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THE AIGUILLES D'ARVE. By W. A. B. COOLIDGE.

MANY of those who have recently visited the mountains of Dauphiné have doubtless entered or quitted the district by one of the passes, most probably the Col du Galibier, which lead from La Grave to Saint Michel on the Cenis road. They can scarcely fail to have been struck by the number of peaks and ridges seen on all sides during their excursion; yet though the group of mountains between the Romanche and the Drac has begun at length to attract climbers, the district just to the north, between the Romanche and the Arc, has been, with so few exceptions that they only serve to prove the rule, most undeservedly neglected. It is true that it includes no peaks which can rival in height the giants of the Ecrins massif. Still there are at least half a dozen summits which exceed 11,000 feet, and the views which they command are exceedingly interesting. Mr. Moore, indeed, in his graphically written book, recommended all travellers who are fond of gorgeous views and mild climbing to try to unravel the intricate topography of this district; but his hint seems to have fallen on barren ground, as the only expeditions made therein by English mountaineers previously to ours, are, for the most part, of earlier date than Mr. Moore's own explorations. In 1841 (I believe), Professor Forbes crossed the Col de l'Infernet; in 1860, Mr. W. Mathews took the Col d'Arve and the Col du Pré Nouveau on his way to Dauphiné. In 1863, Messrs. Bonney, W. and G. S. Mathews crossed the Col de Billan and Col du Couard, and made the first ascent of the northern and highest summit of the Grandes Rousses. In June 1864, Messrs. Moore, Walker, and Whymper made the first passage of the Col des Aiguilles d'Arve, and the first ascent of the southernmost of the three Aiguilles de la Sausse; a few days later the same party crossed the Col du Galibier. In July the same year, Messrs. Bonney and Taylor crossed the

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Col de Goléon. Later in 1864, Mr. C. Oakley made an unsuccessful attempt to ascend the central Aiguille d'Arve from the Col of the same name,* and made the first ascent of the southern peak of the Grandes Rousses from the 'Col de Clavans' (perhaps the same as the Col du Pré Nouveau) on his way from St. Jean d'Arve to Freney.† Finally, Mr. Moore crossed the Col de Goléon in the winter of 1867. So far as I am aware, the above list is exhaustive.

In the course of our explorations of the main group, our attention has naturally been attracted to this minor chain; and I propose in the following pages to give some account of our excursions therein during the last six summers.

The limits of this group (called by Mr. Ball the Oisans district), are on the north, the Arc; on the south, the Romanche; on the east, the Col du Galibier (which is generally considered the limit between the Dauphiné and Cottian Alps); and on the west, the Isère. Within these boundaries, there are three main ridges, running, roughly speaking, from north to south, the highest summits of which (reckoning from east to west) are the Aiguilles d'Arve, the Grandes Rousses, and the Belledonne. Of these, the best known is the last named, culminating in the Grand Pic de Belledonne (c. 3,000 mètres), which up to the spring of 1875 had been reached but twice—in 1859, and in 1873. The other points of the range are the Rocher Blanc (2,931 mètres), the Rochers de l'Argentière (or de Billan) (2,917 mètres), the Rocher d'Arguille (2,898 mètres), the Bec d'Arguille (2,887 mètres), the Glésin (2,827 mètres?), and the Pic du Frêne (2,808 mètres). The Société des Touristes du Dauphiné has devoted itself to a complete exploration of this group; and as it is as yet quite unknown to me personally, I will content myself with a reference to M. Joanne's *Itinéraire du Dauphiné*, first volume, and Mr. Ball's 'South Western Alps,' pp. 72-77, 104-5.

Separated from the chain of the Belledonne by the valley of the Olle is the mass known collectively as the Grandes Rousses, which is connected with the parallel chain of the Aiguilles d'Arve by an undulating shaly ridge, over which several passes lead from the Maurienne to Dauphiné. It is to these two ranges that I intend to confine my remarks in this paper.

The most important question to the intending explorer of a district is whether a good map of it has been published or not. The 'Feuille Briançon' (published 1866) of the great French map on the scale of $\frac{1}{800000}$ takes in the southern fringe of our

* Moore, p. 14, note.

† Bonney, p. 24, note.

district, which is delineated with the usual accuracy (save in the neighbourhood of the Meije) of the French engineers. Bourcet's old map (published 1760) gives the general outlines of the orography with some approach to correctness; the Sardinian map is, I believe, very incorrect, and the small map in 'Joanne' is useless for practical purposes. The 'Feuille Saint Jean de Maurienne' (late Allevard) has not yet been published (October, 1876); but through the unremitting exertions of my friend, M. Lionel Dècle, of the French Alpine Club, I have been able to procure a lithographed copy of this sheet; (that portion of it which includes the Grandes Rousses has already been published, in outline, by Mr. W. Mathews in the first volume of the 'Alpine Journal,' and in detail by M. Puiseux in the second volume of the 'Annuaire' of the French Alpine Club,) by means of which, supplemented by my notes and recollections, I hope to give a tolerably accurate description of the district.

Before entering on the strictly mountaineering part of my paper, it may be well to give a slight sketch of the orography of the group, which I hope may be of value to future travellers, and which all narrow enthusiasts devoted exclusively to climbing can easily skip. I cannot express my own position better than in the words of Mr. Bonney, as one of 'those who are never quite contented with an Alpine view, however beautiful, until they are able to identify every summit in it.'*

The ridge of the Aiguilles d'Arve runs from NE. to SW. Rising between St. Jean de Maurienne and St. Michel, the first prominent point is the Pointe St. Laurent (2,550 mètres), then come the Pointe d'Emy (2,902 mètres), Pointe de la Grande Chible (2,930 mètres?), Roche du Bond Basse (2,996 mètres). (This last name is very indistinct on my copy of the map.) It then sinks suddenly to the Gros Crenier (2,390 mètres), and rises again gradually through the Mont Lellard (2,836 mètres), a nameless peak of 3,030 mètres, and the Aiguille de l'Épaisseur (3,241 mètres). From the east side of this chain, a number of minor ridges diverge, through two of the valleys formed by which passes are marked on the map (Col des Masses, and Pas du Gros Crenier) to the great mass of rolling pasture, which extends on the west down to the united stream of the Arvant and the Arvette. The main ridge bends nearly due west from the Aiguille de l'Épaisseur to the lowest of the Aiguilles d'Arve (c. 3,450 mètres), sending down to NW. a spur culminating in the Mont Falcon

* Preface, vi.

