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IN THE FOOTSTEPS OF DR. PACCARD

BY E. H. STEVENS

II

PERHAPS the most interesting passages of Dr. Paccard's Journal are those describing his exploration of the Tacul basin, and his observations as to the possibility of finding a route to Mont Blanc on that side. These passages present several intriguing problems, which have been already somewhat elaborately discussed in the ALPINE JOURNAL.¹ Some of these problems, however, still remained unsettled, especially those raised in a very thorough and ingenious analysis of Paccard's narrative most kindly sent me by M. Paul Chevalier, and summarized in *A. J.* 46. 12, 13. A break in the bad weather of September last year (1935) enabled me to make an excursion on the Mer de Glace 'in the footsteps of Dr. Paccard,' and to reconsider the whole question on the spot. As a result my views have come into much closer agreement with those of M. Chevalier, and a much smaller margin of uncertainty is left in the interpretation of Paccard's narrative.

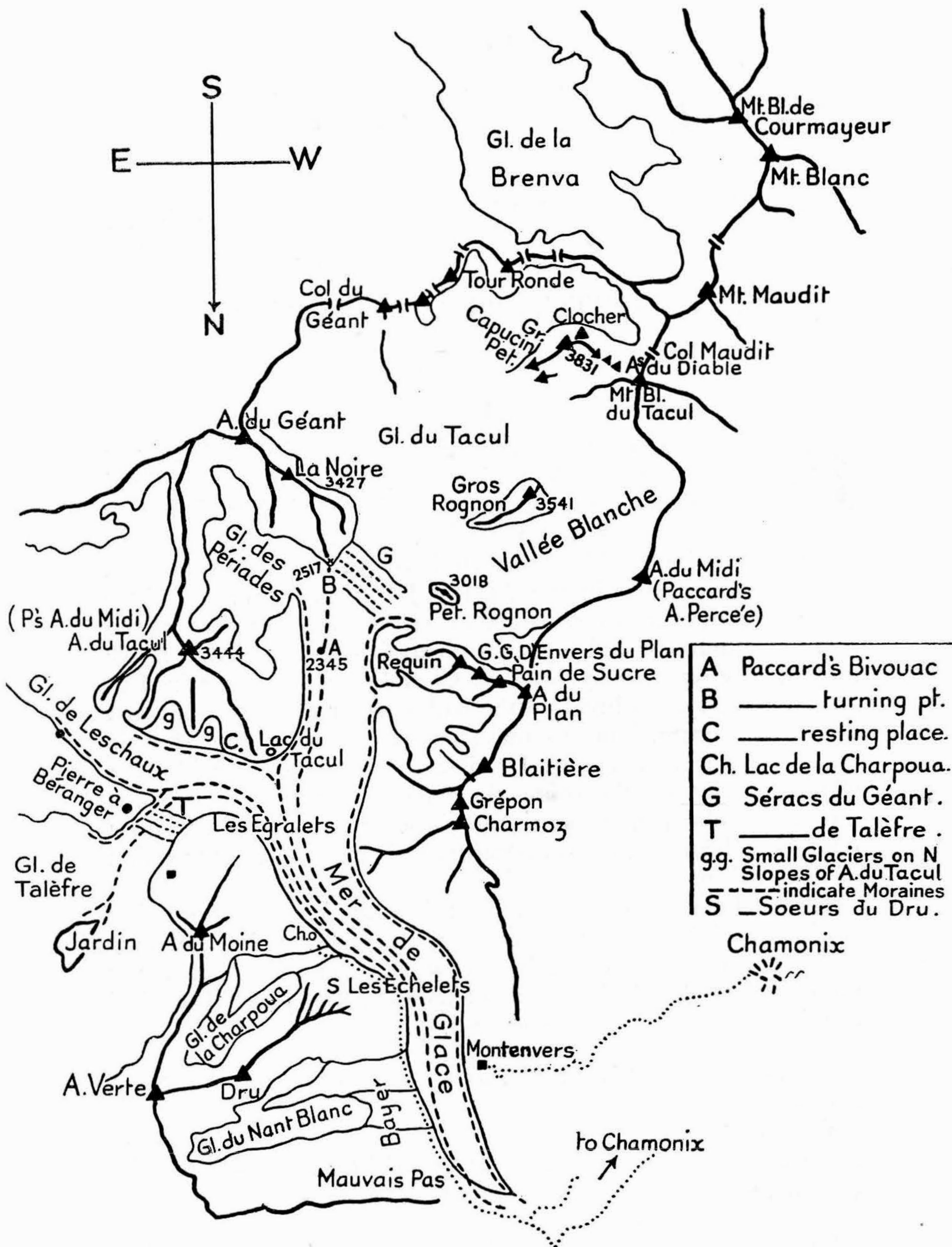
It will be most convenient in this case, instead of quoting Paccard's original text, to give a close translation of it, and thus avoid the necessity of giving separate explanations of many minor points. As before, most of the details of purely botanical or mineralogical interest are omitted.

