the highest peak. 'Stop where you are,' cried Ambroise Simond; 'there is the top, only one more couloir and arête: but beware of avalanches.' Simond and Alexandre Devouassoud then went on by themselves. After an absence of an hour, they reappeared 'pale and trembling.' They had reached the summit, and planted a flag on it, which was visible from the valley, but they painted in the strongest colours the perils they had overcome, concluding, 'C'est pour vous comme pour nous, M. le Comte, le drapeau y est, que voulez-vous de plus? Tout l'honneur n'est-il pas pour vous qui nous avez menés là?'

The Count took the view of the case so politely, and no doubt judiciously, suggested to him, and the whole party commenced the descent together. It was of course not without perils and hairbreadth escapes of its own.

The Count concludes, 'I doubt if there will ever be a second ascent. All my guides, and they were the bravest men Chamonix possesses, declared that not one of them would ever consent to expose himself to risks of death so certain as those they had been brought thus near to.'*

Prophecies of this sort have been frequently made, but rarely fulfilled. In this case the ascent was repeated by W. Abercromby in 1865,† and in 1869 by Messrs. H. Walker and

* 'Les Fastes du Mont Blanc,' pp. 121–132.

† 'Alpine Journal,' vol. v. p. 44.

Foster,* with Jacob Anderegg and Hans Baumann. The following is their description of the rocks which foiled the Count. 'We had a climb of about 700 feet to the summit. Baumann's verdict was that, though steeper than the Matterhorn, they afforded better climbing; but this will account for our not finding them altogether easy. Their main fault was a tendency to run into large, rather rotten, slabs, taxing Walker's and my length of limb to the utmost, and exciting wonder as to how Baumann's shorter legs managed them at all. The party descended the face of the mountain overlooking the Glacier des Bossons. The whole of the descent was extremely dangerous, owing to the constant fall of snow and stone avalanches, but the inn at the Pierre Pointue was finally reached in safety.'

We have taken the Aiguille du Midi out of chronological order, and in treating of the great pass across the glaciers we have to go back to the days of De Saussure.

It has been generally assumed, I think, that the Col du Géant was known in the country before it was visited by the Genevese explorers of the last century. In support of its antiquity there can be brought forward certain marks on maps which have been supposed to indicate a pass, and a persistent, if vague, report among the people of Chamonix, which was mentioned to Pococke and Wyndham in 1741, and certainly credited by Bourrit, the reopener of the Col. On the other hand, it may be said that a diminution of the glaciers does not necessarily make icefalls easier, indeed very often has exactly the contrary effect, that the rumour of old passages of the Col du Géant hangs together with several legends, some of which are manifestly absurd; while as for the maps, M. Durier has pointed out that the supposed track is nothing more than the frontier line between the Valais and the Duchy of Aosta. It may further be urged that the flanks of Mont Blanc are much more easily turned even than the ice-fields of the central Pennines, and that there was little motive, with the St. Bernard and Col de Ferrex at hand, to adventure on the glaciers. That the rumours as to the upper region were far from being always well-founded is proved by the assertion made to Bourrit, that the Glacier d'Argentière was connected at its head with the Mer de Glace. So formidable is the ridge between them that it was not traversed till 1876.

Still it is to be borne in mind that the chamois hunters of Courmayeur can hardly have failed to scale the mountain

* 'Alpine Journal,' vol. v. pp. 145–154.

slopes above Mont Fréty, and that a path may have been found by them and used on rare occasions by their fellows, by smugglers or refugees. Such use would be amply sufficient to account for the growth of a legend,* and I have no doubt that to this extent the Col was used at some time in the seventeenth century. But the old pass had been entirely lost by Bourrit's time. Professor Forbes has shown this in the following passage:—'The passage of the Col du Géant appears to have been reckoned impracticable as late as 1781. M. Bourrit, writing in that year, and speaking of the aspect of that branch of the Mer de Glace of Chamouni called the Glacier du Tacul, says, with respect to the crevasses:—"Elles sont si effroyables qu'elles font désespérer de retrouver jamais la route qui conduisait à la Val d'Aoste."† De Saussure, in the second volume of his travels, speaking of the Glacier du Tacul, does not say one word of this historical passage of the Alps, though he seems to have thought it just possible that the summit of Mont Blanc might be gained in this direction;‡ and in the fourth volume, written some years later, when about to give an account of his memorable residence on the Col du Géant, he speaks of "la route nouvellement découverte," § from Chamouni to Courmayeur. This was in 1788.'