(2,833 mètres), which I shall have occasion to mention hereafter; and then resumes its southerly direction. The lowest of the Aiguilles is just at the angle. Then come the central (3,509 mètres) and southern Aiguilles d'Arve (3,514 mètres), the highest summits between the Romanche and the Arc. Just to the south of the last-named Aiguille, the ridge joins the watershed between Dauphiné and the Maurienne, which runs SE. through the Pointe de l'Argentière (3,240 mètres), then SW. to the Pic des Trois Evéchés (3,120 mètres), finally, nearly due E. to the Pic Blanc du Galibier (2,956 mètres), and the Col du Galibier. The Col des Trois Pointes lies to the NW. of the first of the three last-named peaks, and the Col de Goléon to the SE. Beyond the point of junction, the watershed runs S. to the Col Lombard, and SW. to the three Aiguilles de la Sausse (—, 3,304 mètres, 3,321 mètres), from the southern point of which an arête runs SE. to the Aiguille de Goléon (3,429 mètres), forming the western boundary of the valley through which the routes of the three Cols named above descend. The watershed now turns W. to the Col de Martignare, then NW. to a peak marked 2,875 mètres, the Pic Buille d'en haut, and another point of 2,780 mètres. Then comes the Col de l'Infernet (2,690 mètres), from a knoll beyond which a spur extends to S., including the Pic du Mas de la Grave (3,023 mètres) and Cime du Rachas, and spreading out into the Plateau de Paris above La Grave. NW. of this knoll is the Col d'Agnelin (which, according to the description in 'Joanne,' should be placed farther to the NW. than where it is laid down on the map), and the Cime des Torches (2,957 mètres). A spur projects from the later summit due north, ending in the Pointe du Châtel opposite St. Jean d'Arve; an intermediate summit (over 2,800 mètres) is called by M. Studer Pointe de la Bâtiâ. The watershed then bends to SW., then NW. through the Col du Pré Nouveau (de la Bâtiâ or des Berches), the Col Perrant (M. Studer's Col de la Frattière), to a summit above the Glacier de Saint Sorlin. Once more it turns to the S. as far as the Cime du Grand Sauvage (3,229 mètres), then due W. to the N. summit of the Grandes Rousses, locally known as the Pic de l'Etendard (3,473 mètres). It now runs again to N. through the Cime de la Cochette, across the Valley of the Olle, and joins the ridge already described a little to W. of the Rochers de l'Argentière, the crest of which it follows till just S. of the Pic du Frêne, when it bends to W. to the Col de Bourbière and follows the Bens torrent to its junction with the Bréda at Le Moutaret, a little to N. of Allevard. From the Pic de l'Etendard the

range stretches to S. through the Sommet Sud (3,473 mètres), a point marked 3,332 mètres, and another marked 2,995 mètres, to the pastures above Bourg d'Oisans and Clavans.

The Glacier des Rousses extends from N. to S. nearly the whole length of the west side of the range; below it is a curious rocky shelf, dotted with innumerable lakes which falls steeply on the W. down to Vaujany and Allemont. At the upper end it communicates with the valley of the Olle by the Col du Couard, and at the south extremity the remains of a paved track lead to Bourg d'Oisans by the Lac Blanc and Huez. Two ridges, one stretching W. from the Rochers de l'Argentière, over which lies the Col du Glandon from Allemont to La Chambre; and the other the N. spur of the range of the Grandes Rousses, over which lies the Col de la Croix de Fer (M. Studer's Col de la Petite Olle) from Allemont to St. Jean d'Arve, merge in a great expanse of undulating pasture land N. of the valley of the Arvant, over which lies the Col d'Arve to St. Jean de Maurienne. This plateau rises on the E. to the peak of the Mont Charvin, and then sinks to the united streams of the Arvant and the Arvette, along which a path (soon to be a char road) leads from St. Jean d'Arve by Entraigues, Montrond, and Albiez to St. Jean de Maurienne. In like manner, the valley of Valloire E. of the Aiguilles d'Arve, is closed to the N. by a ridge from the Roche Château (2,924 mètres), over which lies the path to St. Michel by the Chapelle des Trois Croix (or Col de Valloire), the new char road, not quite finished as yet, winding round the slopes rather more to the NW.

Some idea may perhaps be gained of the general direction of all these ridges from the admirable panorama of the view from the Col d'Arve given by M. Studer, in illustration of his valuable paper on the Grandes Rousses in the ninth volume (for 1873-4) of the 'Jahrbuch' of the Swiss Alpine Club.

Our first visit to this district was in the early summer of 1870. Having no large map, and finding very scanty hints in the guide books, it seemed as if we could not do better than follow the route of Mr. Moore's party to La Grave by the Col des Aiguilles d'Arve and the southern Aiguille de la Sausse. With this intention we reached St. Michel en Arc direct from Paris on June 22, and the same afternoon walked to Valloire by the Chapelle des Trois Croix. The party consisted of our two selves and Tschingel, besides Christian Almer, his son Ulrich, and Christian Gertsch, the strongest and most willing porter we have ever met with, who was unfortunately killed by a stone on the upper glacier at Grindelwald, in the summer of 1875.

We started next morning at 8.10. A.M., reinforced by a porter, Nicolas, a mule led for some distance by a young country girl, and a small dog, thus forming quite an imposing caravan. We followed the Galibier path for some way, soon crossing to the left bank of the Valloirette torrent, but near a little village called La Ravine, where the main road recrossed the stream, we turned up the slopes to the right and mounted to a sort of col near a hillock conspicuous from all parts of the valley, beyond which is the first group of châteaux, called Les Aiguilles on the map—the same probably as those at which Mr. Moore's party slept in 1864, before making the first passage of our col. We strolled along very leisurely, halting whenever we felt inclined to do so, which it is needless to say was tolerably often, as it was the hottest time of the day and we were not yet in proper walking trim. The path mounts gently over pastures, but a spur from the Aiguille de l'Épaisseur shuts out the view of the Aiguilles d'Arve, though the rugged chain of the Trois Pointes on the south side of the valley is very striking. The last châteaux, called au Commandraut on the map, are just above the junction of the principal torrent with another coming down from a glen on the right. The path crosses the latter stream and then winds round the steep flanks of the Aiguille de l'Épaisseur, over a very disagreeable combination of stunted grass and loose stones, and finally brings one to the head of the valley in full view of the three Aiguilles. Mr. Moore's party had already pointed out that the map assigns heights to two only of the Aiguilles; this is the more singular as the third, or northern Aiguille, forms part of the same group as the others, and though decidedly lower, is not surpassed by them in point of ruggedness. As far as I am aware, no sketch of the Aiguilles from this side has been published, yet the sheer face of the southern Aiguille, the symmetrical rock pyramid of the central one, the curious double-pronged summit of the northern peak, make up a picture, which, perhaps, even exceeds in grandeur the view of the west side of the same ridge, well-known to all my readers by Mr. Whympers's splendid engraving. At the foot of the rocky slope leading up to the col the mule was left, Nicolas going on with us to the col, which was reached after a tedious climb up loose stones, and crossing a slightly inclined snow-field. The col lies between the central and northern Aiguilles; the notch between the two others has not yet been crossed and may offer considerable difficulties. It was now five o'clock in the afternoon, and the first glance down the steep descent on the west side was not encouraging.

