

make those who are ambitious of following them understand fully the dangers of their engrossing pursuit.

Non ignara mali miseris succurrere disco,

said the Carthaginian queen. Let us all who have experience, possibly dearly bought, help the ignorant, the soon to be wretched if they do not learn wisdom, by insisting again and again on the imperative duty of observing the recognised rules of the pastime to which we owe so much.

NEW EXPEDITIONS IN 1901.

Tarentaise District.

GRANDE CASSE.—DESCENT BY THE JAGGED EAST ARÊTE CONNECTING THE MOUNTAIN WITH THE GRANDE MOTTE.*—On Friday, July 19, Messrs. A. M. Bartleet and H. J. Mothersill, with the guides Adolf and Josef Schaller and Maximin Gaspard, climbed the Grande Casse by the ordinary route from the Vanoise Club hut, reaching the summit at 7 A.M. Without delay they began the descent of the E. arête. At 7.30 they were forced off the arête and compelled to traverse to the S. for about $\frac{1}{2}$ hr. At 8 A.M. they regained the arête, but at 8.40 they were again obliged to traverse to the S., this time for $\frac{1}{4}$ hr. Soon after 9 A.M. they had to traverse to the S. for twenty minutes or so, but they then found themselves once more on the arête, and at 9.30 were on a snow-covered, flat-topped prominence, or hump, that is very noticeable from the valley of the Leisse. At the east end of this hump the leading guide went on alone, with 60 ft. or 70 ft. of rope, to prospect, but it was about $\frac{1}{4}$ hr. before he could find a way. Then the second man went down to him provided with a piton. He found the leader stationed on the top of a small gendarme that is also very noticeable from the valley, just to the E. of the flat-topped hump. The rock of this gendarme was so rotten that the guide had to spend a considerable time in tearing slabs from the top of it before he could find anything solid enough to hold the piton. The party then proceeded slowly downwards, descending the gendarme with the help of about 60 ft. or 70 ft. of spare rope doubled. This rope was left behind hanging from the piton. The party was soon compelled to traverse to the S. for so long that it seemed as if the arête had been altogether abandoned, but it was regained at 12 o'clock. Progress was then made until about 3.15 P.M., the party being sometimes on the arête, and sometimes traversing for a little to the S. It may be here mentioned that at no time between about 9 A.M. and 3.15 P.M. could the party have got off the mountain either to the N. or S., owing to precipitous cliffs that barred the descent. The climbers then

* This ridge was ascended in 1900 (see *Rivista Mensile*, 1900, p. 390) by S. A. Ferrari with the guides E. Sibille and P. Damé.

(3.15 p.m.) saw a feasible gully below them by which the valley could be gained, and decided to descend to it. Another piton was fixed, and another spare rope (of about 30 ft.) attached, as a safeguard for the last man, the rocks being very rotten where the arête was finally bidden adieu to. This rope was also left behind.

In about $\frac{3}{4}$ hr. the difficulties were over, and a meal was partaken of at 4 p.m. near the top of the gully. Then the easy rocks of the gully were descended for some distance, until it became possible to traverse the lower slopes of the mountain (consisting at first chiefly of grass and afterwards of débris) in a more or less westerly direction towards the Col de la Vanoise and the Club hut, which was reached about 8.30 p.m., after an expedition of some nineteen hours.

The point where the party finally left the arête, and where the second spare rope was left hanging, was at a deep depression (as seen from the valley of the Leisse) just W. of the last large snow-covered prominence, or hump, to the W. of the Col de la Grande Motte. This col consists of the long, level snow ridge that forms the most easterly portion of the arête, and leads straight to the rocky west face of the Grande Motte. It should be said that almost throughout the rock is extremely rotten, and that on this account the arête is dangerous, and not to be recommended.

Eastern Graians.

TERSIVA. FIRST ASCENT BY THE EAST RIDGE (3,513 m. = 11,526 ft.). *June 24.*—This new expedition was effected by SS. Garelli, Giacchino, Pollano, Bravo, Verani-Masin, and Nai, with the porter Aimé Maquignaz, of Val Tournanche.*

Mont Blanc District.