Journey to Mont Blanc with Pierre Balmat of les Barats. Spent two days.

On June 4, 1784, the barometer at the Montenvers stood at 22½ inches and the thermometer at 15° R.² (not counting the tiny quantity which occupied one line). We spent the night [in a hut on

¹ *A. J.* 41. 110-4; 42. 170-8; 46. 4-8.

² These observations give a height for the Montenvers of *ca.* 920 m. above Chamonix, or 1960 m. above the sea—about 50 m. too high.



- A Paccard's Bivouac
- B ——— turning pt.
- C ——— resting place.
- Ch. Lac de la Charpoua.
- G Séracs du Géant.
- T ——— de Talèfre.
- gg. Small Glaciers on N Slopes of A. du Tacul
- - - - - indicate Moraines
- S — Soeurs du Dru.

THE TACUL BASIN.

'Vallons'

I 2 3 4 5

↓ ↓ ↓ ↓ ↓

Tour Ronde

↓

Pet. } Capucine.

↓ ↓

Mt. Bl. de
Courmayeur.

↓

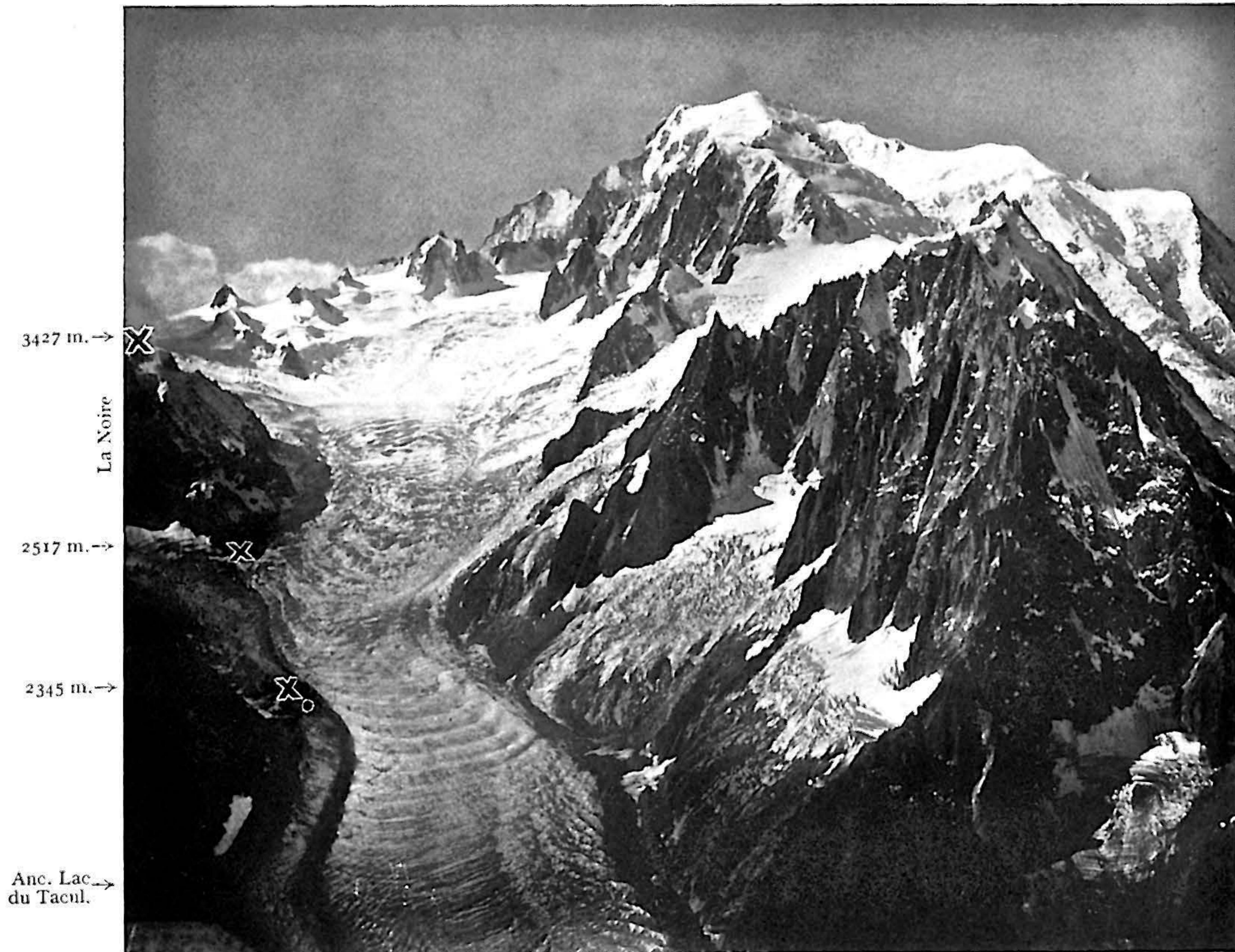
Mt. Bl. du
Tacul.