Mr. Whympers's book had not then appeared; and we had only been able to make a hasty perusal of a borrowed copy of Mr. Moore's 'Journal' (the author very kindly sent us a copy after this summer's journey). Almer was thus the only one of the party who knew anything of the col; the lapse of six years had, indeed, not destroyed his recollections of the first passage, but the lack of snow in the couloir made him hesitate as to the possibility of a descent, especially so late in the day. He went off to explore, the rest employing the time profitably in making a platform for the tent, as it seemed but too probable that we might have to bivouac where we were, and in admiring the great Dauphiné peaks, then displayed before our eyes for the first time. After some time our dauntless leader returned, with the intelligence that a descent might be forced with considerable difficulty. On this everything was repacked in a great hurry, and we started between 7 and 7.30. P.M., little thinking that we should ever revisit this spot. We have since passed three times through that couloir, but never has it proved so difficult as on that first descent. Nicolas held the rope whilst we descended the first steep bit one by one; then came the baggage, and last of all Tschingel, who had been barking loudly all the while, under the idea that he was going to be abandoned. Nicolas then went back to Valloire, and we slowly descended the couloir. The steep snow-slope below had nearly disappeared, its place being taken by loose stones and great boulders of rock, so that when it became dark it was impossible to avoid stumbling over them to the injury of something more than one's shins. At length at 10 o'clock we gave up all idea of reaching the châteaux that night; the tent was hastily set up in the most level place that could be found, and we were all soon asleep, wearied, naturally, more than usual by the first course of the season.

The next morning was glorious; we soon reached the châteaux of Rieublanc, then those of La Sausse, where we made a long halt to enjoy the magnificent view of the three Aiguilles. We had intended, like Mr. Moore's party, to reach La Grave over the summit of the southern Aiguille de la Sausse; but the exertions of the day before had rendered us disinclined to any more climbing than was absolutely necessary, and we decided to walk quietly over the Col de Martignare. This pass is not mentioned by name on the French map; it lies between the southern Aiguille de la Sausse and a point marked 2,875 mètres, and is well seen in M. Studer's panorama. We hired a mule at La Sausse to carry the tent, &c. This wonderful beast would not be stopped by anything; even when the lady of the

party was perched on the artificial mound on his back, the rest could barely keep up with him! The path winds steeply up the flank of the Aiguille de la Sausse to an upland valley, and then more gently to the col, a ridge of the same shaly soil, which crops up on the Col de la Lauz, Col de Venosc, Col de la Muzelle, and Côte de la Laisse. We reached it in about three hours' leisurely walking from La Sausse. On the way up a dark mass was seen some way off, and an alarm raised that it was a chamois. Tschingel and two other members of the party in a great state of excitement hurried to the spot, but returning somewhat more leisurely reported to the amusement of the rest that the chamois was only—a dead donkey. From the col we gained a magnificent view of the Meije, which at that time had not yet been attacked. Like many other climbers since, we fancied we had only to appear and it would surrender. Four days later, however, we were rudely awakened from this pleasant illusion when we found ourselves on the Pic Central (3,970 mètres) separated from the Grand Pic (3,987 mètres) by a serrated arête, which has till now baffled all who have attempted to traverse it. The descent to La Grave was effected in less than three hours, the last bit lying down one of those horrible paved roads, which are the torment of mountaineers.

In 1872 we found ourselves again at St. Michel, and on June 21 went up to Valloire, with the intention of crossing the Col du Galibier the same day; but there was said to be so much snow still on the pass that we decided to spend the night at Valloire at a very rough little inn 'à la Jeune France chez Martin.' Next day we succeeded in making the passage to the Lautaret Hospice and La Grave, passing by the Granges du Grand Galibier. The man who led our mule was unusually intelligent, and gave us much interesting information as to the Mont Tabor and the Aiguille Noire. We found a great deal of snow; in fact the mule plunged so deeply into it that after literally digging him out he was left to await the return of his master, who went with us to the top of the col. The view from the pass is extremely fine; a portion of it, including the Pointe des Écrins, has been engraved by Mr. Whymper. We arrived at La Grave with ambitious projects, but alas, a combination of mishaps made us fly from the district after crossing the Brèche de la Meije to La Bérarde (where we examined for the first time the curious domestic arrangements of the Rodier family), and the Col de la Tempe, to Ville Vallouise. We were charmed with the latter pass, which apparently had not been crossed by an English party

since Mr. Nichols described it in the second series of 'Peaks, Passes, and Glaciers.' The view of the Écrins, the Ailefroide, and the Pelvoux from the Glacier Noir, is, in my opinion, one of the grandest sights in the Alps; and should gain the preference for this pass over its rival, the Col des Écrins, though this, too, has a view which cannot easily be surpassed.

When drawing up our plans for the Alpine campaign of 1873, I felt specially inclined to make a fresh exploration of the Aiguilles d'Arve, with the view of attempting the ascent of one of them, the highest, if possible; the unfavourable opinions expressed by several distinguished mountaineers only serving to stimulate our ambition. Accordingly we met Almer at Culoz on June 28, and went on to St. Jean de Maurienne in the railway. When at La Grave, the previous year, we had tried in vain to get a porter to go over the Brèche with us; but all the able-bodied men were employed in the lead mines near there, and could not, of course, risk the loss of their situations in order to come with us. Hence we had commissioned Almer to bring some Oberland porters with him, and this plan proved so successful that we have always kept to it, though porters are now no rarity in the district. That same afternoon we crossed the Col d'Arve to St. Jean d'Arve (which is locally known as La Tour); a very fine view of the Aiguilles d'Arve and Grandes Rousses is gained from the col, as may be seen by referring to M. Studer's panorama taken from this point. I had had the misfortune to meet with a severe accident in the spring which had somewhat delayed our departure from England, and from the effects of which I was still suffering, so that the passage of this col was quite a 'grande course' for me. On the way up we met a number of people on mules returning from market at St. Jean de Maurienne. The auberge (chez Dermey) was by no means above the average of inns in this part of the world; and we were highly amused on hearing of the expected arrival of a 'famille' consisting of father, mother, and 'demoiselle,' who came here annually 'en pension!'