DAMES ANGLAISES (3,604 m. = 11,825 ft.).—H.R.H. the Duke of the Abruzzi, with the guides J. Petigax, A. Fenoillet, L. Croux, and C. Savoye, of Courmayeur, on August 5 reached a bivouac at 2,900 m. on the N.E. wall of the Dames. At 10 o'clock on the morning of the 6th they reached the notch between the southern and central points. The actual summit of the central point proved invincible, though it was almost conquered, but at 2.30 the summit of the southern point was attained. At 7.30 the bivouac was regained, and Courmayeur reached at noon on the following day. This account is summarised from the '*Rivista*' of August 1901, p. 1.

MONT BLANC BY THE S.W. (BROUILLARD) RIDGE. *July 20.*—This ascent has been accomplished by SS. J. and G. B. Gugliermi without guides, but accompanied by the porter J. Brocherel, of Courmayeur. The party took five days in going from Courmayeur to Chamonix, bivouacking three times on the way, viz. at 3,900 m., 4,800 m., and on the summit. To the peak with the height

* *Rivista*, July 1901, pp. 246-7.

4,472 m. on Kurz's map they gave the name *Picco Luigi Amadeo*, in honour of the Duke of the Abruzzi.*

COL DE L'AIGUILLE VERTE (9,782 m.?)—The same party crossed the Col between the Aiguille Verte and Les Droites.†

LA NOIRE (Kurz's map), AIGUILLE NOIRE (Italian map), or LA NOIRE AIGUILLE (Mieulet's map) (8,427 m. = 11,244 ft.). August 18. —Mr. G. Yeld, with Sylvain and Abel Pession, of Val Tournanche, ascended this peak, as to which the 'Climbers' Guide' says, 'No information.' They went from the Col du Géant directly to the foot of the peak, and then climbed to the top by the rocks to the (true) right of the big couloir, which is a conspicuous feature in views of the ridge from the W. This route brought them out a little to the S. of the first pinnacle, the foot of which was reached at 7.20, the Col du Géant having been left at 5.20, slight halts included. There were five pinnacles, the most N. of which turned out to be the highest, and was reached at 8. The climbing near the top was interesting and not easy. The one drawback to the climb was the number of loose stones and the rotten character of the rocks in many places. On the descent, just before reaching the glacier, they plunged into the couloir before spoken of for a few steps, but the risk, which would have been great if the sun had been shining upon it, was minimised by the fact that the whole of the couloir was still in the shade. The Col du Géant was reached in about 2 hrs. from the summit.

LES ROUGES.—There are several rock towers in the arête between La Noire and the point where a massive ridge (snow-clad) runs down to the Géant glacier, without name on the maps. These are of red rock, and the name Les Rouges seems appropriate to them. The highest point, as the party satisfied themselves on the spot, is the little two-headed peak next to the junction of ridges above mentioned, though it is not the most conspicuous of these needles. The same party, ascending from the Col du Géant, and mounting by the ridge mentioned above as running down to the Géant glacier at right angles to the Aiguille du Géant—La Noire ridge, reached the highest point between Les Rouges and the snow dome immediately under the A. du Géant without any difficulty. They then went down the ridge towards Les Rouges. On this ridge they found traces of previous visitors in the shape of a sardine tin and a bottle. When the foot of the highest of Les Rouges was reached it was found to be impossible to get up, as the rock face overhung for some 8 or 10 m., say about 30 ft. Access on the E. was also impossible. Eventually the guides descended on the W. side, and climbing a very difficult couloir reached a point under the summit, but well above the impossible rock-face, at the foot of which the traveller had been left. By the help of two ropes the traveller now reached the guides, and then the summit. The descent of the difficult rock-face was made by all the party by skilful use of the rope on the part of the guides. The top was

* *Rivista*, July 1901, p. 246.

† *Ibid.*

reached at 8.30, the Col du Géant having been left at 4.35. Halts probably took 30 min. The Col was regained—a long time having been spent in a halt for lunch—at 11.40. The climbing on the actual peak was distinctly difficult.