↓

A. du Plan.

↓

A. du Midi.



Photo, W. F. Donkin.]

THE TACUL BASIN.

[To face p. 2.]

the moraine in the Tacul] on this side of the Noire, where the barometer was $3\frac{3}{4}$ inches (less one line) below the 25 inches at which it stood at the Priory.³ That is about 60 toises [ca. 400 ft.] higher than our sleeping place on the Montagne de la Côte last year. The thermometer at the same moment was two lines below 15° R. The crevasses from the Noire [downwards] were covered with snow, which involved great danger. Immediately above the glacier which is at the top of the region of this hut Mont Blanc is seen, showing its rounded, snowy top as [it does] from the direction of Chamonix. Behind it there is an aiguille almost bare [of snow], at least in the direction of Val d'Aosta, which Monsieur de Saussure probably took for Mont Blanc.⁴ It is said that this summit appears higher [? than Mont Blanc] when seen from les Courtes [sc. from the Glacier de Talèfre]. We got as far as the meeting-place of two branches of the glacier valleys. In the moraine here several plants were seen that are found elsewhere, but smaller. . . . We made a round on [the slopes of] the mountain [sc. Aiguille du Tacul] and found [various plants]. . . . We found another, larger kind of 'salix' in the moraine which we followed to reach our hut. Near the glacier which is above our hut in the Tacul *cerastium semidecandrum reflexum* was very pretty.

In the morning as we started from our hut the thermometer was a little above 5° R., and the barometer one degree lower than the previous evening, which means approximately a fall of one line for 8° of the thermometer. We went on some distance nearly as far as the Noire; we crossed a large number of covered crevasses. The snow was beginning to soften, and having only advanced two gun shots' distance in two hours, we decided to go down again in order not to be exposed to the dangers of the crevasses covered with snow, which the sun had softened.

The approach to Mont Blanc from this side is difficult. It appears that it is necessary to follow the Noire closely, and even to go over [its] rocks. This route leads to a plain which is above a glacier⁵ that appears [in front]. Abutting on this plain are several valleys⁶ which go in the direction of Cormajeur, but the widest valley⁷ goes straight to the foot of the mountain which is behind

³ Allowing for the error mentioned in the previous note, the height of the bivouac comes out as about 2345 m.

⁴ This is Mont Blanc de Courmayeur (see *A. J.* 42. 171).

⁵ The Séracs du Géant, above which stretches the gently sloping upper basin of the Glacier du Tacul.

⁶ The word is 'vallons,' and probably indicates the five snow slopes leading up to gaps between the peaks on the southern rim of the Glacier du Tacul. Several of these gaps provide passes leading to the Brenva valley, and therefore to Courmayeur. For these snow slopes see Donkin's photograph.

⁷ The snow slope (number 5 on Donkin's view) to the (spectator's) right of the Tour Ronde, which runs at first towards Mont Blanc de Courmayeur, and then turns to the right, towards Mont Blanc, behind the Petit Capucin.

Mont Blanc [sc. *Mont Blanc de Courmayeur*], and appears to bend to the right towards *Mont Blanc* behind a granite *aiguille* which hides it. The depth at which it lies beneath the lofty slopes which seem to rise to an enormous height above it makes one suppose that this valley can only lead to *Mont Blanc* by a very steep couloir.⁸ To attempt this route it appears that it is easier by the valley in the background [? the *Brenva* valley], or near *Cormajeur* by the same passage [sc. the *Col du Géant*] which appears beyond the *Noire*, where it is said that the innkeeper 'Abondance' of *Cormajeur* came in pursuit of a *bouquetin*,⁹ and from which he said he had seen the whole valley of *Bayer* [sc. of the *Mer de Glace*].

We counted three granite *aiguilles* behind the *Aiguille Percée* which are not visible from *Chamonix*; all the others are also thus doubled several times; one sees a countless number of these granite *aiguilles*, and it is the place in which one can study the rocks of this kind.

We rested behind the *Aiguille du Midi*, where we saw nine chamois (including four little ones), which at the noise we made ascended the moraine of a little glacier and, without our seeing them, got down, crossed the glacier and went to the *Talèfre*, where we saw them above and beyond [the *Pierre à*] *Béranger* and where they ascended a steep snow-slope to cross the snow and go to the valley of the *Talèfre*.