I must here draw somewhat largely on the patience of my readers, in order to explain why we came to St. Jean d'Arve to attack the Aiguilles d'Arve. At page 157 of the second volume of M. Joanne's '*Itinéraire du Dauphiné*' a remarkable statement is made with reference to the ascent of the Grande Aiguille d'Arve, to which a height of 3,509 mètres is assigned. It is there asserted that 5 hrs. suffice for the ascent from the village of Entraigues, not far from St. Jean d'Arve, that it is

possible to descend on the other side to Valloire, and that Célestin Bellet 'qui a plusieurs fois gravi les Aiguilles,' a chamois hunter of Entraigues, is the best guide. The route described leads in 3 hrs. to the 'Col de Rieublanç,' overlooking the châteaux of the same name, thence to the east by the 'Basse du Gerbier' to the 'Ravin de Rochefendue.' Turning to the right, the way lies at a great height above this ravine, 'et l'on s'élève lentement à travers les pâturages,' the summit of the Grand Aiguille being reached in 2 hrs. from the 'Col de Rieublanç.' Then comes a mysterious sentence, 'de ce côté l'ascension est relativement facile, tandis que du côté de la Sausse elle semble complètement impossible.' The latter half of this phrase is undoubtedly true; but the former half is pretty certainly inaccurate. Mr. Moore, relying on this account, reached the Col des Aiguilles d'Arve, and, after careful examination, decided that neither the central nor the north Aiguille could be ascended from that direction. He concludes (p. 16) that 'if the account in Joanne is not (as I can scarcely believe it is) entirely mythical, it refers to the north peak to which the height of the central peak has been assigned, but that this is, as he says, "relativement facile" I much doubt.'

Mr. Whymper, agreeing with Mr. Moore as to the inaccessibility of the Aiguilles from their standing-point, goes on to remark (p. 186), 'Looking at the Aiguilles from Rieublanç, according to our united opinion, the central one was as inaccessible from this direction as from the east, north, or south. On the following day we saw them again from a height of about 11,000 feet, in a south-easterly direction, and our opinion remained unchanged. We saw (on June 20-22) the central Aiguille from all sides, and very nearly completely round the southernmost one. The northern one we also saw on all sides excepting from the north. (It is, however, precisely from this direction, M. Joanne says, that its ascent is relatively easy.) We do not, therefore, venture to express any opinion respecting its ascent, except as regards its actual summit. This is formed of two curious prongs or pinnacles of rock, and we do not understand in what way they (or either of them) can be ascended.' Hence it will be seen that our intention was to examine the northern Aiguille from the north, the only side which Messrs. Moore and Whymper had not seen, and that by which M. Joanne had declared the ascent to be relatively easy.

The morning after our arrival (June 29) was a Sunday. The church is not far from the auberge, and we watched the people flock in to mass. They all looked well to do, and Joanne's assertion that the village is one of the richest in the

Maurienne seemed to be completely justified. The men wore coats made of a sort of thick white flannel, the effect of which was rather curious at a distance. Each woman had two wedding rings, one on either hand; they were extremely large, and resembled small dog collars. One of the first things we did on arriving was to enquire about Célestin Bellet, the guide mentioned by Joanne. We found, however, that he was long past active work; but his brother-in-law, one Auguste Alex, offered to go with us in his stead, for the moderate sum of 20 francs. We accordingly left La Tour Sunday afternoon in order to sleep at some châteaux called La Motte d'en haut. Alex, it may be noted, had a club foot, and accompanied us on his mule, assuring us, however, that this infirmity would not prevent him from guiding us up the Aiguille next day. We followed the usual road down to near Entraigues, and thence walked along the bank of the united streams of the Arvant and the Arvette as far as Belleville. We here crossed a bridge, and toiled up a steep and hot path to Montrond. The new French map marks a char road from S. Jean de Maurienne to La Villette, beyond Albiez. It is apparently intended to continue it from that village to Montrond, and so down to St. Jean d'Arve by the route which we had been following. We now left the main path and mounted to the right to the last village, Le Chalmieux, where we made a short halt. The path now passed over grassy alps which to me at least appeared never ending, and right glad was I to reach the upper châteaux of La Motte, after 5 hrs. walk, including halts, from La Tour. These huts are beautifully situated in a grassy amphitheatre, through which runs the torrent of Pierre Fendue, backed by the three Aiguilles d'Arve, of which the double-pointed one is the nearest, and consequently appears to the greatest advantage. But, alas! the weather showed signs of changing; and, in fact, next day it was too doubtful for us to think of starting. We were very much puzzled to know how to while away the time, as trusting to a continuance of the fine weather, we had left everything, save what was indispensable, at La Tour. Tuesday was nearly as bad; it only rained at intervals, but mist shrouded all the neighbouring summits. We had, however, one exciting episode that afternoon. We were talking to Alex, and lamenting the bad weather, when he happened to remark that it did not much matter to him as he was earning 20 francs a day. Startled by this, we enquired what he meant, and discovered a bare-faced attempt at extortion on his part, as we had agreed to give him 20 francs for the whole expedition, if we reached the summit. Neither side