Bernese Oberland.

NORTH MAASPLANKJOCH.—DIRECT PASS BETWEEN THE TRIFT HUT AND THE GÖSCHENEN ALP (HEIGHT ABOUT 8,360 m.).—On July 19, 1901, Mr. Legh S. Powell, with Heinrich Zurfluh, of Meiringen, made a new and very direct pass across the ridge separating the Triftthal from the Göschenenthal. The pass crossed lies immediately to the N. of the Maasplankstock. The time occupied from the hut to the Damma Gletscher Hotel, in the Göschenenthal, including two short halts, was 6½ hrs.

The route lay across the arm of the Trift Glacier, which lies between the westerly spurs of the peaks of the Thierberg and of the Maasplankstock, as far as a short and easy couloir near the termination of the broad western spur of the Maasplankstock. The time to this spot was 40 min. This spur was now ascended, the ascent to the watershed occupying 1 hr. 40 min. more. No difficulty of any kind was encountered as far as this point, the rope not even being required. A short distance to the left—i.e., N. of the crest attained—lie two steep and continuous snow couloirs on the Göschenenthal side descending to the Kehlen Glacier. The further or more northerly appeared to be the least steep and was therefore followed. The descent, although very steep and requiring considerable care, was not impracticable, and was effected in 1 hr. 20 min. From the bergschrund the route lay across the Kehlen Glacier, the further side being easily gained in 35 min., whence the hotel was reached in 1¼ hr. more.

The only other recognised pass that appears to have been made between these two points is the Maasplankjoch, which lies at some distance to the S. of the Maasplankstock. The route taken in crossing this pass is more circuitous, and, as there appears to be glacier as well as rock difficulty, the time required to traverse it is decidedly longer than that necessary for the new one here described.

Bernina District.

PIZ PRIEVELUSA.—On September 1 Dr. E. Kingscote and Mr. Alexander, with the guides Schocher and Platz, ascended this peak from the Prielvelusa Sattel, and descended by the rocks to the Boval hut. The Tschierva hut was left at 2.20 A.M., the Prielvelusa Sattel reached at 4.10, and the summit at 10 A.M. The descent was begun at 11 A.M., and the Boval hut reached at 4.30 P.M. It was a most interesting climb.

Dolomite District.

LA CEDEL (SORAPIS GROUP) (9,080 ft.) BY THE N. RIDGE. August 25.—A party, consisting of Miss K. Slingsby, Messrs. W. C. VOL. XX.—NO. CLIV. P P

and W. E. Slingsby, and Herbert Rathbone, made what is believed to be the first ascent of La Cedel by this route. Having passed through the Faloria forest from the inn at Tre Croci they climbed by steep crags to a snow field in the northern lap of the mountain, which presumably affords the natural way up the peak. The party, however, left the snow field, and climbed up to the ridge on the west side, and, after a ridge climb of no great difficulty but of much interest, they reached the summit of the mountain. On the descent they turned down a steep chimney to the upper part of the snow field, and by doing so avoided some awkward slabs. Good glissades brought them to their former route, by which they returned to Tre Croci. Two of the party had previously reconnoitred the mountain from the S.

NORWAY.

The Söndmøre Alps.

SMÖRSKREDTIND BY THE WEST RIDGE (5,241 ft.). *August 28.*—Mr. Herbert Kynaston, with Lars Haugen, of Fibelstadhaugen, had the good fortune to make the ascent of Smörskredtind by an entirely new route, which has added another fine rock climb to the already considerable list of good expeditions which attract mountaineers to Norangsdal.

The first ascent of this mountain was made in the year 1884* by a party who, the same day, made the first tourists', and second actual, ascent of Slogen. They tried at first to climb it from the top of the little snow pass on the N., but were defeated.† Then they descended a few hundred feet down the glacier on the E. side of the mountain and found a way to the summit from there. They descended by the western face to the top of the Skylstadbrække pass.

The W. ridge, the ascent of which is now recorded, descends into the woods below the top of this pass, and forms the profile of the mountain when viewed from the hamlet of Skylstad. The ridge also bounds the W. face.

