whose head-snows lie in a cirque some 5 or 6 miles N. of that peak.

Geological findings, moreover, were of considerable interest, not the least being that some of these mountains, which now rise several thousands of feet above the existing glaciers, carried 'erratic' material on their summits, a clear indication of the once enormously greater size and height of the Inland Ice-cap, which at an earlier age must have submerged them. Important evidence, too, was gleaned as to the structural history of these ancient mountains of 'Caledonian' and 'Hercynian' age, their mode of folding, and the granite intrusions within their

predominant sedimentary quartzites.

Other expeditions in the neighbourhood, some of which had to be accomplished solo, if particularly strenuous and lengthy on account of concurrent topographical and geological work, yet afforded some of the most delightful days that it has been my lot to spend on the mountains, whether of higher or lower latitudes. A summer expedition in a good ice season on the coasts, such as last year, need have few troubles and little anxiety, provided the skipper knows his job and moves warily in these uncharted waters. One brief lapse and disaster may follow, as might have befallen the Veslekari when she ran aground at high spring tide on a delta at the head of Geolog Fjord. The position was retrieved, however, after failure with kedge anchors in the soft mud, by making fast to a handy ice-floe and towing ourselves off with our own winch. If this pretty operation had failed, we might have had to spend a dark and hungry winter in the Arctic, since other ships had long since left the coast.

FIVE TRAVERSES IN DAUPHINÉ.

By B. R. GOODFELLOW.

(Read before the Alpine Club, April 10, 1934.)

WHEN Graham Brown asked me to join him in 1933, my plans for a prior fortnight of guideless climbing made it impossible for us to join forces before the middle of August. It was likely enough that by that time there would be little or nothing left on Mont Blanc in the conquest of which I might hope to take a share. The long overdue summer of fine weather that 1933 gave us, made this probability a certainty.

When I left Zermatt for Courmayeur the downfall of Mont Blanc had been even more complete than any of us had dared

to suggest.

We had chosen Dauphiné to wind up our season's climbing; we both had certain orthodox ambitions there, and Colonel Strutt had supplemented these with suggestions for new routes. Hasty staff work at the Alpine Club produced adequate notes on the former; but left the latter distressingly vague in detail. It is a thankless task to search the literature for guidance in something that has not been done.

From Courmayeur we drove over the Little St. Bernard Pass, and on to Dauphiné by the Route des Alpes. This makes very much the most attractive approach to the district. After the long spectacular climb out of the limestone gorges of the Maurienne valley up to the Col du Galibier, one arrives at the top of the pass to see suddenly unfolded a panorama of the entire Alpine range of the Central Dauphiné. Probably it is the Route des Alpes that is responsible for the emptiness of the valleys inside the horseshoe of the Dauphiné chain. Tourists who seek Alpine scenery without personal exertion find greater satisfaction in the charabancs of Le Lautaret than among the steep-walled and tortuous valleys of the interior where very little of the mountains can be seen without a climb to Alpine heights. Thus La Bérarde, secluded, unsophisticated and little changed among the dwarf birch trees and the impoverished stony pastures, remains almost empty. Even the two or three daily 'buses stay but a few hours, and the passengers are seldom seen far from M. Tairraz' excellent little hotel.

What is difficult to understand is that Dauphiné is not more visited by climbers. One often hears it still said that, apart from the traverse of La Meije and Les Ecrins, there is nothing in Dauphiné to detain the serious climber! In point of fact there is probably no other district in the Alps where opportunities exist on so generous a scale for new routes. There are ridges that have been attacked and never climbed, simply on account of their technical difficulties, and on some of the rock faces there are possible routes to be seen by all, yet they have never been attempted.

Here is an outstanding challenge to the virtuosity of the modern British school of rock-climbers, for Dauphiné to-day offers as rich a field for enterprise as did the Chamonix district just after the war. The French enthusiasts who climbed and classified every pinnacle among the Aiguilles, and made the fine routes up the Argentière face of the chain of the

Aiguille Verte, can never have submitted the complicated rock mountains of Dauphiné to the same degree of scrutiny. Many fine routes have been made, largely by guideless parties, and the names connected with them are few, notably Vernet, Dalloz, Lagarde, Morin, Stofer and the brothers Mayer with their Dolomite guide Dibona—these latter as far back as 1913. But several really great new routes still remain to be done, and the number of variations on the old-established climbs that can be made is infinite. Among such mountains as in Dauphiné, snow and ice are usually of minor importance, and the interest in a climb is largely in the technical detail of the rock-climbing. New variations thus differ more in character from their parent routes, and have a less artificial flavour than is possible for alternatives to the simpler, bolder routes on the mountains of the Central Alps.

Until recently guideless parties may have been deterred by a lack of good maps and guide-books. This is no longer the case. The new French military map ¹ approaches even the Atlas Siegfried in its wealth of detail and clarity of rendering, and the excellent series of Gaillard Climbers' Guides has at last added Dauphiné to its list.² The first volume dealing with the northern half of the group is an exhaustive book of reference to all the known climbs, and the second volume for the southern half is in preparation.

For those who require guides, there is the new generation of Turcs and Rodiers, who as rock-climbers are now once again in the very first rank; they are even enthusiastic enough to make new ascents by themselves when seasons have been slack. That can be said of few guides to-day in the more popular Alpine resorts.

We reached La Bérarde on August 21 and went straight up to the Promontoire hut with designs on La Meije, but the next day we were forced to spend in idleness in the hut while light snow fell until evening. This snow made La Meije impossible, even by the ordinary route, and accordingly we decided on Le Râteau for the morrow.

¹ 'Service Géographique de l'Armée': scale, 1:20,000. These maps are nominally confidential, but can be bought in Grenoble bookshops. The colouring shows four varieties of ice and snow, three varieties of rock and three of scree and moraine.

² Commandant Gaillard. Les Alpes du Dauphiné. Tome II. Partie i. The 'Coolidge' Climbers' Guide (1905) and especially the 'Duhamel' 1:100,000 maps in their handy cover are still indispensable.