yielding, the end of the matter was the summary dismissal of Alex; and we resolved to rely on the well-known capacities of our trusty leader. The weather began to improve on Wednesday; and on Thursday, July 3 (after staying at the châteaux since Sunday evening), we effected a start. The evening of our arrival Alex had told us the route he proposed to take, viz., to cross the ridge north of the northern Aiguille, by what he called the Combe des Sarrasins, and make the ascent from the Valloire side. The first part of his route seemed to tally with Joanne's description, but the second did not; besides, the slope we should have to climb to reach the crest of the ridge seemed very steep. We, therefore, determined to go up to the Col des Aiguilles d'Arve, and try the ascent from that side. I should have stated before that the great basin in which the châteaux were situated, was bounded on the east by the main ridge described above, including the Aiguille de l'Épaisseur and the Mont Lellard, and on the west by a long spur which branched off from the main ridge a little to east of the north Aiguille, and culminated in the Mont Falcon. Starting from the châteaux, we aimed at the crest of this latter ridge, which was reached just to the right of a small black peak seen from below; and, mounting another slope, we gained in $1\frac{1}{4}$ hrs. from the châteaux a grassy depression overlooking the head of the Vallon de la Sausse. This seems to be Joanne's Col or Basse du Gerbier, of which more anon. Twenty minutes' steep ascent up shaly slopes brought us to the edge of the great snow slope, which was very different now from what it had been in 1870. After zigzagging up this, we mounted a narrow couloir to the left of the great central one, and reached the col in about $1\frac{1}{4}$ hrs. from the edge of the snow, or rather over 3 hrs. walking from the châteaux. On the way up, two chasseurs caught us up, coming from St. Jean d'Arve. They turned out to be the sons of Célestin Bellet, Jean Baptiste and André, and had come up in search of chamois. The former told us that he had taken three curés up the central Aiguille (M. Pierre Puiseux in the first *Annuaire* of the French Alpine Club, p. 179, only mentions the curé d'Entraigues), and a gentleman (Mr. Oakley?) up the north one. They advised us to descend some way towards Valloire, in order to attack the central Aiguille by the south face. This, however, involved a long détour, which the time at our disposal would scarcely allow, as we intended to return to La Motte. The two hunters then ran down the snow slopes to the east, and we soon heard the crack of their rifles. We then set about the business of the day. The central peak, by what we later

found to be an optical illusion, looked hopelessly inaccessible, and I have already explained why we could not adopt the advice of the chasseur. We then turned our attention towards the northern or double-headed Aiguille. Both Mr. Moore and Mr. Whympier, but especially the latter, had declared it impossible from this side, strangely overlooking a broad snow couloir, slightly to the east of the Col, whence it is very conspicuous. A short descent soon brought us to the base of this couloir, which we mounted to the summit, then turned to the left and climbed up steep rocks, which became smoother and smoother as we advanced. A great gap separated us from the higher and more massive of the two prongs—that to the north—and we wasted some time in attempting its ascent. The summit of the south prong, which is a few feet lower, was reached in about 1½ hrs. walking from the Col. This point turned out to be double-headed also (as Mr. Whympier's engraving shows), both of the heads were easily ascended and earmarked with stone men. No traces of any previous ascent were found. I have already mentioned that said to have been made by Mr. Oakley. Tschingel reached the top with us, getting up the rocks in grand style. The view of Mont Blanc and the Dauphiné peaks was very fine, though I believe that one of the giants of the latter is hidden by the central Aiguille, which looked just as unpromising as from below. No height is assigned to this peak on the map; it may be provisionally estimated at about 3,450 mètres.

We returned to the col by the same route in an hour, and in 2½ hrs. more regained the chalets. Another glance at the north side of our Aiguille convinced us that we had chosen the best route up, and, I think, my readers will agree with me, when they look at M. Studer's panorama. Yet the chalets are in the Combe de Pierre Fendue (probably the same as Joanne's C. de Roche Fendue) and should not be very far from the direct route to the Aiguille, according to the same authority. I confess I am thoroughly perplexed what interpretation to put upon Joanne's words, for the description can scarcely be entirely imaginary.

One thing may be asserted without fear of contradiction—that though the northern Aiguille *may* be accessible from the north, the ascent would require much more than two hours from the Col de Rieublanc. Messrs. Moore and Whympier both incline to refer the description to the northern Aiguille. All things considered, I should almost prefer to hold that it relates to the much lower peak of the Aiguille de l'Épaisseur, which is somewhat to the east of the Aiguille d'Arve, is situ-

ated at the head of the Combe de Pierre Fendue, and from which it would probably not be difficult to descend to Valloire. This merely by the way. The whole question forms one of the most singular topographical puzzles of which I am aware.

Next morning, Friday, we returned to St. Jean d'Arve, hearing at Montrond that Monsieur le Curé had seen us with his telescope on the summit. From Belleville we took a short cut on the other side of a green hill, passing by the village of Sallanche and regaining the ordinary road near some houses above Entraigues. We had had some thoughts of taking the highest peak of the Grandes Rousses on the road to La Grave, but we had been delayed so long at La Motte that we determined to cross the Col de l'Infernet next day, July 5. The scenery in the Combe de Val Froide, specially the wall of rocks on the east called 'Le Palère' by Joanne (who gives a very good description of the pass), is extremely grand; but the ascent on the northern side is very long, and the descent to La Grave most tedious, despite some fine views of the peaks above that village.

After some explorations in Dauphiné, we found ourselves once more, on July 25, at St. Michel, which I had reached by the Val de Galambre, the Col d'Ambin and the Punta Ferrand (which, according to the description in the old edition of Ball, I had taken erroneously to be the Mont d'Ambin), the rest coming from Bardonnèche by the Tunnel. We waited there two wet days in hopes that the weather would clear up sufficiently to allow us to make an assault on the central Aiguille d'Arve; but the elements were against us, and on July 28 we retreated ignominiously to Geneva.

During the whole of the next winter I was haunted by that central Aiguille; and as the Grandes Rousses were on our list of agenda for the season of 1874, it was resolved that the group of the Aiguilles d'Arve should be revisited, and the central peak climbed, or else the reason why it could not be reached definitely ascertained. With this firmly-rooted intention we arrived, on July 6, at Francoz, in the valley of the Arc, having come from Brides-les-Bains (a very curious watering place immortalised by Mr. Pilkington in one of the early volumes of this journal) by the little-known Cols du Peclet and de la Montée du Fond, and reached S. Michel after a dreadful half hour's drive in a hay cart. The weather was glorious; but next day we were condemned to inaction (solely, however, from a mountaineering point of view), as it turned out that English bank notes could not be changed at any place nearer than Chambéry! which involved a long and hot railway journey there and back. We were