Mr. Kynaston and Lars reached the base of the actual narrow ridge in about 2½ hrs. from Øie. At first the rocks were interesting rather than difficult. By degrees the ridge grew steeper and narrower, and ahead a high crag towered ominously in front, and, apparently, threatened defeat. On reaching it, however, it looked more hopeful. Lars made a good start on the S. side, and cautiously worked up to a place where he found good anchorage, and in time the top of the crag was reached. From here up to the very top the ridge was remarkable for its knife-edge character, which necessitated the turning of certain portions by traversing the face just below and grasping the edge with the hands, as is the case on

* *Alpine Journal*, vol. xii. p. 267.

† This difficult ascent was afterwards made by Messrs. C. W. Patchell and A. B. S. Todd. *Alpine Journal*, vol. xx. p. 47.

some of the extraordinary flakes of rock which form little peaks on the skyline of the Fuss Hörner near the Bel Alp. This type of structure, alternating with steep faces, afforded much interesting climbing. Here and there an easier way might have been found on the N. side, but the party kept, practically, to the ridge the whole time.

The time from Øie to the cairn on the summit was just under 6 hrs., inclusive of short halts. Three hours were occupied in actual rock-climbing. This is the most direct route from Norangsdal, and may be looked upon as a rival of the ridge climb up Kviteggen direct from Fibelstadhaugen,* on which the same skilful guide led a party to victory twelve months earlier.

W. C. S.

CANADIAN ROCKY MOUNTAINS.

We have received the following notes of new ascents from the Rev. J. Outram.

[N.B.—The altitudes given are all approximate, mostly arrived at by comparison of aneroids, including a 'Watkin' on some peaks. There are no mountains over 12,000 ft. high known S. of the Canadian Pacific Railway, or for some distance to the N.]

1. MOUNT VAUX (alt. c. 10,600 ft.). *July 16.*—Professor Fay, of Boston, U.S.A., Mr. J. H. Scattergood, of Philadelphia, U.S.A., and myself; guide, C. Häslér. Leaving Field (alt. 4,050 ft.) about noon on July 15, we went 5 miles W. on an engine to Ottertail Bridge, and then struck up Ottertail Creek by a fair trail for 8 miles, crossed the stream, and ascended by trackless woods on the Eastern slopes of Mt. Hurd to a high camp about 6,700 ft. up. Next morning, starting at 4.30, we climbed by rocks and a steep snow slope to the pass between Mt. Vaux and Mt. Hurd, and thence by rock arête and over a snow dome to the fine glacier which clothes Mt. Vaux on the Southern side and stretches away to the head of the Ice River Valley. Forty minutes further took us to the summit, which we reached in a thunder-storm accompanied by driving hail and snow, at 10.45. We remained only $\frac{1}{2}$ hr. on the top, owing to the intense cold, but got some fine views piecemeal. The descent was made by the glacier and lofty cliffs into the Ice River Valley, and camp regained at 4.50.

2. MOUNT CHANCELLOR (alt. c. 10,400 ft.). *July 30.*—Messrs. J. H. Scattergood, of Philadelphia, and G. M. Weed, of Boston, and myself; guide, C. Häslér. An attempt made on July 20 by the Mt. Vaux party, *via* a spur into Ice River Valley and the long ridge S. of the mountain, having failed through lack of time to negotiate the arête, more than a mile long, and broken by numerous towers and gendarmes, we went on July 29 by train to Leancoil, crossed the Wapta River, and bivouacked high up on the Western slopes (6,400 ft.). Two obvious routes suggested themselves for attack, and, starting at 8, we first attempted the direct rocky

* *Alpine Journal*, vol. xx. p. 267.

Western arête, but were turned back by a lofty cliff, and after losing 6 hrs. descended into the deep, snowy valley leading to the col S. of the main peak, our alternative way. This was quite easy to the rock and snow col wall, and the ridge was reached at 12.20 (alt. c. 9,800 ft.). From thence it was slow work by awkward rocks, mainly pitched at a steep angle, slab-wise, as the snow was in dangerously avalanching condition. We remained on the summit, which was crowned with a fine cornice, from 3 to 4.15, enjoying a magnificent panorama and busy with observations and photography. The descent was made by the same route to camp at 9 P.M., and the return to Field next morning.