Le Râteau from the Brèche de la Meije. (August 24, 1933.)

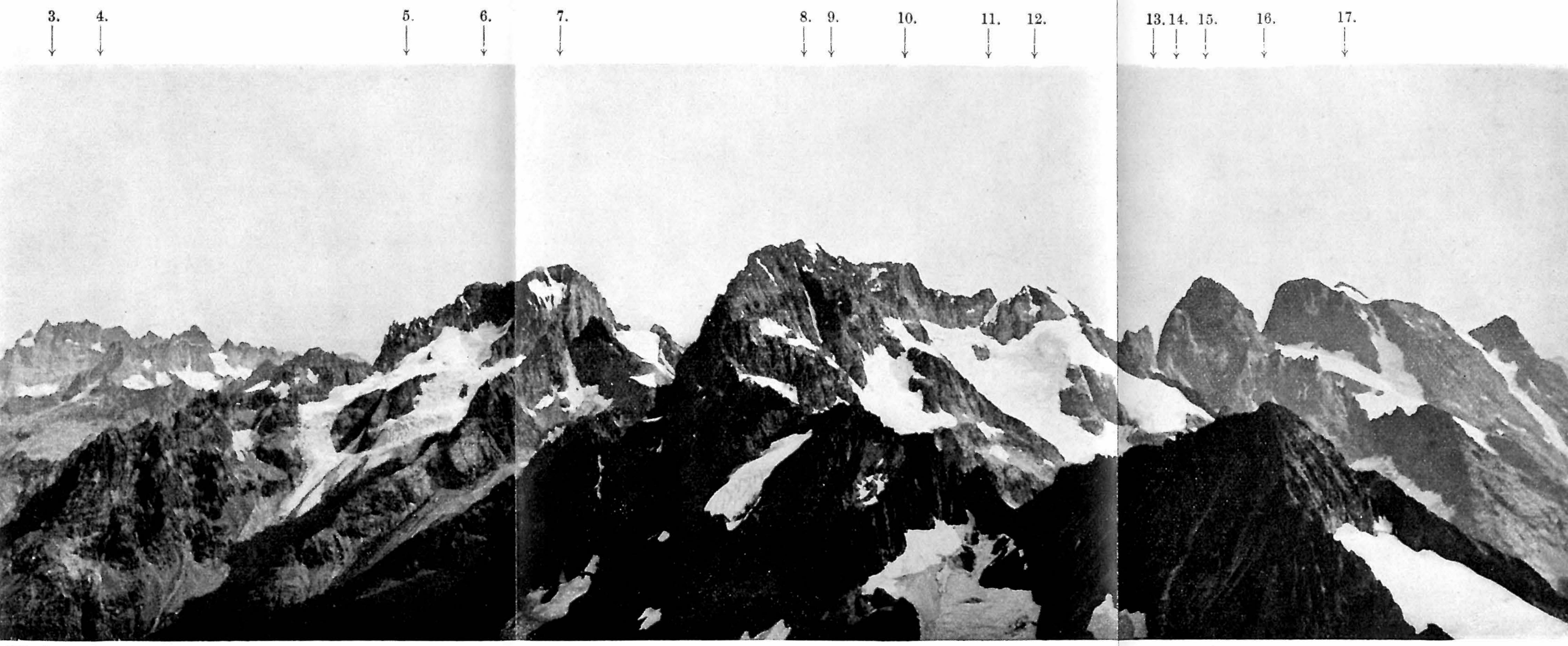
The E. ridge of Le Râteau is probably the most attractive way up a rather dull mountain.³ It is worth climbing Le Râteau by this route if only for the views of La Meije, whose proud wedge of rock, perfectly proportioned, slim and symmetrical, looks its very best from the west. As the E. ridge of Le Râteau is ascended, La Meije behind grows ever more magnificent and dominating.

The Promontoire hut is so conveniently close to the Brèche de la Meije that we had no need to start until well after dawn. We left impatient for action after our enforced idleness of several days. There was a good deal of the previous days' snow still on the rocks, and the first intimidating step demanded care, for it is exposed and loose. The ridge rises steeply above the level crest of the Brèche, and the flanks fall smooth and sheer on either side. The angle soon eases, and an ample platform is reached. Another similar step follows, less difficult but more loose; we climbed in two pairs and the two ropes had to keep strictly together and move cautiously. The ridge is a succession of these steps, with snow arêtes joining them as we neared the top. We kept to the crest of the ridge for most of the way, as the rock was better, and once only left the watershed to turn a long gendarme by scrambling over snowcovered débris on the S. face.

We left rock and reached a broad snowy saddle after 2 hours' climbing from the *Brèche*. From here there was a fine view of the sheer N. face of Le Râteau. This face is still unclimbed, and the various claimants to an ascent of Le Râteau from the N. have in reality all come up the far less meritorious snow face which joins the ridge on which we were climbing well to the E. of the summit ('A.J.' 45, 163). The true N. face of Le Râteau is a formidable rock wall, rising at a high angle from the glacier. We examined it from the side and from the summit and agreed that it *might* be climbed.

After a further spell of rocky arête, we reached the summit in just 3 hours from the *Brèche*, without a halt. We spent there a luxurious hour and a quarter, lying in the hot sun with perfect views all round. La Meije fascinated us, and we studied every detail of the various routes up its faces and ridges.

³ There is also the very sensational, if not too difficult, W. arête. A.J. 23, 326-7.—Editor.



oodfellow.]

E. ridge of Le Râteau.
 Brèche de la Meije.
 La Meije: Grand Pic.
 Brèche Josef Turc.

5. Clocher des Ecrins.

6. Dôme de Neige.7. Barre des Ecrins.

8. Ailefroide: Pic Occidental.

Dauphiné peaks from Les Bans.

9. Ailefroide: Pic Central.

Pt. 3908 m. 10.

First gendarme.