M. Bourrit's passage of the Col du Géant was made in 1787, the year previous to that of De Saussure's famous residence on the summit of the 'Grand Col.' The King of Sardinia had heard a story which Bourrit tells us was 'assez repandue' both at Turin and Geneva, that a man had passed from one town to the other 'through the gorges of the Alps' in thirty-eight hours; and he questioned Bourrit on the subject. For a King, Bourrit was naturally ready to confront any dangers, and having come to the conclusion that the only

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* See Bourrit's 'Description des Cols,' p. 187, for the arguments in favour of the existence of an old direct pass from Chamonix to Courmayeur. The chapter contains many doubtful statements and false conclusions. The following passage, however, is noteworthy: 'Quand j'ai décrit dans mon premier livre, publié en 1793 (he is writing in 1803), les divers glaciers qui pendent le long de la vallée de Chamounix, je n'en comptai que quatre, celui des Bossons, des Bois, de l'Argentière et du Tour; mais depuis ce temps le théâtre a bien changé de décoration, on en voit deux nouveaux qui sont ceux de Griez et de Tacona; on voit même celui-ci déjà si bas qu'il fait craindre aux habitans qu'il ne s'empare bientôt des possessions qui en sont voisines.' He goes on to relate a story of a passage disused for fifty years, having formerly existed over the Glacier du Tour to the Col de Ferret.

† Bourrit, 'Voyages,' i. 106.

‡ Section 629. § Section 2025.

possible short cut lay over the Mer de Glace, he determined to try it. This is his own account. But if the desire to satisfy royal curiosity was the pretence of his expedition, its real cause was doubtless some information obtained at Chamonix, that a pass had lately been found. It must strike every reader as highly improbable that guides, in cloudy weather, such as Bourrit describes, would have pressed on boldly to the crest of the chain had they not been very certain of what sort of descent they would find on the other side. And from other sources * we learn that Marie Couttet, one of Bourrit's guides, had in 1786 actually reached the Col from Courmayeur in company with an Englishman, although no attempt had been made to descend to the Mer de Glace.

Unlike De Saussure, who was compelled to find a way (as the writer was in 1863) along the dangerous rocks of La Noire, Bourrit and his son were led by their guides through the séracs, 'forced to descend into crevasses so deep that they could hardly see the sky. They a hundred times thought themselves at the point of death. But, while four of the party began to despair, Cachat le Géant † restored their courage by his exertions and his boldness, and they succeeded in surmounting all the dangers of their position.' Bad weather overtook them as they approached the pass; they were encompassed first by clouds, then by a drifting snowstorm. One of their porters fell into a concealed crevasse, but fortunately the ladder he carried held him suspended over the gulf. The fatuity of the early explorers in their very partial and careless use of the rope is astonishing. De Saussure as nearly as possible lost one of his porters in the same place by a similar accident.

A happy change in the sky relieved their distress. The wind drove away the storm, they saw close at hand the strait through which they had to pass, and soon had the satisfaction of looking down on the Italian mountains and the town of Courmayeur, lit up by a bright sun. They do not seem to have found any difficulty whatever in the descent, and reached Courmayeur by moonlight, after being out seventeen hours, having started apparently from the Montanvert.

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* Ebel's Guide, French Edition, Paris 1823.

† This Cachat was one of the most famous of the early guides. Bourrit's other guides were Charlet-Mercure, Tournier l'Oiseau, and 'le grand Jorasse.' The appearance and character of the last-named guide are described in words which will remind many readers of one of the best men now on the Chamonix roll:—'Le grand Jorasse dont l'âme sentimentale et délicate contrastait avec sa figure gigantesque et la simplicité de ses manières.'