We found some crystals below this glacier [*Gl. de Talèfre*]. We went to gather some dwarf *Achillea* on the moraine under [the *Pierre à*] *Béranger*. Then we went on the other side of this glacier by the *Col de . . .* as far as a little plain under the *Aiguille* [? du *Moine*], where are several huts. Then we came all the way on grass and by a little path which follows the valley of *Bayer* [sc. of the *Mer de Glace*], under those buttresses of the *Aiguille d'Argentière* [sc. *Aiguille Verte*¹⁰] and the *Dru* ['*sous ces appendices de l'éguille d'Argentière sœurs du Dru*'], making our way over against this latter. The plants there were dried up by the heat. . . . We came by the *Mouret*¹⁰ [= the *Mauvais Pas*]. Its boggy places ['*marais*'] appear

⁸ This is the steep and difficult couloir leading to *Col Maudit*, between *Mont Blanc du Tacul* and *Mont Maudit*. It has been ascended three times—by *Bowlby* and *Anderson* on their way to *Mont Maudit* and *Mont Blanc* (1888—see *A. J.* 14. 151), by the *Gugliermi* brothers, *Ravelli* and *de Petro* (1921—see *A. J.* 35. 112, with illustration) and by *Smythe* and *Macphee* (1927—see *A. J.* 40. 67). They all took about 4 hrs. to climb the couloir. It has been descended twice by *Prof. T. Graham Brown*, who experienced considerable difficulties, viz. in 1932 (*A. J.* 44. 307, illustration 311) and 1933 (*A. J.* 45. 379–80). *Yeld* in 1895 said (*A. J.* 21. 117), 'The couloir looked perilous in the extreme.'

⁹ *Bourrit* (*Nouvelle Description des Glacières*, tome III, p. 72) relates what must have been the same adventure, but calls the hero of it 'Patience,' a chamois hunter who was employed as a guide by *de Saussure* and by *Bourrit*.

¹⁰ The *Aiguille Verte* was formerly called *Aiguille d'Envers d'Argentière*. The *Mouret* is the *Rocher du Mouret*, which later acquired the now familiar name of *Mauvais Pas*.

interesting for the botanist. Under the Talèfre, where we [had] lunched, we found some rock specimens [several named].

Taking this narrative in order, the first point is the location of the bivouac. Had it been, as would otherwise be likely, at the Lac du Tacul (ca. 2200 m.), Paccard would surely have described this already well-known site more precisely than as being 'on the moraine in the Tacul, on this side of the Noire.' Presumably the bivouac was at the spot subsequently mentioned as 'the meeting-place of two branches of the glacier valleys.' Paccard's barometrical measurement would seem to make it at about 2345 m.¹¹ (some 500 ft. above the Lac du Tacul). It is just at this height that in the B.I.K. map the upward route from the Lac du Tacul is marked as crossing the moraine (at the junction of the Glacier des Périades with the Glacier du Géant) towards the W. side of the latter. This spot is in full view of the Noire (most of which is invisible from the immediate neighbourhood of the Lac du Tacul), and about 550 ft. below its foot. A gîte there would be an excellent base for exploring the adjoining glacier basins, and from it the summit of Mont Blanc is well seen. It seems to correspond most nearly with Paccard's references to his bivouac, though it is perhaps a little surprising to hear of a hut ('cahute') here, unless the word can denote a simple gîte,¹² such as were used by crystal or chamois hunters.

How far did Paccard advance beyond his bivouac? He says 'we went on nearly as far as the Noire'¹³; we crossed a great

¹¹ See note 3 above. The place is close to 'the rocky promontory on the right bank of the glacier, about half way between the [Lac du] Tacul and La Noire' which was Forbes's 'subsidiary station' K in his survey of the Mer de Glace.

¹² Cf. de Saussure (*Voyages*, § 637), 'J'étois venu visiter ce glacier [de Léchaud] en 1767 (*sic*!); je pénétrai jusqu'au fond du cul-de-sac [*sc.* towards the Col des Hirondelles] . . . je revins en côtoyant le pied des aiguilles de Léchaud; je passai aux *boutes* ou grottes de Léchaud, espèces de taunieres ['dens'] pratiquées sous des rochers pour servir de retraite pendant la nuit aux gens de Chamouni qui vont à la recherche des crystaux.' [These *boutes* were likely enough somewhere near the site of the present Refuge de Leschaux.] Perhaps *boutes* could also be called *cahutes*. I learn, however, from a French friend who has made inquiries in mountaineering circles in Geneva and Paris, and amongst specialists in Swiss dialects, that *cahute* is not used for a natural shelter, but always implies some construction, however elementary. As to *boute*, 'no one has heard it used within the memory of man, or would understand it if heard.' These 'boutes de Léchaud' were more remote than Paccard's 'cahute,' and date from (at least) some twenty years before his expedition.