12. Ailefroide: Pic Oriental.

13. Petit Pic sans Nom.

14. Coup de Sabre.

15. Pic sans Nom.

16. Col du Pelvoux.

17. Mt. Pelvoux.

(Pic Gaspard is conspicuous rocky summit to right of La Meije massif.)

We then came down by the Brèche du Râteau, and descended by a rather tedious and untidy route direct to the Étançons valley. The only merit of this way off the mountain is that it avoids a long trudge down the Selle valley to St. Christophe and the 8-mile walk back up the road to La Bérarde.

Our times for this expedition were:—Promontoire hut: dep. 06.45. Brèche de la Meije: 07.19-07.24. Top of first step: 08.05. Summit: 10.22-11.35. Étançons valley: 13.56.

La Bérarde: 17.20.

Up: 3 hrs. 32 mins., with halts. Down: 4 hrs. 26 mins., with halts.

After the Râteau expedition our second guide fell sick, and later had to return to Zermatt. In La Bérarde Graven made a survey of local opinion, and in due course produced Casimir Rodier as a substitute.

The success of our subsequent expeditions in Dauphiné would never have been possible without Rodier. Without him our knowledge of the district was too scanty. We had read of the Dauphiné climbs, mostly in guide-books or in summarized reports of expeditions, but these seldom venture opinions on the climbs best worth doing. Rodier, with his intimate knowledge of the district and of its climbing history, guided our choice of expeditions; our route on Les Bans was his suggestion.

Once Rodier joined the party our whole outlook was changed. Our sick guide had been nervous on Le Râteau, for in some circles in Zermatt, the Dauphiné peaks, La Meije in particular, seem to be credited with almost supernatural difficulties. Rodier's absolute confidence reacted on Graven, and he gave then the very best of his superb powers in gay challenge, as it were, to a charming and brilliant foreigner.

Traverse of La Meije by the W. Arête and S. Face. (August 26, 1933.)

One of the greatest joys to be had from one's Alpine photographs, guide-books and journals, is in planning revenge on a peak already made half familiar by failure. For six years I had thus been planning to return to La Meije, for in 1927 our guideless party was defeated by storm high up on the Grande Muraille, and we roped down hurriedly in driving snow and high wind. We reached the hut with our ropes and clothes

dripping wet from the water running down the face of the

rocks. Our humiliation was complete.

A passion for following true ridges had dictated that my next attempt on La Meije should be by the W. arête, and our views of this ridge from Le Râteau stimulated Graham Brown's enthusiasm equally. British climbers seem to have ventured little from the orthodox traverse of the mountain, up by the Promontoire, over the arêtes, and down on the N. to the Refuge de l'Aigle. In seeking alternatives we had discussed the Dibona-Mayer route on the S. face 4; when descending from Le Râteau we had examined that route in great detail and in La Bérarde had talked it over with the well-informed Rodier. This route has been done six or seven times only, and all of these have been fully described in the Promontoire hut book, which we had had ample time to study. The crux of the ascent is the final 1000 ft. or so of nearly vertical rock that rises above the highest point of the conspicuous snow band which runs right across the face. In the lower section of this wall is a difficult chimney which must be absolutely dry, and Rodier considered it was too early after snow for us to attempt it. Later on we looked down from the summit ridge at the overhang of the last section of the climb. The finish looks desperately hard and the rock unpleasantly loose.

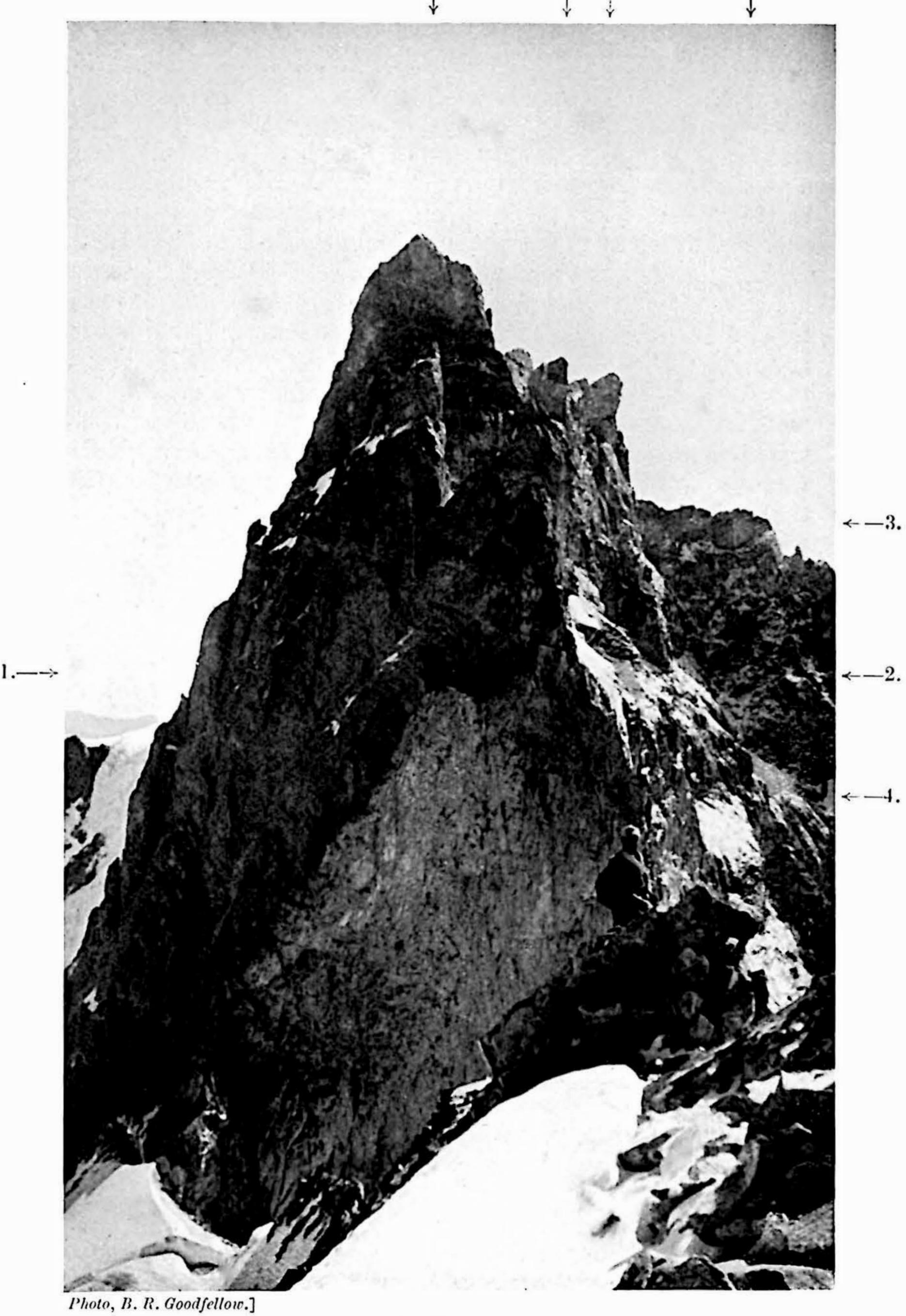
The W. arête rises as slender as a flying buttress from the Brèche de la Meije. It is flanked on the right by a yellow wall that curves clean and sheer round to the Promontoire, and on the left by a more broken wall nearly as steep which is lost in the tremendous N. face of La Meije itself. Several routes up this ridge have been described, and Rodier led us confidently up one which agrees closely with the ascent which has been