De Saussure's sojourn on the Col du Géant has been well described by Professor Forbes, from whom I again quote:—'De Saussure and his son arrived at the Col du Géant on the 3rd July, 1788, accompanied by a number of guides and porters, who carried two tents, and the utensils required for a long residence, having slept by the Lake of the Tacul. On the 19th of the same month he descended on the side of Courmayeur, having remained seventeen days at this great elevation. It may be believed, that those guides who remained to share the wretched accommodations of this truly philosophical encampment, were not a little exhausted by the tedium of such prolonged hardships. De Saussure states, that he believes they secreted the provisions appropriated to the day of their descent in order to render impossible a prolongation of their exile from the world. The astonishment of the country people on the side of Piedmont, whence the position of De Saussure's cabin is distinctly visible, it may be believed, was great; and it naturally showed itself in the form of superstition. It is still well remembered at Courmayeur that that month of July having been exceedingly dry, the report arose, that the sorcerers who had established themselves on the mountain had stopped the avenues of rain, and that it was gravely proposed to send a deputation to dislodge them by force,—a task, probably, of some difficulty, for a few men could defend the Col du Géant against an army.

'If we look to what was accomplished by these indefatigable observers, we shall find that it was fully commensurate to the efforts made to attain it. Scarcely a point in the "Physique du Globe" which was not illustrated by their experiments. Geology, meteorology, and magnetism, were among the most conspicuous.'

Professor Forbes tells us in a few words what was commonly known twenty-five years ago of other passages across the chain of Mont Blanc:—'There is said to be a passage which has been effected from the Glacier de Miage, which penetrates very deeply indeed on the south side of the chain of Mont Blanc, to the valley of Contamines, by the glacier also bearing the name of Miage, on the north side; but I have no accurate information of its accomplishment, and the appearance of the head of the glacier on the south side gives little encouragement to the attempt.

'One other passage of the chain has, however, been made, and that is by the Glacier of Le Tour, near the Col de Balme, descending by the Glacier of Saléna into Val Ferret. This was discovered a few years since by a guide of Chamouni,

named Meunier. It cannot be very long, and is probably not very dangerous.*

'Such are the only known passes of this wild country.'

As to the two passes mentioned by Professor Forbes, a few words must be added. The Col de Miage was first crossed at the end of the last century by a party of peasants, one of whom perished in the 'bergschrund,' or ice-moat, at the base of the wall of rock which forms its N. side.† It was also traversed by a hunter named Mollard in 1849. Like many other glacier-passes, it has its traditions. 'Once upon a time,' the inhabitants of the nearest village on the Savoy side are said to have been in the habit of walking over the chain to attend mass at Courmayeur, and so regular were they that a part of the church was reserved for their use. This legend is entirely unconfirmed by any good evidence. During the French Revolution, an émigré is stated to have passed the glacier with 10,000 francs in gold about him. The first authentic passage by a traveller was made by W. Coleman (the author of the beautifully illustrated work, 'Scenes from the Snow-fields') in 1858. He had reached the top from the Swiss side in the previous year, too late in the day to cross. His successful passage was made from the Italian side.

Professor Forbes, with his constant guide, Auguste Balmat, and Michel Charlet, was himself the first traveller to cross from the Glacier de Tour by the Glacier de Saléna to the Swiss Val Ferret.‡ He descended a steep snow-wall from the Glacier du Tour to that of Trient, and then, turning to the right, passed through the gap since known as the Fenêtre de Saléna. Owing to mists the party found some difficulty in the descent. Mr. Wills's passage of the same glacier in 1857 is the subject of the first paper in 'Peaks, Passes, and Glaciers' (first series).

Mountain exploration in the remoter parts of the Pennine range was pursued at long intervals of time and with little persistence of purpose until General Dufour's map on the one hand, and on the other, the impulse given to climbing by the formation of the Alpine Club and its publications, led to the systematic investigation of districts and the invention of new 'high-level routes.' If the following pages appear desultory and fragmentary it is partly the fault of the subject. I shall

* There was a tradition of an old pass over this glacier, as well as over the Mer de Glace. See Bourrit's 'Description des Cols,' p. 187.