3. KIWETINOK PEAK (suggested name) (alt. c. 9,600 ft.). August 8.—With guides, Jos. Pollinger and Chr. Kaufmann. At 5.30 we left camp in the Upper Yoho Valley (alt. c. 6,800 ft.) and proceeded up the valley to the pass leading to the Kiwetinok River (c. 8,800 ft.) in 2 hrs.; thence, skirting the peak on the E. snow slopes, we gained the N.E. ridge and followed it to the summit in 1 hr. Returning, we kept along the ridge, over a small intervening point, to Station 18 of the Government Survey (alt. c. 10,000 ft.), and descended by its Eastern glacier to Insulated Peak. On the way we discovered a large porcupine on the edge of a great crevasse, at an elevation of about 8,800 ft., 1,500 ft. above timberline, and took a photo of him, as the record climber of his species. From Insulated Peak we came straight down to camp at 2 P.M.

4. EMERALD GROUP, 3 peaks (alt. c. 9,800 to 10,200 ft.). August 9 and 13.—With guides, Pollinger and Kaufmann. We ascended the highest peak of the group (c. 10,200 ft.) on August 9 from the Upper Yoho camp by way of the Emerald Pass. Starting at 6.50 we gained the glacier at 7.45, and by good going reached the col (c. 9,800 ft.) at 8.50 and the summit at 9.35, by steep snow slopes and rocks. Owing to bad weather we only remained 15 min., and decided to return by the same route, arriving in camp at 11.25.

On the 13th we climbed the second highest peak, leaving camp at 8.30, and mounting the glacier descending from the col on the N.E. side of the highest peak for $1\frac{1}{2}$ hr. We then took to the rock arête on our left, and ascended by it and the steep snow slopes on the N.W. face to the top at 11.30 (c. 10,000 ft.). At 12 we went on by the N.E. ridge to the slightly lower Angle Peak above the Upper and main Yoho Valleys, and, following the arête, which turns here at right angles, came to Michael's Peak, climbed last year by Prof. Michael and Häslar, and about the same height as the Angle Peak. We remained here an hour, and then crossed the glacier directly to the col between the highest and second peaks (35 min., alt. c. 9,500 ft.), and descended by the finely crevassed glacier to camp in 42 min. more.

5. MT. HABEL (alt. c. 10,600 ft.). August 15.—Mr. E. Whymper and myself. Guides: C. Klucker, J. Pollinger, and C. Kaufmann. We started at 4.45 from our Upper Yoho camp, and ascended

through woods and up the glacier below Insulated Peak to the col below its eastern cliff (alt. c. 8,700 ft.). A sharp dip of 300 ft. took us to the wide expanse of the Habel Glacier, along which we went steadily for 2 hrs. over excellent snow to the rocks at the base of Mt. Habel. After $\frac{1}{2}$ hr. rest, we mounted the glacier on the S.E. side of the mountain, passing some large schrunds, and ascending by increasingly steep slopes to the bergschrund, which was crossed by a convenient bridge, and a sharp pull up a pretty straight-up wall of snow landed us on the rocky S. arête. From thence, after a 25 min. halt, we climbed by easy rocks and shale to the summit ridge, narrow and rocky, topped by a grand cornice. Here we remained from 11.15 till 1.30, enjoying a magnificent panorama, especially towards the N.W. and N., where the giants of the Rockies lie, with the Freshfield Group, Mt. Mummery and Mt. Forbes nearest to us. Our homeward way was by our morning's tracks, and the snow was fortunately still in good order, so that, with two $\frac{1}{2}$ hr. halts, we arrived in camp at seven o'clock.