fully written up in La Montagne,⁵ 1928, p. 161.

In half an hour from leaving the Promontoire hut we stood again on the Brèche de la Meije. We had started late, for this ridge is no place to climb in half darkness. Rodier changed his boots for *Kletterschuhe*, and at 6 a.m. we started on the rocks. We traversed first along a little corridor level with the *Brèche* for about 80 ft. on the N. side of the ridge. Here the serious climbing began, and we climbed steeply up on perfect rock for a difficult 150 ft. until we regained the narrow crest of the true arête at the top of the first step rising sheer above the

⁴ A.J. 26, 462.

⁵ This route is also described briefly in Gaillard, p. 86, Route 130. The French party took 12 hours from the *Brèche* to the Grand Pic.



LA MEIJE. From the E. ridge of Le Râteau.

- Key: 1. Great Tower on the W. ridge of La Meije.
 2. Foot of Glacier Carré.
 - - 3. Direction of Brèche Joseph Turc.
 - 4. Snow band below Brèche Joseph Turc. The route of descent is from 3 to 4.

Brèche. The next step rose above us, and again we turned it on the N. face, and a steep chimney brought us to the crest again. For a time the climbing was easier, and mostly on the ridge. We turned a little gap by crossing the top of a rock couloir that fell away steeply on the S. face to the glacier below.

Soon the ridge narrowed again and a high thin tower soared impressively above us; this bold tower is the most conspicuous feature of the ridge seen in profile. Again we were forced on to the N. face. The angle was no less steep than on the crest, but the rock was more broken, though perfectly sound, as it was throughout the climb. The ascent of this tower was quite the most memorable section of the climb, and when an exhilarating upward traverse finally brought us back to the crest of the arête, we were astonished, looking back, to see how slender was the great tower, whose flank we had climbed. Next came a conspicuous gap, 25 ft. deep, into which we roped down on our own ropes: then easier ground on the broader crest of the ridge brought us close under the wall of the Doigt du Glacier Carré. This can be turned on either face, and we chose the more comfortable alternative of traversing round the corner to the S., where we joined the ordinary way up La Meije exactly level with the foot of the Glacier Carré. We paused and had our breakfast on the aerial ledge, filling our waterbottles from the glacier.

The remainder of the ascent to the summit of La Meije needs no fresh description in these pages, for we followed the ordinary route. As we passed the top of the Glacier Carré, Casimir Rodier, with an air of modest pride, pointed out the finish of the great climb he had made earlier in the season up le Couloir en Z on the N. face (p. 219; La Montagne, 1933, pp. 363–72). This couloir is conspicuous from La Grave by its Z form picked out in snow against the rock wall.

We stood on the summit of the Grand Pic 4 hours after leaving the hut. The ascent of the W. ridge from the Brèche as far as the Glacier Carré had taken us 2 hours, and the remainder, after our halt, 1 hour. The summit ridge of La Meije must surely be unique in mountain expeditions, for where else can one climb so far along the crest of an overhang, with tower after tower of the same characteristic profile studding the ridge behind and before?

We were slightly but not seriously hampered by the recent snow on the N. side of the ridge, and the weather was queer

⁶ See photograph no. 2.

this day. Since early morning a low haze had been rising from the valleys: it steadily enveloped everything till only Mont Blanc stood clear above the sea of it. As we traversed the ridge grey streamers of formless dry mist blew over the pinnacles in the bitter north wind, and swirled eerily down the crags of the S. face. Had the year been any but 1933, we might have feared a break in the weather, but these odd threats that never materialized had been so common in this season that we gave it no thought, save regret that the lack of sun deprived us of views and photographs.

We reached the Pic Central in 1 hour 40 minutes from the Grand Pic. A steep, icy rock descent brought us to the little gap whence one normally descends on the N. when doing the Meije traverse to the Aigle hut. There was a cluster of most comforting pitons here for rappels down the ice slope. All the difficult descents on the Meije arête have, in fact, much well-worn ironmongery to guide those uncertain of the way.

Our route now lay on the sheer S. face, along easy but appallingly exposed ledges. Thus we avoided a broad gendarme and regained the snowy ridge at an easier point, and were soon down at the Brèche Joseph Turc, in 54 minutes of climbing from the Pic Central. The ridge then rises to the Pic Oriental; but beyond this gap it has never been followed, save by a long

rappel in descent.