¹³ The Noire is the big rock mass on the left, E., of the Séracs du Géant, separating the latter from the Glacier des Périades, which lies to the N.E. and E. of it. Its summit (3427 m.) is 'round the corner' above the Séracs, towards the Col du Géant and below the Aiguille du Géant. From it Sella took one of his finest Alpine photographs (Mathews, *Annals of Mont Blanc*, p. 218; Coolidge, *Alps in Nature and History*, p. 203). Its foot (2517 m.) is a little

many covered crevasses.' Originally I took 'the Noire' to mean the summit so called, feeling that the very precise details about the highest stretches of the Tacul basin that Dr. Paccard records (see the third paragraph of his narrative as given above) implied a higher and nearer place of observation than could be found below the Séracs du Géant. I suggested that he ascended these to the 'snow plain' above them (towards the base of the actual peak of the Noire), and that it was here that 'the snow softened and they only advanced a few hundred metres in two hours.' In that case, however, one would have expected some reference to what are now so well known to be the difficulties of the route. Further, if he had actually been up and down the great icefall, he would hardly have said that in order to approach Mont Blanc from this side 'it appears necessary to keep close to the Noire or even go over its rocks.' The wording sounds exactly as if he meant 'the icefall looks too difficult, and it would probably be best to try to turn it by the rocks on the left.' Lastly, consider the phrase 'the passage (*sc.* Col du Géant) which appears beyond the Noire.' This surely implies that the observer had the Noire in front of him, and that he was therefore somewhere below the Séracs du Géant. If he were above them, with the summit of the Noire on his left, he could not speak of the Col du Géant, which would be straight in front of him, as 'beyond the Noire.' On the whole, therefore, it seems pretty certain that, as M. Chevalier urges, Paccard only advanced to the base of the Séracs, 'nearly as far as [the foot of] the Noire' (*i.e.* the point 2517 m.), that it was in doing so, and not *after* doing so, that they 'crossed a great many covered crevasses,' and that 'the snow began to soften' and impelled them to turn back down the glacier.

For Paccard's really masterly observations (made no doubt during his march up the glacier, and from his turning-point) as to the possibility of reaching Mont Blanc from this side, and his almost inspired guess at the 'very steep couloir' (see note 8) leading to the Tacul-Maudit ridge from the uppermost S.W. bay of the Glacier du Géant, which bay itself 'bends to the right towards Mont Blanc and then is hidden behind the granite pinnacle' of the Petit Capucin, it must suffice to refer to the discussion in *A. J.* 42. 173-4.

above the base of the Séracs, about on a level with the Requin hut (2516 m.) on the opposite side. It may be noted that although the usual route nowadays is to ascend the Séracs on the right (under the Petit Rognon), it has sometimes been found necessary to take to the rocks of the Noire. Freshfield's party in 1863 were compelled to descend that way, and did not much like it. The whole Tacul basin and its surroundings are well seen in Donkin's splendid photograph (taken from the Aig. Verte).

We come now to the 'Aiguille Percée.' It will probably be generally agreed (and M. Chevalier concurs) that the puzzle of this name is finally solved by Bourrit's reference¹⁴ (in an enumeration of the aiguilles as seen from Chamonix) to the 'Aiguille Percée or du Midi,' so called, he says, 'because in fact the sky is seen through a hole in it.' Whether the reason given is sound or not (presumably it can at best only refer to a cleft between the two summits), the explanation is at least good evidence that the name was in regular use. If, then, the Aiguille Percée is the Aiguille du Midi, what are the 'three granite aiguilles behind it which are invisible from Chamonix'? As Paccard often uses 'behind' (*derrière*), meaning 'behind as seen or thought of from Chamonix,' M. Chevalier points out that exactly 'behind' the Aiguille du Midi in this sense (as shown by drawing a line on the map from Chamonix through the peak, which line produced passes through the buttresses of Mont Blanc du Tacul) are such striking pinnacles as the Grand Capucin, the Petit Capucin, the Clocher, the Trident and the Aiguilles du Diable. Remembering, as M. Chevalier emphasizes, that Paccard's main object in making this trip was to investigate the possibilities of access to Mont Blanc from the Mer de Glace, and that the passage now in question is closely connected with his observations on that subject made when he had decided to turn back from the base of the Séracs du Géant, it is certainly suggestive that the pinnacles mentioned are in his line of sight towards Mont Blanc, and would be worthy of record as little, if at all, known in Chamonix. It must be admitted that it is not easy to specify three aiguilles in particular as pre-eminent among those referred to, but the Petit Capucin, the Grand Capucin and a lower but sharp little pinnacle at the base of the next ridge to the right of these are conspicuous, and above them the Aiguilles du Diable are strikingly 'doublées.' It is however rather difficult to see why Paccard should describe these as 'behind the Aiguille Percée' (Aiguille du Midi), since the latter is far away to the right, even if visible at all from any point near the base of the Séracs du Géant.¹⁵ It would all be easy if he mistook the Mont Blanc du Tacul for the Aiguille du Midi!