† Coleman, 'Scenes from the Snow-fields,' p. 38.

‡ 'Norway and its Glaciers,' &c. By J. D. Forbes.

first give some notes on the early ascents of peaks between the Lake of Geneva and the Simplon.

In 1784 M. Clement, curé of Champéry, reached the top of the Dent du Midi.

Behind the dreary lake and hospice of the St. Bernard rises a steep-sided mass of rock seamed with ice and capped with a pure snow-dome—the Mont Velan. It had been attacked before, but the first man to set foot upon its summit was a Prior of the monastery, Murith by name. A description of his ascent is found in Bourrit's 'Description des Alpes Pennines et Rhétiennes,' Geneva, 1781.

M. Murith set out on August 31, 1779, with two chamois hunters from the Alp Tzouss, two hours from Bourg St. Pierre, and reached by rocks and grass slopes the Glacier de Proz which surrounds the ridge of the mountain. On seeing the formidable steepness of the peak the hunters lost courage, and one of them separated himself from his companions. The second, Genond by name, remained with the Prior, and they attacked together the face of the Velan. After an hour and a half they hoped they had left behind the greatest difficulties, when a wall of snow, 40 feet high, shook their courage. With the help of their iron-spiked sticks and crampons the obstacle was overcome. Their way was still dangerous but less difficult. After an hour's further progress they drew near the top. But before them a smooth vertical ice-wall presented no hold either for hands or feet. The hunter declared he had enough, and would go no further. Thereupon the spirited Prior produced a hammer and knocked out steps in the wall. With this assistance they both scaled it and found themselves only separated from the snow dome by broken rocks. The climbers were rewarded by a clear view, and M. Murith was able to take observations with a thermometer and barometer on the top.

They looked in vain for another way down, and returned to St. Pierre by the same route in seven hours.

In 182–(?) an Englishman climbed the Velan. In 1826 two monks, MM. d'Allèves and Marquis made an ascent which entitles them to the respect of some of our members, for it is the first recorded as 'without guides.' They left the hospice at 2 A.M., and climbed by the Valsorey valley and glacier to the summit, which was reached about midday. Descending to the ridge that separates Val d'Entremont from the Etroubles valley they returned by 8 P.M. to the hospice. Since this date the mountain has been frequently ascended.*

* Studer 'Über Eis und Schnee,' vol. ii. p. 263.

It was not till 1851 that Herr Studer ascended one of the lofty snow peaks which overlook the Corbassière Glacier. The summit attained was named the Combin de Corbassière to distinguish it from the true, and 2,000 feet higher, Grand Combin, known in the Val de Bagnes as the Grafféneire. In 1856 he was followed by Messrs. W. and C. E. Mathews, who, intending to attack the higher peak, were misled by a local guide.

On July 20, 1857, three hunters from Lourtier, in the Val de Bagnes, reached the upper ridge of the Grand Combin. Whether they attained either of its peaks is somewhat uncertain. On August 19 one of these men led Mr. W. Mathews to the saddle between the two summits. The local guide then led up the N. peak, which proved to be the lowest. Such a mistake could hardly have been made by a man who had previously reached either top. The S. and (by 17 mètres) highest peak, distinguished by Herr Studer as the Aiguille de Croissant, was not attained till July 30, 1859, by M. Deville, with the brothers Balley of St. Pierre.

It is only quite of recent years that the topography of this great glacier-group has been known with any approach to accuracy. Writing in 1859, Herr Studer spoke of the Grand Combin as on the boundary between Valais and Piedmont, whereas, as was proved in 1861 by the discovery of the Col du Sonadon, it lies some distance N. of it. The early explorers made the châlets of Corbassière their base of operations. It has since been found that the Valsorey valley, near St. Pierre, is the best starting-point for the ascent of the Grand Combin, which has of late years been successfully attacked from several directions. Several other ways over the glaciers in this region were known to hunters or smugglers, such for example as the Col de Collon, a track over the glaciers from Val d'Herens to Val de Bagnes, and the Col du Mont Rouge, first described by Professor Ulrich and crossed in 1856 by Messrs W. and C. E. Mathews.