6. MT. COLLIE (alt. c. 10,500 ft.). *August 19.*—Same party as for Mt. Habel. From a camp at the head of the main Yoho Valley, about 15 min. from the end of the Wapta glacier snout, and about 6,000 ft. in elevation, we started at 4.50, and took to the ice at its snout, ascending for about an hour by the glacier, and then by pleasant slopes on the S.W. side for another hour. Thenceforward our route was wholly over ice and snow, leading up the middle of the upper glacier on the W. of the main Wapta glacier and so to the depression below the S.E. face of the mountain. Here we turned to the left, crossing the bergschrund, and ascending steeply to the S. arête, which we struck about 400 ft. below the summit at 10.40, and halted for $\frac{3}{4}$ hr. A fairly steep snow arête, with a few traverses on the Eastern slope, took up to the top at 12 o'clock. The summit is formed by the junction of three steep ridges, and was snow-capped, except for a small space along the top of the Western precipice. Unfortunately the view was almost wholly obscured by the dense smoke of some huge forest fires, and observations were impossible. After $2\frac{1}{2}$ hrs. on the peak, we returned by the same line as was taken in the ascent, leaving the upper glacier at 4.40, and getting to the camp at 6.40.

7. TROLLTINDERNE (alt. c. 9,600 ft.). *August 21.*—Same party as for Mt. Collie. From the same camp we left at 7.25 to ascend this shattered ridge and peak, projecting from the massif of Mt. Balfour to the W., went to the Wapta glacier snout, which we crossed, and descended the left bank of the Yoho river for about 15 min., and then commenced climbing up on the right bank of the cascade that falls from the glacier N. of the Trolltinderne. At 8.50 we reached the top of the steep ridge, crossed the stream, and ascended by easy slopes diagonally to the base of the Trolltinderne cliffs, where we halted for 15 min. Striking to the right, we made our way up the loose shale and scree of the main ridge till at 11.20 we arrived at the foot of the square tower that crowns the mountain.

It is about 100 ft. high, with sheer precipices on three sides, and only accessible by the Western side, by which the ascent to its base is made. Here the rocks were broken sufficiently to enable us to scramble to the top by large smooth ledges, sloping slightly to the right, with vertical faces 5 ft. or 6 ft. high. The W. face of Mt. Balfour immediately in front is a fine sight, and two icefalls on our right over a perpendicular wall, uniting the upper and lower glaciers, were most interesting. We remained till 3.30, and, descending fairly rapidly, were back in camp by 6 o'clock.

8. BALFOUR PASS, between Mts. Balfour and Gordon (alt. c. 8,400 ft.). August 22.—With guides Pollinger and Kaufmann. We left camp (as above) at 6 A.M., and crossed the Wapta glacier snout, making our way thence along the *débris* on the E. side of the glacier, skirting the shoulder of Mt. Balfour till we reached, at 7.15, the lateral valley which separates that mountain from Mt. Gordon. We ascended by a rising succession of flats, divided by ridges from 100 ft. to 200 ft. high, to the base of the glacier at its head in half an hour more. The ice on the Gordon side offers an easy route, and a remarkable medial moraine marks out the line right across the pass, curving under the Northern cliffs of Mt. Balfour. The summit of the pass is rather level, and, with the névé in good condition, we arrived at 8.30 (fast going). Shortly afterwards Mt. Hector and the Lower Bow Lake came into sight, and we descended the Balfour glacier to the icefall; then, crossing to the right bank, we skirted the base of the cliffs that separate the main Balfour glacier from a large tributary which joins it from the S., and descended that branch to its junction, and so to the end of the glacier, which has an enormous cavern at its apex, with a large stream issuing from it. Our time thus far was 4 hrs. The Lower Bow Lake was soon reached, and we had a rough time skirting its trackless shores. After lunch, for which we halted $\frac{3}{4}$ hr., we crossed the Bow river at 1.30, and struck the trail to Laggan at 1.50. Pushing on at our usual rapid gait, we arrived at Laggan station at 6.10, $\frac{1}{2}$ hr. of halt being allowed for refreshments *en route*.