Three routes have been accomplished up the great southern rock wall of La Meije between the Promontoire and the Col du Pavé. The first of these is the Dibona-Mayer route that I have already mentioned. We now stood at the top of the second route; the Brèche Joseph Turc is the lowest point of the summit ridge, and the conspicuous snow band across the S. face is only 600–650 ft. below. The third route goes straight up the face of the Pic Oriental. This exceedingly difficult rock-climb has been accomplished but once, by Casimir Rodier and his brother.

The descent from the Brèche Joseph Turc follows a steeply inclined couloir that curves down close under the sheer rock wall of the Pic Oriental. We followed down this line of weakness until the couloir petered out in the face. We then traversed back to the W. on slabs of none too firm rock; then descended these slabs till they became too steep, when we roped down about 40 ft. over an overhang under which was a small ledge. A steep descent towards the E. brought us to another couloir of dirty ice and bad snow, and we hurried down this till it curved to the W. under a bulge that sheltered us from possible stonefall. Below this the angle eased, and we





soon reached the top of the snow band. We roped down this snow by Graham Brown's double roping technique. We often used this method both in ascent and descent of places where caution demanded that the party should not move all together; it saves so much time that it is perhaps worth description. We were as usual in two pairs on two ropes, Rodier and I, Graven and Graham Brown. This is the procedure: first Graven belays and holds Rodier. I run down the slope, held by Rodier, till the full extent of the rope is out. Graham Brown next descends at full speed, held by Graven, with our rope as an extra handhold. Rodier then comes down using Graven's rope for a hold, and finally Graven descends: he is the only one who need take care lest he should slip.

In this manner we descended rapidly to the lower edge of the snow band, and followed it down to the E. along the line of débris dividing the bottom of the snow from the rock precipice that plunges over to the Étançons Glacier. Here we were safe from direct stonefall. Soon we found a little promontory where we rested in full view of the astonishing S. face of La Meije which rose sheer all around us, below and above, till it culminated in the great overhang of the Pic Central

that seemed to curve over our very heads.

It was now a simple matter to follow the snow band on to the Étançons Glacier. We had to be on the alert for falling stones, but the dangerous passages were short and the sky overcast. Nothing of importance disturbed us, and we were soon running down the easy slopes of the glacier to the valley. The descent from the Brèche Joseph Turc to the moraine took 3 hours.

All the way down from the Pic Central we had seen tracks of a previous party in the snow. Later we learned that lights which we had seen on the Étançons moraine late the previous evening were those of the party, who had done the same traverse as we, and were benighted at the foot of the glacier.

Our descent of the Étançons valley was a succession of orgies among bilberries; we reached La Bérarde disgracefully late and as blue as early Britons. This was a daily event, so that all our times up and down the valleys around La Bérarde are better left unrecorded.

Les Ecrins by the W. (Clocher) arête to the Dôme de Neige. (August 28, 1933.)

It was Graham Brown's first visit to Dauphiné, so it was essential to include Les Ecrins among our expeditions. In

1927 Michael Wilson and I had made the traverse by the orthodox route up the S. face from the Col des Avalanches, and down by the N. face and Col des Ecrins; in 1933 we traversed

the mountain exactly at right angles to this.

The Clocher ridge up the Dôme de Neige des Ecrins is conspicuous both from the side of the Tête de la Maye or the Bonne Pierre Glacier as from the Pilatte side. The ridge first springs a bold 1000 ft. from the Col de Bonne Pierre to the group of towers which form the Clocher des Ecrins. Then, after a deep cleft, it carries on to a second fantastic cluster of gendarmes; these are followed by many lesser towers, gradually diminishing in size until a final rock slope leads to the Dôme de Neige. The lower pinnacles overhang to the N. in the way the Meije arête overhangs to the S., and a few years ago the entire summit of the Clocher itself fell on to the Bonne Pierre Glacier below.

When looking at the Clocher ridge from below, we had hoped to storm the great W. face of the Clocher direct, and thence cross every gendarme to the summit of Les Ecrins. But Rodier knew better; the deep cleft above the Clocher seems unclimbable, so rather than risk disorganizing our subsequent plans by a possible day of failure on the lower part of the ridge, we compromised by joining the ridge above this gap, and as far down as was possible. To do this, we worked round to the W. from the Col des Avalanches on the upper snowfield of the Glacier du Vallon de la Pilatte till we were below the second cluster of gendarmes. The broken face can be ascended almost anywhere here, and we worked up to the left over ribs and couloirs until we saw a good buttress which led us directly upwards on splendid rock till we reached the main, W., ridge at about 3850 m., just above the deep gash on the near side of the Clocher.

The sudden situation here was superb. We looked straight across at the vast cirque of the N.W. face of the Dôme de Neige, which rises, seamed with ribs and gullies and sheer walls, on a magnificent scale from the Bonne Pierre Glacier. Rodier pointed out the route up this face, which looks a fine and fully justifiable climb. On our right was a similar great rock face, rising to Pic Lory between our ridge and the similar ridge from the Col des Avalanches, apparently first climbed [?] last year.

We followed the ridge closely upwards. Tower followed tower, large and small, in detail so complex that it is useless to

attempt to describe it. Graham Brown's notes record seven gendarmes of importance. The climbing was often difficult, and many times we roped down on our own ropes; the rock was always excellent. Finally we crossed the top of the steep snow couloir up which Mr. Geoffrey Young made his route in 1911,8 and then first-rate rock-climbing brought us quickly to the snowy crest of the Dôme de Neige.9 Here we spent a glorious hour in idleness, in photography and in telescopic study of the Ailefroide for our next expedition.

The ridge onwards over the Pic Lory and up to the summit of the Barre des Ecrins presents no special difficulties. Soon we crossed the top of the broad ice slope where the ordinary way up the N. face joins the summit ridge. There were steps to be cut in ice here and there, but most of the ridge was a

fast, exhilarating, aerial scramble.

Again we spent nearly \(\frac{3}{4} \) hour on the summit, for the day was so perfect that we were loth to descend to earth. The whole of Dauphiné was at our feet; the valleys beyond the complicated ridges were filling slowly with cloud from below, and the lazy cumuli moving in and out of the lower ridges gave depth and perspective to an otherwise bewildering confusion of rock. Mont Blanc and the Valais peaks were clear to the N., standing remote and ethereal over 100 miles away. Casimir told us that he had seen the Mediterranean from the Ecrins.