very glad to get off from St. Michel on July 8, followed the well-known path to Valloire, by the Chapelle des Trois Croix, whence, for the only time we have passed here, a glorious view of the Ecrins and the Aiguilles d'Arve burst upon us, and slept that night at the highest chalets au Commandrant, in the Vallon des Aiguilles d'Arve, a violent storm driving us back when a little way beyond them. Next morning we started in doubtful weather. When we reached the base of the stony slope leading up to the snowfield of the Col des Aiguilles d'Arve, we bore to the left, so as to gain the foot of the eastern arête of the central Aiguille, where, as the weather became worse and worse, it was thought best to bivouac. In the afternoon it cleared up a little, and Almer was able to go off on an exploring expedition, coming back with tidings which seemed to offer hopes of success on the morrow, and began to shake our belief in the terrors of the peak. Next morning I started at 4.35 with Almer and young Peter Michel, one of our porters. We mounted some steep rocks to the upper snowfield and reached the base of the northern face of the central Aiguille at 5.15. Comparatively easy rocks and then a snow couloir, brought us to a point just under a conspicuous yellowish rock at 5.40. The couloir here became so narrow that, after a vain attempt to squeeze ourselves through it, we had to traverse a smooth face of black rock to the right, which was made very slippery by the water, due to the melting snow in the couloir. This was followed by a climb up rocks inclined at a very high angle, and which did not offer the best of hand-holds. In this way we gained the crest of the eastern arête at 6.20. A halt of five minutes was made here, in order to leave behind the provisions and other incumbrances, as the final peak rose very sheerly above us, and had not quite lost its spell over us. We went along the crest for a few minutes, then turned over to the south face, which, with intervals of climbing along the arête, brought us to the top at 7.5, only 2½ hrs. after leaving our bivouac. The last peak proved far easier than it appeared from below; in fact, we met with no very serious difficulty throughout the entire ascent. This deceptive appearance of inaccessibility, when seen from the col, recalled to our minds two other peaks on which we had experienced the same illusion in September 1872—the Unterbachhorn, near the Bel-alp, and the Wellhorn, from the Rosenlauri glacier. The first object which met our eyes on the summit was a small but unmistakable stone man. As this evidence of man's presence had not been seen by us the year before, when on the northern Aiguille, I am inclined to believe that it was built by Savoie, a chamois

hunter of Valloire, who was reported by the people of that village to have lately made the ascent. Almer, with the professional eye of a *gamsjäger*, soon spied out some chamois tracks on a patch of snow on the southern face, not far from the summit, and was convinced that Savoie had mounted entirely by the southern face, the rocks of which are comparatively broken up, from the glacier between the southern and central Aiguilles. This would agree with the advice given us by the Bellets, which I have already mentioned, to descend from the col towards Valloire so as to get round the base of the east arête. I have also noted above Mr. Oakley's attempt, in 1864, and the ascent reported to have been made by one or more *curés*. At all events, I think I may claim to be the first *bonâ fide* traveller who has reached the top. As the view was very cloudy, I venture, instead of giving a description of what we might have seen, to insert in this place a few remarks on the relative height of the Aiguilles. The northern peak is undoubtedly the lowest of the three. Its height may be provisionally estimated at about 3,450 mètres (11,319 feet). It is far harder to decide between the claims of the two others. The map gives 3,514 mètres (11,529 feet) as the height of the southern peak, and 3,509 mètres (11,513 feet) as that of the central peak. Mr. Ball, Mr. Moore, and Mr. Whymper, accepting these figures, assign the pre-eminence to the southern Aiguille; but Mr. Moore remarks (p. 9) that the two highest Aiguilles were so equal in height that the map only decided the question of supremacy. So, too, Mr. Whymper (p. 184): 'We were inclined to favour the central Aiguille, but it was hard to determine; they looked so equal in height.' With all respect for the French engineers, I venture to submit that the highest peak is the one reached by us—viz., the central Aiguille.

First of all, when on the summit, we tried to estimate the difference between our standing point and the southern Aiguille, and came to the conclusion that our peak was slightly the highest. This was Almer's opinion, and, as a proof that he can accurately estimate trifling differences of height between neighbouring points, I would cite the following from among several instances of his skill. When on the Pic central of the Meije, in 1870, he gave it as his opinion that the western peak overtopped us by 12 or 13 mètres. It was not till several years later that we learned that the difference given by the French engineers is 17 mètres—a sufficiently close approximation on the part of Almer to warrant some confidence being placed in his judgment as to such matters. Again, it is the

general opinion of the people both at St. Jean d'Arve and at Valloire, unhesitatingly given whenever we questioned them on the subject, that the central peak is the highest; and it certainly seems so when seen from any of the Dauphiné summits, even though the southern Aiguille may be nearer the spectator. Lastly, that veteran climber, M. Studer, in the paper already alluded to (p. 17), says 'die mittlere Aiguille soll die höchste sein, wird indessen die südliche um Weniges übertreffen,' and marks it as such on his panorama, though I do not know who his authority is for the figures given there—3,820 mètres and 3,814 mètres. It, may, however, be gathered from an expression on the same page from which the above quotation is taken, that the '8' at least is a misprint for '5.' For these reasons, then, the supremacy of the central Aiguille may, I think, be provisionally assumed, until some one provided with proper instruments for levelling makes the ascent and sets the question at rest. The same scientific climber would render a great service to topography, by mounting and ascertaining the exact difference in height between the Pelvoux and the Ailefroide. The map gives 3,938 mètres for the former, and according to Mr. Tuckett 3,925 mètres for the latter peak. But Mr. Tuckett, in 1862, when on the Pelvoux, found that the Ailefroide slightly overtopped him; and this, too, was Almer's opinion, after we had climbed the two peaks, July 9th and 7th, 1870, respectively.

To return from this long digression. Hoping that the clouds would disperse, we spent some time in strengthening the cairn and scratching Almer's initials on one of the highest rocks, as we had no bottle in which to leave our names. We waited, however, in vain, and turned to descend at 7.50 A.M. Going cautiously and, therefore, slowly, we regained the provision knapsack at 8.50. After a halt of 20 m. we resumed our course at 9.10; passed the slippery rock at 9.40; then bore more to the left than on the ascent, down a broad snow couloir, and reached the snow-field at 10, crossing which we rejoined the rest of the party on some rocks near the Col, whither they had come up by appointment. Thus the ascent from the snowfield had taken $1\frac{1}{2}$ hrs. walking (allowing for time lost in trying to get through the couloir), and the descent rather more than $1\frac{1}{2}$ hrs. An active walker could easily take the Aiguille on his way over the Col, and, doubtless, the view from the summit would reward him for the slight détour necessary to accomplish this. Let me note here that Mr. Ball (p. 63) asserts that the northern of the two

highest points, i.e., the central Aiguille, has been climbed by the French engineers. The only foundation for this seems to be that a triangle is affixed to this summit on the map. But as a similar mark is assigned to the Écrins and to the Meije, and to other peaks where the engineers have certainly not been; and as the cairn is not one of those substantial edifices generally erected by engineers (such as the one we found on the Pointe de Charbonel last summer), Mr. Ball's supposition seems to be untenable.