Mr. Longman has told the story of Monte Rosa and its neighbours, and we now make a wide leap to the Saasgrat.

The Ulrichshorn is called after its conqueror, Professor Ulrich, who with Herr Imseng, Franz Andermatten, J. Madutz, S. Biener, and Mathias zum Taugwald made the first ascent on August 10, 1848, at the same time with a new pass over the Ried Glacier from Saas to St. Niklaus. The party climbed by a steep glen to the Hochbalen Glacier and then over the rocks of the Gemsistock. In six hours from Saas the névé of the Ried Glacier was reached. A steep

snow-slope, 1,000 feet high, but in perfect condition, led to the top of the peak, then known as the Kleine Mischabel. They descended partly by the Ried Glacier, partly by the rocks on its right bank to the Schalbetalp, whence a steep path leads down to St. Niklaus.*

In the previous year, 1847, Professor Ulrich had crossed the Täschjoch or Allalein pass, a glacier route occasionally used by shepherds or hunters from the Mattmark See to the Vispthal. In 1856 the Allaleinhorn fell before Mr. E. L. Ames with Andermatten and another guide. From the pass they ascended a long snow-slope which, narrowing as they went, brought them to a saddle near the end of a southern spur of the Allaleinhorn. Some stiff rock climbing along the ridge led them to the peak in 2½ hrs. from the pass.†

In 1856 an Englishman, Mr. Chapman, attained one of the minor summits of the Mischabel from the Saas side.‡

On the west of the Simplon pass rise the bold peaks of the Fletschhörner, falling on the opposite side into the Saas valley. They were among the first to attract Alpine explorers. On August 28, 1854, the Rossbodenhorn, the northernmost point of the group, was climbed from Simplon by the Pfarrer, Herr Amherdt, with two of his parishioners.

In 1850 Franz Josef Andermatten found a way from the Zwischbergen pass over the Thälihorn to Simplon. The Weissmies, the highest peak of the range, is said by Herr Studer to have been reached in 1855 by a Swiss, Dr. Häuser of Zürich, over the Trifthorn and glacier. He was followed in 1859 by Messrs. L. Stephen and Hinchliff. The mountain is now sometimes crossed from Simplon to Saas.

The third and central peak, the Laquinhorn or southern Fletschhorn, is one of the few Alpine peaks which has a legend. The story relates that the Fletschalp had been promised as a reward of his prowess to the first man who should climb it. A peasant was found to attempt the deed, but when he got high on the mountain, he was terrified at the terrible ruggedness and the vast ice slopes of the upper region. A ghostly voice fell from the top commanding him to bring with him a cat, a dog, and a hen. On the following day he did as he was bid, but the animals one after the other fell over the precipices; whirling snow encompassed him, so that all further advance was impossible, and he only regained the valley after great

* Studer, 'Über Eis und Schnee,' vol. ii. p. 57.
† 'Peaks, Passes, and Glaciers,' 1st series, p. 226.
‡ Ball, 'Western Alps,' p. 321.

difficulty. Although greeted with jeering and contempt he waited for a favourable day to again set forth with his three animals. This time he got still higher than before, but again the three animals came to a sad end, and a terrible headache prevented the peasant from winning the summit. On a glorious clear morning he was once more seized by an irresistible desire to measure himself again with the mountain even at the cost of his life. He bound an iron band across his forehead (possibly to counteract the effect of the rarity of the air), and since his heart was also of iron, he gained the very top of the hitherto inaccessible peak, and the Fletschalp became his reward.*

On August 29, 1856, a party of nine, Mr. Ames and several friends, Herr Imseng and M. Andermatten reached the top in seven hours from the Triftalp. The ascent was made by a long rocky ridge, which was tedious, but nowhere very difficult to climb.†

Mont Leone is to the Simplon hospice what Mont Velan is to the St. Bernard. Between 1840 and 1850 Professor Forbes with a monk, Herr Alt, had climbed one of its spurs, the Wasenhorn. In 1850 Professor Ulrich, Herr Studer, and Herr Siegfried reached the W. peak from the N. The higher eastern summit was not gained till 1859, when it was visited by some Swiss engineer officers, and a few days later by Herr Weilenmann, an adventurous Swiss mountaineer, known as the author of some spirited volumes of Alpine adventure.