It was well after noon when we set off again down the N.E. ridge. This ridge is easy but sensational, for on one side is the rock-studded ice slope of the N. face, while on the other is a full view of the S. wall of the Barre that falls 4000 ft. in sheer precipices to the Glacier Noir. The ascent of this face shares, with the Dibona-Mayer route on La Meije, the place of honour among accepted tours de force in Dauphiné. Our impression of the route was that, like the Meije face, and as in fact with most face-routes in Dauphiné, the rock is much less sound than on the arêtes.

There is only one difficult point on the summit ridge of Les Ecrins, and we soon reached this after crossing the top of the 'Whymper' couloir. The ridge falls suddenly in a vertical

First accomplished, July 31, 1926, by MM. J. Vernet and R. Toumayeff. A.J. 38, 304–7.

⁸ A.J. 25, 736.

⁹ The Dôme de Neige has been elevated to the rank of a 'four-thousander' in the new French military map.

wall, perhaps 50 ft. high. It was here that Whymper was turned in his first ascent of Les Ecrins. In descending, a simple rappel overcomes the difficulty, and 10 minutes later we stood on the snowy saddle that leads quickly off the mountain down the slopes of the N. face.

It is a very long way down the Glacier Blanc, though there is no finer walk in Dauphiné. From the upper glacier is the constant view of the bold outline of Les Ecrins, and lower down come views of the rock walls of the Ailefroide, and finally the S. face of La Barre des Ecrins, gloomily encircling the Glacier Noir. The contrast between these glaciers is as complete as their names imply.

We paused for gossip and refreshments at the little hut among the trees on the desolate Pré de Madame Carle. It is comforting to know that this stony plain was only a portion of Madame's estate. It was dusk when we left the hut, the path was stony, and the day had been long enough when we reached

the comfortable little hotel at Ailefroide village.

Our times for the expedition were:—Temple-Ecrins hut: dep. 03.20. Col des Avalanches: 06.20. Foot of rocks: 07.10. Arête above Clocher: 08.15. Dôme de Neige: 10.04-11.16. Summit of Les Ecrins: 11.59-12.41. Head of Glacier Blanc: 14.48–15.26. Refuge Cézanne: 18.33–18.47. Ailefroide hamlet: 19.52.

From hut to summit: $6\frac{3}{4}$ hrs., including halts.

From summit to Ailefroide, 5 hrs. 57 mins., including halts.

The Sélé hut under the Ailefroide must be one of the most difficult of access in the Alps. The first check is encountered soon after leaving Ailefroide village, where the path skirts hillsides that are thick with wild raspberry. Towards the end of as dry a summer as 1933 these were irresistibly luscious and profuse. Having passed this obstacle, the susceptible climber is confronted a little higher up with a carpet of equally prolific bilberries. As if to penalize the glutton, the final 2000 ft. of ascent to the hut is up the most outrageous of all Dauphiné scree slopes.

The hut is ingeniously perched under a bulge of rock high above the Sélé Glacier, at the base of the E. peak of L'Ailefroide. This is the only site in the glacier basin that can be safe from winter avalanches, but the hut must be exceedingly hard to find in mist or darkness. This hut has been open for five or six years, yet there are only two British names in the book: Edwin Kempson and George Harris.

The Traverse of the summit ridges of L'Ailefroide. (August 30, 1933.)

Although the Ailefroide is the third mountain of Dauphiné, its summit ridge had never been traversed in its entirety until this day. This ridge runs almost due W. from the E. peak of the Central peak, and thence S.W. to the W. peak forming the highest or summit. During the whole of our ascent of Les Ecrins the Ailefroide ridge was in full view, and we looked at every aspect of it in greatest detail through Graham Brown's little folding Zeiss monocular. There seemed to be no insuperable obstacles, save possibly one unpleasant-looking overhanging gendarme near the W. summit, and evidently any difficulties we might expect on the ridge would be in the detail of the innumerable rock towers studding the crest.

Although the complete traverse of the Ailefroide arête has been the object of many attempts, on one occasion only had a party been successful in traversing the portion of it between the W. and Central peaks, on another occasion point 3908 m. was reached along the ridge from the Central peak, while the actual arête between the E. peak and point 3908 m. had never been traversed at all—at least to Rodier's knowledge.

The E. peak can be reached without difficulty from the Sélé hut, under a great rock bulge at the foot of the mountain. One can either turn this bulge by a long détour on the Sélé Glacier, or alternatively climb steeply up quite difficult rocks on the left bank of a couloir which comes past the hut a little to the E. This we did, starting by lantern light shortly before dawn. There was perhaps 800 ft. of scrambling until we reached easy ground above. Here we unroped and walked up scree and névé, and after climbing a short upper rock wall, easy snow slopes brought us to the E. peak in a little under 3 hours from the hut.

We had previously debated the possibility of reaching this E. peak by the true E. ridge, thus accomplishing the entire traverse of the Ailefroide along the watershed. On this matter Rodier soon cut short our argument; he told us that a French party had attempted to descend this ridge, and although equipped with no less than 300 metres of cordes de rappel, they had been unable to get down.

It was cold on the top of the E. peak; we stowed our ice axes in our sacks and almost at once were confronted with a serious problem. A quarter of an hour's easy walk had brought us to a little gap with a delicate à cheval ice crest,

leading to the base of a truly fearsome gendarme straddling the ridge. The crest of this rose in a smooth steep slab 150 or 200 ft. high, while both sides fell away in sheer walls to where they rested several hundred feet below on the steep icy rock of the parent mountain. It was practically out of the question to turn this tower. Graven left his sack and tackled a thin crack on the right of the crest; slowly and with infinite care he worked up and then back on exceedingly small holds, to the crest where there was a tiny stance 60 ft. up. Rodier followed quickly, using the rope as a hold, then Graham Brown, to an exiguous ledge below Rodier; Graven was then able to force his way for a further stretch of great difficulty on the crest to easier ground above. For 120 ft. or so this rock was as difficult as anything that can be climbed in nailed boots. Our combined manœuvres with ropes saved us much time, but the engineering of rucksacks cost us more; the ascent of the gendarme took three-quarters of an hour.