We halted for more than an hour on the rocks, making soup, recounting our adventures, and admiring our new conquest, which looked quite as formidable as ever from below. A few minutes' walk brought us to the Col, whence $2\frac{1}{4}$ hrs. walking down the familiar couloir and snow slope led us to the châteaux of Rieubanc. Here we got a mule to carry the baggage, and mounted grass slopes to Joanne's Col de Rieubanc, whence the path descended steeply to the Combe de Val Froide, near La Vallonet.* From that point the road to Entraigues and La Tour (reached in about $3\frac{1}{4}$ hrs. from the châteaux) was the same we had traversed the year before in the reverse direction on the way to the Col de l'Infernet. This is, I believe, the first time that the Col des Aiguilles d'Arve has been traversed throughout its whole length from Valloire to St. Jean d'Arve. The inn at La Tour had changed hands, but I cannot say that any improvement was noticeable. We now began to think of the second item on our programme—the Grandes Rousses, which we proposed to cross to Bourg d'Oisans. I may remark that at the time we were ignorant that any previous ascent had been made from the Maurienne side, though Mr. Bonney's account (p. 24) had induced us to believe that it could be effected without serious difficulty. As the descent to Bourg d'Oisans seemed long on the map, it was resolved to sleep the first night at some châteaux; and, on consulting the people of La Tour, those of Aigues Rousses were recommended as most suitable for our purposes. Accordingly, with Almer and Kaufmann (another of our porters), I left La Tour on the afternoon of July 11. Descending rapidly to the Arvant, we crossed it and mounted a pasture valley to the ridge at its head, called Col d'Ornon in M. Studer's panorama. We then kept down to the left to a chalet known as La Grande Maison, crossed

* Joanne (ii. 157) is in error when he says that the Basse du Gerbier leads into the Combe de Valloire. As the foregoing description has shown, and as the Editor himself allows in the next column, it leads into that of Pierre (or Roche) Fendue.

the upper stream of the Arvant, opposite a ruined 'baraque,' and mounted steeply to the upper group of châteaux des Aigues Rousses (reached in $4\frac{1}{4}$ hrs. leisurely walking from La Tour), passing on the way a curious ridge, which reminded me, save for the absence of the sea, of the Coupée at Sark on a small scale. After some hesitation the people received us very hospitably. The châteaux are finely situated, commanding a distant view of the Glacier du Mont de Lans, over the ridge of the Col du Pré Nouveau. Next morning (July 12) we left at 4.5 a.m., with every prospect of a fine day. Mounting the grass slopes behind the châteaux, we reached an upland valley; then, turning to the right, we climbed up a low ridge and found ourselves, on reaching the crest at 4.55, overlooking the great glacier known as that of Saint Sorlin. Descending to it in a few minutes, we halted a quarter of an hour to don our gaiters, and then mounted over the gently inclined glacier towards our peak, which, alas! was already beginning to be enveloped in clouds. We aimed at the depression between the Sommet Nord (known locally as the Pic de l'Etendard) and the Cime de la Cochette, which we reached by steep snow slopes, a rocky projection in the midst of the snow and ice, and more snow slopes, at 7.35, having halted half an hour on the way for breakfast. By this time all chance of a view was gone; but we could not abstain from going to the top, as it seemed quite near us. Leaving at 7.45 we followed the north arête more or less to the summit, which was gained in dense clouds at 8.25, in rather more than $3\frac{3}{4}$ hrs. walking from the châteaux. We found there a small cairn with some fragments of a broken bottle, as M. Puiseux's party had done before us. •

As far as I am aware, there had been but three previous ascents of this peak. The first ascent was effected on August 6, 1863, by Messrs. W. and G. S. Mathews, and T. G. Bonney with Michel Croz and J. B. Simond. Starting from the chalet of La Cochette Dessus, they mounted to the Col du Conard, then over broken rocks to the north portion of the Glacier des Rousses of the map, whence a steep climb up a long rocky ridge brought them to the summit (reached thus from the west) in about five hours' walking from the châteaux. The descent was effected by the same route, thence by the Lac de Balme Rousse, a fatiguing path to Allemont in $6\frac{1}{2}$ hours' walking from the top. A magnificent view was obtained.*

* See Mr. Mathews' article in *Alpine Journal*, vol. i., pp. 294-302; Mr. Bonney's *Sketches*, pp. 23-26, 49.

The next ascent was made on September 17, 1872, by M. Puiseux with his two sons and Celestin Belley. Having passed by the châteaux of La Balme, above Saint Sorlin d'Arve, they mounted over the Glacier de Saint Sorlin and gained the summit by the northern arête.*

M. Gottlieb Studer made the third ascent on July 21, 1873, with Peter Sulzer of Guttannen. Starting from the châteaux of la Valette by the Torrent du Grand Sauvage on the south side of the ridge of the Pré Nouveau, M. Studer mounted by the Glacier de Saint Sorlin and reached the top by the northern arête; the descent was effected to Saint Sorlin d'Arve by the châteaux of La Balme.†

I have already mentioned the ascent of the southern peak of the Grandes Rousses by Mr. Oakley in 1864.

M. Puiseux and his companions made another interesting excursion in 1875. Starting from the châteaux of La Balme, they mounted over the Glacier de Saint Sorlin to the ridge between the Pic de l'Etendard and the Cime du Grand Sauvage. From this pass, which may be named Col du Grand Sauvage, the party descended to the Glacier des Quiries, thence to Clavans and Freney by the valley of the Ferrand.‡

The question of the relative height of the north and south peaks of the Grandes Rousses is not yet finally settled. The map gives 3,473 mètres (11,394 feet) for each; but a barometrical observation of Mr. W. Mathews makes the north peak higher by two mètres (3,472 mètres—3,470 mètres). M. Studer (p. 47) inclines to the belief that the south peak is the higher.

Mr. Bonney and M. Studer both rate the view very high; and I shall ever regret that it was completely concealed from us. After shivering for three quarters of an hour on the summit, we left at 9.10, and regained the depression mentioned above at 9.30. This gap may be called Col des Grandes Rousses, and as the ascent of the highest peak may be combined with the passage of the Col, it is the most tempting route for a mountaineer desiring to pass from the valley of the Arc to that of the Romanche. Halting five minutes to collect various impedimenta which had been left there on our ascent, we descended steep broken rocks, keeping rather to the right, and crossed a small bergschrund at 10. We then descended the

* See M. Puiseux's article in the first volume of the 'Annuaire du Club Alpin Français,' pp. 173-181.

† 'Jahrbuch des Schweizer Alpen-Club,' vol. ix., pp. 3-60.