When this idea first occurred to me, I had no other ground for it than its probability as an explanation of Paccard's wording.

¹⁴ *Nouvelle Description des Glacières*, tome III, p. 60.

¹⁵ This is a point which I unfortunately omitted to verify. Can any reader say whether the Aiguille du Midi is or is not visible from the neighbourhood of the base of the Séracs? Judging by relative heights (base of Séracs = 2500 m., Petit Rognon, top = 3018 m., Aig. du Midi = 3843 m.), it would seem probable that at least the summit of the latter would be so visible.

Since then, however, I have found an unexpected but, I think, convincing confirmation of it in the legend under Mr. Lloyd's beautiful print of 'Mont Blanc from the Couvercle,' reproduced in *A. J.* 41. 98. The legend runs 'Vue du Mont-Blanc, des *Aiguilles du Midi, des Blaitières*, du Géant, du Glacier du Tacul, prise du Sommet du Rocher du Couvercle.' A glance at the print will show that it does not include either the true Aiguille du Midi—which in any case would be hidden by the Requin-Plan ridge—or the Blaitières proper. The artist's Aiguille du Midi and Aiguilles des Blaitières can therefore be no other than Mont Blanc du Tacul and the Requin and its ridges. (The Requin was, of course, not known by a separate name till long after this time, and it might easily be taken for a peak of the Blaitière group, as even Forbes did in 1842, calling it 'A. de Blaitière derrière.') Such mistakes may seem strange to us, with our maps and other apparatus of information, but it would not really be surprising that people familiar only with the Chamonix side of the Aiguilles, and lacking accurate maps, should lose their bearings a little after getting round to the Mer de Glace, and be confused as to the identification of the peaks visible therefrom with those they knew from Chamonix. They would almost certainly expect to see the Aiguille du Midi on the left of the other Aiguilles, just as from Chamonix it is conspicuous to the right of them. As, however, it is actually invisible from the region of the Mer de Glace, whereas Mont Blanc du Tacul from that side bears a general resemblance to it, and stands in a similar relation to the other Aiguilles and to Mont Blanc, but was not separately individualized or named till much later, the confusion was natural enough. Compare the prints of Mont Blanc from the Brévent (*A. J.* 41. 125) and from the Couvercle (do. 98), and the view of Mont Blanc du Tacul on M. Chevalier's photograph. The ridges and peaks on its left would clearly appear to the observer to be 'behind' it as seen from Chamonix, which itself would be felt to lie away to the right. This view of the matter has the advantage of dispensing with what seems the artificial method of drawing a line on a map, especially as it is doubtful if Paccard (or anyone else!) would possess at that date an accurate map of the Mont Blanc group, or, if he had one, would use it in the way suggested. If now the mistake of confusing Mont Blanc du Tacul with the Aiguille du Midi was possible in *ca.* 1792 for an artist¹⁶ relying no doubt on the guides or porters he must have brought with him from Chamonix, and working on an often visited and fairly lofty viewpoint which affords a com-

¹⁶ The artist was J. A. Linck (1766–1843). Mr. Lloyd tells me that 'his work in the Mont Blanc district must have been done around 1790–1795.'

N.W. ridge of
A. du Tacul



←Tour Ronde

Capucin

←Petit

←Grand

←Aiguille
du Diable

←Mt. Blanc
du Tacul

←Gros Rognon

←Petit Rognon

←Requin

←Grand
Gendarme
d'Envers
du Plan

←Pain de Sucre

←A. du Plan

←Crocodile

Photo, Paul Chevalier.]

IN THE FOOTSTEPS OF DR. PACCARD.
(Mont Blanc is in cloud behind Mont Blanc du Tacul.)

[To face p. 8.]



Photo, H. Bregcault]

THE 'PEAK IN THE SOUTH.'

(A. du Tacul, with the two small glaciers on its shady N. slopes.)

[To face p. 9.]

prehensive survey, such a mistake would be still less surprising on the part of Dr. Paccard in 1784, making his observations from a part of the glacier floor which was rarely if ever visited, and beyond which no one had yet penetrated.

Failing this suggestion, it may be worth considering whether the 'three Aiguilles' might not be the Petit and Gros Rognons and the Grand Capucin. From the glacier below the Séracs these are quite imposing; the two former, though not particularly aiguille-like, look steep and lofty, and would be more naturally described than the others as 'behind the (actual) Aiguille du Midi.' There is also, I think, still the possibility that Paccard might have remarked the peaks on the great S.E. ridge of the Plan (Pain de Sucre, Grand Gendarme d'Envers du Plan, Requin) and counted these as 'behind the Aiguille du Midi,' using the phrase less accurately than the map, if he had one, would allow, but still as fairly applicable in the general sense in which the Vallée Blanche and its surroundings might well be so described (as they were, *e.g.*, by Exchaquet¹⁷ about this time). That even on this trip Paccard was not *solely* interested in the question of access to Mont Blanc is shown by his botanical and geological memoranda.