Readers who wish to learn more as to the state of the country between the Rhone and the crest of the Pennines, and how much was known of the mountains before the Alpine Club invented the high-level route, will find information in the works of Simler, Altmann, De Saussure, Frobel, Engelhardt, and Bourrit; or, coming to a later date, in those of Toppffer, Brockedon, Forbes, Latrobe, Studer, and the early editions of Murray's 'Handbook.' A more exhaustive catalogue is to be found in Studer's 'Physische Geographie der Schweiz.'

I do not propose to enter into the early history of the Pennine passes, but the following passage taken from Tschudi's 'Gallia Comata,' published about 1660, is worth quoting as the original authority for the vague statements made in many modern works:—

'Silvius Mons von Teutschen der Gletscher genannt von wegen dass ein ewiger Firn und Gletscher auf seiner First ist

* Studer, 'Über Eis und Schnee,' vol. ii. p. 238.

† 'Peaks, Passes, and Glaciers,' 1st series, p. 206.

bei vier Italischer Meilen breit, der nimmer verschmelzet oder abgeht darüber man zu Sommerszeit ohn Unterlass zu Ross und zu Fuss wandelt ohne Sorgen. Dieser Berg ist fast hoch, scheidet Sedunos oder Wallis, und Salassos, die Augstaller, von einander. Ob dieser Berg-first thielet sich die Strass zu oberst auf aller Höhe in zwei Thäler in das Augsthal hinab zu ziehen, das eine, Valle Tornenza genannt, ist zu rechter Hand, gehet richtig hinab zu dem Städtle Castellum (Châtillon); das andere Thal, Aiaza genannt, zur linken Hand gelegen, gehet nach Eporedia, teutsch Livery (Ivrea). Ueber diesen Berg Gletscher kommt man in Wallis auch in zwei Thäler das eine zur Linken, Vren-Thal (Erin) genannt, gehet richtig nach Sitten, das andere zur Rechten, das Matt-thal genannt, darinnen das Wasser Vischbach (Visp-bach) entspringet, gehet hinab gen Visp.'

It is I think clear from this passage that the St. Théodule and Cimes Blanches and, perhaps, the Col d'Hérens were in common use, and that horses were constantly taken over them. Doubtless such an assertion will, as to the latter pass, appear absolutely incredible to most readers. But my Caucasian experience leads me to the conclusion that the present performances of horses in the Alps are very far from representing equine capacity at its highest development. I have actually seen in the East horses cross a pass equal in difficulty to the Col d'Hérens, and there seems no reason, therefore, why they should not, before there were any good roads to make them lazy, have done as much in the Alps.*

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## The Oetzthaler Ferner in 1875. By Russell Starr.

HAVING crossed the Stelvio in very good weather, we spent Sunday at Nauders, where we had an interview with Herr Senn, formerly the parish priest at Vent. He was most polite and obliging, giving us much useful information as to guides, routes, &c., and was quite delighted to find that my companion was acquainted with Mr. Tuckett, who, he said, was his 'lieber Freund.' His only regret was that he could not accompany us in person, having arranged to spend a few days mountaineering with Dr. Petermann, of Frankfort—a regret we fully

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* I propose in another paper to condense two accounts of early passages of the Simplon by English travellers. This will be followed by chapters on 'The Alps of the Forest Cantons and Glarus,' and on 'The Alps of Graubünden.' Any curious information as to old books or old ascents which members may have to contribute will be gladly received.