There followed then a long stretch characteristic of this ridge of the Ailefroide. We came on exceedingly loose rock, while the ridge was studded with endless small gendarmes. These could never be turned, for their flanks fell sheer on either side, giving situations consistently as exposed as the most aerial part of the summit of the Rothhorn. These gendarmes were so loosely constructed that many of them could be felt shaking as we crossed them, but fortunately wherever there was any real difficulty the rock was firmer. This was indeed true of

the whole ridge.

Before long we were looking across at the bold tower, point 3908 m., which is so conspicuous in any view of the Ailefroide from the E., S. or N. This looked at first sight absolutely unattainable and, like the first gendarme, it sat astride the ridge in such a way that to turn it one must descend hundreds of feet. The tower itself rose 250 ft. sheer above the general level of the ridge. This tower, however, succumbed more easily than we expected to an attack straight up the left centre of the face, followed by a sensational corner on fine rock to a shallow, steep couloir. This led us to a chimney on the S. face and thence to the summit, each section forming a lead of about 70 ft. This was as charming a piece of rockclimbing as one could desire, and a welcome change from the exceeding rottenness of the easier ground we had just crossed. The tower took us 25 minutes, and brought us to point 3908 m. after 2½ hours on the ridge. On the summit we found a cairn and in it a bottle. This was a disappointment, for at the time

we did not know that this point had been reached in the other direction by the level ridge from the Central peak. We had hoped that the remainder of the ridge to the Central summit would be as free from any trace of previous visits as the section

we had just completed.

The day was now perfect, the sun warm and brilliant and the air keen and still. More excellent conditions on the ridge could not have been possible. We rested for half an hour and breakfasted, then hurried on, for there was no time to be lost. We had started late and so far the ridge had been harder than expected. We had started out fully prepared to be benighted, and opinions were still divided as to our chances of getting to easy ground by dusk. After leaving point 3908 m., we were soon again in the thick of a succession of thin unstable gendarmes about 10 to 20 ft. high. While ascending one of these the rope dislodged a jagged flake from a crack, and this fell a few feet on to Graham Brown's cheek, cutting him to the bone. The climbing along these razor edges was fantastically exposed and every step needed the greatest possible care on account of the loose rock and the high standard and complexity of the climbing.

After this cluster of pinnacles the ridge lost character and we encountered no further difficulty in reaching the Central peak (3928 m.). Along this section we had some excellent views of the whole of the route from the Col de la Coste Rouge to the Central peak of the Ailefroide. This is one of the great expeditions in Dauphiné—it has been climbed thrice only, I believe; from above it looks a fine route with an exceedingly

steep finish.

The second section from the Central to the W. peak was less formidable. Although the W. face of the ridge remained without exception within a few degrees of perpendicular, the S. slopes gradually assumed an easier angle, so that traverses

on easy ground were sometimes possible.

After leaving the Central peak we first crossed a group of small gendarmes giving delightful climbing. Shortly after these the ridge descended to a gap, and from this a steep chimney led on to the N. face. We turned the squat tower above us to another gap, by a very exposed traverse on the N. face. The situation here was most remarkable. The Pilatte valley was far below us and the steep S. face of the La Barre des Ecrins rose across the ravine of the Glacier Noir. Mont Blanc

¹¹ A.J. 27, 437-8, with marked 'Sella' illustration.

as usual dominated the far distant horizon 70 miles away. All the details of Dauphiné to the N. of us were flat and

featureless in the midday sun.

Then came long spells of scrambling, alternating with a characteristically broken, narrow-crested ridge, but there was nothing of note until we came down a wall into the gap in which stood the gendarme of overhanging profile that had worried us so much when we studied the ridge from the valley and from the Ecrins. This proving an impostor, we walked easily round on a ledge at the base of it. The other side of this gap was climbed by a long couloir on the S. slope of the arête. This couloir was unexpectedly choked with ice and snow, and we used combined rope tactics as time was short. Last came a gendarme, a gap and a final steep rock recess and we stood on the summit of the Ailefroide (3959 m.). The ridge had taken us about six hours—nearly four times as long as the summit ridge of La Meije.

At this stage we felt we had earned a rest from the anxieties of constant loose rock, but it was not to be so. We descended by the continuation of the summit ridge to the W., and when that showed signs of becoming precipitous we took to the loose slabs and snow patches of the S.E. face till an ingenious slanting gully, curving under the precipice, brought us on to snow close by the Brèche des Frères Chamois. From this gap to the Pilatte Glacier the descent was made a nightmare, first by scree lying on slabs and by ice thinly covered with moraine; finally, by just moraine and endlessly more moraine. For 7000 ft. from the summit of the Ailefroide we had scarcely a single step unmasked by débris. I would give a solemn warning that in no circumstances should the Ailefroide ever be approached from the Pilatte valley.¹²

However, we avoided being benighted and dusk fell an hour

before we reached La Bérarde.

The detailed times of this expedition were:—Sélé hut dep.: 05.05. Ailefroide, E. Peak: 08.01–08.06. Foot of first gendarme: 08.22. Top of first gendarme: 09.07. Foot of point 3908 m.: ca. 10.00. Top of point 3908 m.: 10.25–10.55. Central Peak: 11.38. W. Peak: 14.01–14.46. Brèche des Frères Chamois: 16.21. Pilatte Glacier: 17.15. La Bérarde: 20.48.

¹² Early in the summer, or in a snowy season, the entire route to the Brèche des Frères Chamois is masked in snow, providing interesting and pleasant, if complicated, access.—*Editor*.





Les Bans by the N. Face. (September 1, 1933.)