On the whole the likeliest solution, in my opinion, is that Paccard mistook Mont Blanc du Tacul for the Aiguille du Midi and therefore called it the Aiguille Percée, and that his 'three aiguilles behind it' are the Grand Capucin and its neighbours.

Another problem confronts us in the next paragraph. 'We rested¹⁸ behind the Aiguille du Midi.' As Paccard has just mentioned the Aiguille Percée, it seems clear that he cannot, a few lines afterwards, be referring to the same peak under another name. What other possible Aiguille du Midi (or aiguille du midi¹⁹—one cannot be sure of capitals in the MS., as may be seen on the facsimile in *A.ŷ.* 46. 12) can we find? Here M. Chevalier's suggestion helps us out, viz. that Paccard is referring to the Aiguille du Tacul, which is the 'peak in the south'²⁰ as

¹⁷ See *A.ŷ.* 46. 7.

¹⁸ 'Nous avons couché.' This would normally mean 'we spent the night,' but the substantial reasons against this rendering and in favour of 'we rested' are very strong (see *A.ŷ.* 41. 113; 42. 177). The decision as to the possible usage can only be given by Frenchmen, and those whom I have consulted—scholars and mountaineers, including M. Chevalier—agree that a Savoyard of 1780 might well use the word 'coucher' for 'lying down' or 'resting.'

¹⁹ It is noteworthy that even de Saussure varies in his usage on this point. In *Voyages*, § 1120, he writes: 'L'aiguille du midi au-dessus de St. Maurice' (= Dent du Midi), but in § 667, 'l'aiguille du Midi au-dessus de Bex,' and in § 654, 'le glacier des Pèlerins est au pied de l'aiguille du midi.'

²⁰ The actual bearing is about S.S.E., but the peak is the nearest and most conspicuous object in the southerly opening of the Mer de Glace valley. 'Midi' = midday = south, and the sun at midday would be pretty nearly over it.

seen from the then commonly visited parts of the Mer de Glace (Montenvers, Mauvais Pas, etc.). In fact, M. Chevalier himself remembers hearing such experienced guides as Joseph Ravel and Ed. Payot in pre-war days call the peak 'Aiguille *du Midi* du Tacul.' It is not necessary to suppose that Paccard's use involves more than a descriptive reference—the nomenclature of the whole Mont Blanc group, except for a dozen or two names, was far from settled in the eighteenth century, and in detail was only slowly elaborated, so that if Paccard calls the peak now known as Aiguille du Midi 'Aiguille Percée,' there would be no confusion in applying the former name to another peak, especially in his private notes. The account of the chamois Paccard saw strongly confirms this interpretation, for in contrast to the ice and rock of the W. side of the Mer de Glace, the grassy slopes of the Aiguille du Tacul are highly suitable 'pâturages de chamois,' and the animals if disturbed there would naturally make for another such pasture, viz. the Jardin.²¹ What about the resting-place 'derrière l'Aiguille du Midi'? While it is true that, as mentioned above, Paccard often employs the word with the meaning 'behind as seen or thought of from Chamonix,' it would be pedantic to *restrict* the use of such a common word to this meaning. We may therefore in all probability interpret as follows. After turning back from the base of the Séracs du Géant, Paccard and Pierre Balmat would descend the glacier towards the Lac du Tacul, and turning to the right there would find a resting-place in shade from the midday sun on the N. slopes of the Aiguille du Tacul, which would be *behind* this Aiguille as they approached it from higher up the glacier. Here they saw the herd of chamois, which, being disturbed by the approach of the strangers, fled up the moraine of one of the two small glaciers²² on this side of the Aiguille du Tacul, passed out of sight, descended to the Glacier de Leschaux, crossed this glacier and came into sight again as they went up the left bank of the Glacier de Talèfre by the Pierre à Béranger in order to cross the snow to the Jardin (de Talèfre). In earlier papers I had suggested that Paccard might have crossed from *above* the Séracs du Géant towards the Petit Rognon, disturbed the chamois and watched them from that neighbourhood, and come down on that side. In support of this view I

²¹ Bourrit (*loc. cit.*, p. 106) calls it 'l'extrémité du Talèfre : c'est un pâturage de chamois.' Paccard had visited the Jardin with Blaikie, the astonishingly enterprising Scotch gardener, in 1775 (when he was 18). Blaikie speaks of it as 'this remote garden, which may be called Jardin des Chamois as I believe it is hardly ever seen or frequented with anything else.' See *A. J.* 45. 25, 26.