‡ 'Annuaire du Club Alpin Français,' vol. ii. p. 278, *seqq.*

small glacier, whence Messrs. Mathews and Bonney made their ascent, and got off the ice at 10.55 near a large lake, apparently that called Lac de la Sasse on the map. Then turning sharply to the left, we walked along interminable masses of débris and loose stones, passing innumerable lakes of every size and shape. The heat and wearisome character of the descent nearly exhausted us; and when, after two hours' monotonous grind, having reached the edge of a steep descent near a large lake overlooking a marshy plain at the further end of which was the village of l'Alpe, a halt was called, it was so acceptable to the whole party that nearly three hours sped by before any of us felt the slightest inclination to move. By four o'clock the sun was no longer so powerful, and we started much refreshed. In half an hour we reached a solitary chalet, and in thirty-five minutes more the village of l'Alpe. A steep stony road, becoming steeper and stonier every minute, led us down at 6.20 P.M. by Huez and La Garde to a char road in the level basin, in which stands the small town of Bourg d'Oisans; and half an hour's tramp along this and the 'route impériale' brought us at 6.50 to the comfortable Hôtel de Milan, where we found the rest of the party just arrived from La Tour by the Col du Pré Nouveau and Freney.

We had been about seven hours walking from the summit. This is, I believe, the first time that the mountain has been crossed, or that a direct descent has been effected to Bourg d'Oisans. When Dauphiné becomes a favourite resort of climbers, this expedition no doubt will be frequently repeated, and, in fine weather, the splendid views would probably make up for the wearisome nature of the descent to Bourg d'Oisans. The early summer of 1875 will long be remembered for the bad weather and disastrous floods which characterised it. We arrived in Dauphiné just as the fine weather broke; but after a month, during which we were able to carry out but a very small proportion of our long list of projected excursions among the mountains, and even that generally in defiance of the weather, we resolved to fly to more favoured districts, if any such existed. Hence, on July 15, I found myself crossing the Col de Goléon on the way to the Graians and Chamonix. We followed the path on the left bank of the torrent by Puy Golèfre, crossing it at Pramelier. We managed to reach the top without a wetting, but the view was almost entirely concealed by storm clouds. We raced down the other side as hard as we could, but the storm burst out upon us in all its fury before we gained Les Losettes; and we reached Bonne-nuit in a drenched condition, having only been a little over

5½ hours walking from La Grave. We slept in a barn there that night, hoping to be able to get up the Mont Tabor next day, but it rained unceasingly, and we had to go down to Saint Michel, July 16, by the new road and tunnel from Valloire; and as the weather was nearly as bad July 17, we threw up all our plans and went to Geneva by railway.

This expedition, it will be seen, did not add much to my knowledge of this district; and I resolved to repair this failure by revisiting the same neighbourhood this last summer, 1876. Accordingly I met Almer and his second son, Christian (who was on his travels for the first time), at S. Michel on June 21. We slept at Valloire that night, and bivouacked June 22 in the Vallon des Aiguilles d'Arve, some way below the site of our camp in 1874. My plan was to effect a pass, if possible, across the ridge south of the southernmost Aiguille d'Arve, and to examine this peak with a view to attempting it, if there was any hope of success. We started early on the morning of June 23, and mounting over moraine, and then up snow slopes, reached a well-marked depression between the southern Aiguille and the northernmost of Les Trois Pointes des Aiguilles. We had only been something more than 1½ hrs. from our bivouac, and had encountered no difficulties whatever. I cannot, therefore, understand what Mr. Moore (pp. 9-10) says as to the impossibility of crossing this ridge owing to a smooth and precipitous wall of rock. My aneroid gave 3,175 mètres (10,417 feet) as the height, but this is probably somewhat too high. It is proposed to call this pass *Coldes Trois Pointes*. We then went up the ridge leading to the southern Aiguille for some distance. A prolonged examination of the peak, however, satisfied us that it was as hopeless on this side as on every other, and we returned to the col. Just opposite lay the Aiguille de Goléon, with its stone man, and round the Glacier Lombard rose three points, one of snow and two of rock—the three Aiguilles de la Sausse. These are the summits seen by Mr. Bonney (*Sketches*, p. 37); the col he mentions is called Col Lombard on the map. In 2 hrs. from the col we reached the edge of the steep descent to Pramelier. The descent was entirely over snow, of which there was an enormous quantity this year. Looking back, the southern Aiguille appeared over a low peak, marking the point where the ridge of the Aiguilles joins the watershed. To the right of this point was our col, and, still more to the right, the Pointe de l'Argentière, as to which I am not quite clear whether it forms one of the Trois Pointes or not. After a long halt we resumed our course,

and, following the path of the Goléon by Pramelier and Puy Goléfre, gained La Grave the same morning.

After some explorations chiefly in the range south of the valley of the Vénéon, we returned to La Grave on July 6, and next day crossed the Col de la Ponsonnière to Valloire. This pass is much longer and more fatiguing than would appear from Joanne's description. It took us $3\frac{1}{2}$ hrs. walking from Le Lauzet to the top, and $2\frac{1}{2}$ down to Bonnenuit; whereas Joanne only allows 3.20 for the whole distance. On the way some fine views of the Ecrins are gained; but from the actual col, the only one of the Dauphiné peaks visible is the triple-headed Crête du Glacier Blanc, which appears over the ridge stretching SE. from the Pic de la Ponsonnière. The French Government are making a good carriage road over the Galibier, but the lateness of the season had greatly retarded the works. On the whole, this pass cannot be recommended as a substitute for the Galibier; and is certainly longer as well as more laborious. Such up to the present have been the results of my exploration of this district. It can scarcely claim to be regarded as an independent mountain group; but it is attractive on many accounts, and can very well be visited on the way to or from Dauphiné. It would certainly be difficult to name finer views than those which may be obtained from its two highest peaks, which themselves form prominent objects in all panoramas from points to the north or to the south. It may, perhaps, be a further inducement to some climbers to learn that the district even now is but very imperfectly known.

TRAVERSES IN THE EASTERN GRAIANS. By the REV.
F. T. WETHERED.

WHETHER the Graian Alps will, in future, be frequented by mountaineers to the same extent as Zermatt or Arolla, remains to be proved. At present Val Savaranche and Val de Cogne appear to be regarded by our members as the extreme limits of Alpine civilisation. The Hôtel de la Grivola, at Cogne, is clean and well conducted, requiring only a little more steady encouragement than it has yet received to become a very good little mountain hostelry. But Val Savaranche can boast of no decent inn at all.

It was on one of the beautifully cloudless July days of last summer that I left Courmayeur, with my guide Laurent Proment of that place—in a one-horse carriage—for Ville-