Our last climb had of necessity to be short, since we had planned to be in Grenoble the same night. We had looked at Pic d'Olan and examined Les Bans. Rodier told us the history of routes on Les Bans, and we discussed the three conspicuous buttresses that rise from the Pilatte Glacier to the N. face. Of these, the most westerly, known as l'arête Santi, is often climbed. On the other side of a conspicuous hanging glacier rises the middle buttress more steeply: this has been climbed once only. Further to the E. again rises the third and this, said Rodier, was virgin.

From the Pilatte hut, this buttress is seen against the skyline and seems to lie back at an easier angle than its true inclination, and we set out full of confidence, with the expectation of not too difficult a climb before us.

We came through the little icefall of the Pilatte Glacier as dawn was breaking, and were soon high up under the N. face of the mountain with a short ice slope separating us from the lowest rocks of our rib. In this very dry year the 'highwater mark' of the ice on the rocks was clearly noticeable, running all along the face of the mountain about 30 ft. above the level of this year's ice.

Looking up now at our buttress above us, it was clear enough that we had undertaken no simple task. The rib was steep and smooth, and half-way up was the ugly black bulge of an overhang. Graven declared flatly that the route would not go, and pointed out unpleasant and unmeritorious alternatives on the steep, broken face lying between our rib and the ordinary route up the N.E. ridge. It was not till we were well started on the rib that the feel of perfect rock and the cheers of his supporters changed his outlook and, on our encountering real difficulty high up, nothing but a major act of God would have stopped him from getting up.

Graven cut across the ice slope, and in 2 hours from leaving the hut we were established near the bottom of the rib, where it points down like a finger into the glacier. The lower part of the rib is at an easier angle than the main section of the climb, but it was a shock to find how high was the standard of climbing, even at the very start. The rock was firm and smooth, Chamonix-like, and we worked up a long thin crack,

¹³ The first ascent appears to have been on August 16, 1913, by the late Mr. E. V. Slater's party. A.J. 29, 171-3, illustrated.

alternating with slabs, till the angle steepened and the buttress towered above us. Now the climbing became more open: we mounted directly up the crest of the curved wall of the buttress. The rock was perfect and the holds, though small, were sufficient. Resting-places were few and Graven used the full extent of his 30-metre rope in most leads before any possible security was reached. Now we were in the full morning sun: the rocks were warm and dry and the day was calm. We climbed in that spirit of calm tense elation peculiar to difficult rock; it is a sensation that one experiences rarely in the high Alps, where the pure joy of rock-climbing is generally marred by the demands of speed or the anxieties of dubious weather or indifferent rock.

Soon we came up behind a little pinnacle dividing the buttress into two equal portions. Above us now the crest was clearly impossible, so we worked a little way up to the left over a welcome brief stretch of easier terrain, towards a steep shallow chimney that ran on for several hundred feet up the eastern wall of the buttress. Graven tackled the wall between this chimney and the edge of the buttress. After about 100 ft. of exceedingly difficult climbing we reached an overhang which seemed impassable. Meanwhile, Rodier tackled the wall on the other side of the chimney and, spreadeagled on my narrow resting-place, I enjoyed the thrill of watching Graven's boots 50 ft. above me, with Rodier giving a fine exhibition of first-class climbing on very steep rock a little below me across the chimney.

Our two parties united in the chimney above, which we followed for 200 or 300 ft. The angle was still high and the climbing scarcely easier; several times we used the double roping tactics I have described already. In time the chimney merged into the face and, after a further very steep slab and difficult face climbing, the angle began to ease off, and a quarter of an hour of scrambling finish led us direct to the W. peak of Les Bans. We had been $2\frac{3}{4}$ hours on the rock face.

The astonishing feature of this route is the consistently high standard of the climbing. Save for a few steps in the middle and for the easy finish, there was no section of this 1200 ft. of rock that is not of first-class difficulty. Rodier described it as the hardest piece of rock he had climbed save the S. wall of La Meije Orientale. By British rock-climbing standards the route would be called 'severe,' with one or two steps 'very severe'; the nature of the climbing is similar to the well-known N.W. climb on Pillar Rock or to the harder routes on

Gimmer Crag in the Lake District. The flawless quality of the rock, the fine situation of the mountain and the encouraging morning sun combined to make this route the ideal of rockclimbing perfection.

On the summit of Les Bans our reward was complete, for our panorama encompassed all the five routes of our 10 days in the district. We could follow in detail every route I have described in this paper, save only the descent of the snowy N. face of Les Ecrins. We spent on the summit a glorious hour and a quarter in retrospection.

The ordinary way off Les Bans by the E. ridge is a delightful climb on nearly as perfect rock as the buttress we had climbed. We came quickly down on to the snowy crest of the Col de la Pilatte, and regained our faint tracks of ascent on the glacier. We were back at the hut in $2\frac{1}{4}$ hours from the summit and in La Bérarde, for the last time, soon after lunch.

As we drove down to Grenoble in the evening, there came the most satisfying finish to a climbing season, for black clouds rolled up the valleys and thunder was all around in the foothills. We left the Alps feeling that the summer was ended.

Illustrations by B. R. Goodfellow:—

No. 2 represents La Meije; on the great tower of the W. arête.

No. 3 represents Les Ecrins; on the 'Clocher' arête of the Dôme de Neige: S. arête of Pic Lory.

No. 4 represents L'Ailefroide; E. peak from point 3908 m.

No. 5 represents L'Ailefroide; W. peak (summit) from Central peak.

THE PICOS DE EUROPA, 1933.

By G. F. ABERCROMBIE.

(Read before the Alpine Club, February 6, 1934.)

THE Picos, which I have the honour to attempt to describe to you to-night, though much neglected by British climbers, have from time immemorial arrested the attention of every passing traveller. George Borrow, for instance, almost certainly refers to them, 'an immense range of mountains, which rose up like huge ramparts at about a league's distance from the sea,' and Richard Ford knew them by

¹ The Bible in Spain. 1843.

² A Handbook for Travellers in Spain. 1845.