²² The existence of these little glaciers (near C on the sketch-map), just opposite the moraine and icefall of the Glacier de Talèfre, fits in so exactly with Paccard's reference to the chamois as to confirm very strongly this interpretation of his 'Aiguille du Midi.'

quoted Forbes's experiences in 1842. His party, coming from the Col du Géant, had great difficulty in finding a way down the Séracs, and finally escaped by following chamois tracks below the Petit Rognon. But the tracks were those of *a* chamois, and though one enterprising animal might well have explored the W. side of the Mer de Glace, I now recognize that it is unlikely that a herd with four little ones would visit such an inhospitable region.

The final paragraph of Paccard's narrative offers less difficulty. It is pretty certain that the last sentence is a P.S., and that they lunched at their resting-place (C), from which they would look up the Séracs de Talèfre, and therefore be 'under the [Glacier de] Talèfre.' There or thereabouts they found some crystals and rock specimens, then followed the chamois up the moraine of the Talèfre and gathered some dwarf *Achillea* below the Pierre à Béranger. Presumably they went down again, rounded les Egralets pretty much by the now usual track from the Couvercle, crossed the big medial moraine (which seems to separate the ice stream of the Talèfre from the Mer de Glace proper) by a depression like a little nameless col, and returned to dry land on the E. side of the glacier at a little plain, probably somewhere near the small Lac de la Charpoua,²³ under the Aiguille du Moine, where 'there were several huts (*cahutes*),' used no doubt by the herdsmen tending the cattle which are pastured during the height of summer even on these slopes, difficult of access as they are.²⁴ From this point there are traces of a steep and narrow path along

²³ When Blaikie with young Paccard made his first excursion on the Mer de Glace (Aug. 31, 1775, see *A. J.* 45. 20), they crossed the glacier to the E. side, and returned to Chamonix by Les Bois, being, as Mr. Montagnier remarks, the first tourists to have done so. On the subsequent excursion to the Jardin (Sept. 4), it is, I think, pretty certain that they again crossed the glacier near the Montenvers—thus avoiding 'les Ponts,' which were not *aménagés* till three years later—and ascended by the right, E., bank. After passing the little Lac de la Charpoua on the edge of the glacier (2095 m.), they would have to take to the highly crevassed ice beneath the steep and lofty rocks of the Moine on their left—'at the foot of a wall which seems to go up indefinitely' (Vallot)—until they could mount these rocks to the Couvercle. (See Blaikie's striking description of all this, *A. J. loc. cit.* Nearly seventy years later Forbes wrote, 'I have more than once ventured down the east side of the glacier, under the Aiguille du Moine, towards station F [les Echelets], but the passage is embarrassing, often impossible.') Paccard would thus be familiar with these routes on the E. side of the glacier, which are those that he and Pierre Balmat followed on their return from the excursion now under discussion.

²⁴ Cf. Forbes, *Travels*, p. 66. 'There is scarcely any part of this (eastern) bank of the Mer de Glace as high as the foot of the Aiguille du Moine, which I have not traversed.' [Some way above the Mauvais Pas] 'are some fine pasturages which extend along the foot of the jagged rocky chain which extends from the Dru to the point of Les Echelets . . . and are grazed by cows for a good many weeks in summer. How a cow can ascend and descend pathways which might be pronounced precipitous by even a not fastidious walker may appear sufficiently surprising.'

the grass slopes beneath those immense buttresses of the Verte and Dru, which Paccard apparently calls the 'sœurs du Dru.' Perhaps one may compare the 'Seven Sisters' on the Sussex coast near Seaford. The path after passing les Echelets improves and continues by the Mauvais Pas to the Chamonix valley. I do not remember any specially 'boggy places,' but above the Mauvais Pas one has to cross several streams from the hanging glaciers on the lofty slopes above (Glacier du Dru, Glacier du Nant Blanc, etc.), which would often be in flood in June. The name 'Bayer,' which is twice used by Paccard in this narrative for the valley of the Mer de Glace, properly belongs to a pasture below the Glacier du Nant Blanc and nearly opposite the Montenvers,²⁵ and M. Ch. Vallot considers that the wider application was a personal peculiarity of Paccard's.

It is hoped that Dr. Paccard's narrative as thus interpreted will be seen to be clear and coherent down to the smallest detail. The only important point remaining doubtful appears to be the identity of the 'three granite aiguilles,' for which, however, reasonable candidates are available. On the whole we see once more in Dr. Paccard a man remarkable for accuracy of observation, exactness of record and sagacity of judgment, and well worthy of the fullest respect of all interested in the history of mountaineering.

²⁵ Guide Vallot, *la Moyenne Montagne*, I, p. 218.