9. CATHEDRAL MOUNTAIN (alt. c. 10,100 ft.). August 26.—With guides C. Klucker and J. Bossonay. Leaving Field at 5.25, we walked up the railway track for about $3\frac{1}{2}$ miles, turning up the slopes at 6.30 about 500 ft. above Field. Owing to a misunderstanding as to our route, this was too far, and we had to work across diagonally to the W. ridge, which we crossed at 8 o'clock at 7,000 ft. elevation, and traversed extremely loose slopes of rocks and scree under the shattered Cathedral crags. Crossing several gullies and rock-ribs, we reached a steep couloir, descending from the col between the crags and main summit immediately to the left of the latter's precipitous cliffs. A sharp climb up this gully, on very steep snow, with occasional détours on to the jagged rocks on one side or other, brought us to the col at 10.30, and easy snow arêtes led to the summit at 11.12. The mountain is very rotten and shattered, and stone avalanches are of constant occurrence. Two

hours were spent on the top, and after retracing our steps to the col (c. 9,900 ft.), we descended by the glacier to the N.E. into Cataract valley, and so to Hector station (3,300), from whence we walked along the railway to Field at 5.45.

10. MT. ASSINIBOINE (alt. c. 11,800 ft.). *September 8.*—With guides Chr. Häsler and Chr. Bohren. This mountain has been termed 'the Matterhorn of the Rockies,' owing mainly to the strong resemblance in form, and partly from the impression that the difficulty of climbing it would be very great. Three previous attempts had been made, by the W. arête, the N. face and arête, and the S.W. arête and face. We went by train from Field to Banff, and, under the guidance of W. Peyto, by forced marches with our pack animals, covered the forty odd miles to the N. side of the mountain in a day and a half, and camped about 7,000 ft. up.

September 2 was spent on the mountain in thick mist and sleet from 9 o'clock onwards. Starting at 6.25, a mile and a half up the valley brought us to the snow slopes and cliffs at the base of the glacier; we climbed these, and traversed the easy sloping glacier to the col to the N.W. of the mountain (alt. c. 9,000 ft.: 2 hrs. from camp). This we crossed, and dropped to another glacier 250 ft. below, which we ascended to a second col, from the W. spur of the mountain, about 9,500 ft., in 50 min., and halted for $\frac{1}{4}$ hr. Taking now to the mountain itself, we traversed below steep cliffs on *débris* and across gullies and rock ribs, striking the S.W. arête at 10.15, at a point slightly lower than the col. The mist was now very bad, and soon narrowed our horizon to a circle of frequently less than 50 yds., but we made our way steadily upwards by loose shale, rocks, and broken cliffs to a formidable wall 70 or 80 ft. high, rather more than 1,000 ft. from our starting point on this arête. Never having had any opportunity of seeing the mountain from this side, we were at a loss to know whereabouts the summit lay, and could see nothing but the wall of cliffs, so we skirted its base to the right (the wrong direction, as was afterwards proved) till we came to a crack up which we could clamber, and then continued by ledges till, to our astonishment, we reached a peak nearly 11,000 ft. high, evidently not the summit, but the identity of which perplexed us much until, on the following day, the broken S.E. arête was for the first time disclosed to us, with this lofty pinnacle projecting above a deep gap between it and the main peak. We arrived at 12.50, and remained 1 hr. in cold fog and sleet, hoping for a glimpse that would reveal our position, and help us to take some notes that would aid us in making out a feasible route to the summit, but in vain. So we descended at 2 o'clock, and, after prospecting a little below the big cliffs, left the S.W. arête at 6, and reached camp at 8.35 in the dark. The night proved clear and cold, the moon and stars were brilliant, and all looked well for a second attempt on the morrow. We got off in grand weather at 6.10, and followed the route of the previous day, arriving at the S.W. arête at 9.25. The big cliffs were reached at 10.25, and we then turned to our left on to the S.W. face, and had

some rough work on broken ledges, up steep couloirs, skirting cliff bases on hard ice slopes which necessitated a good deal of step-cutting. The rocks were loose, friable, and treacherous, and much covered with 'verglas,' which compelled great caution. At 12.20 we arrived, by way of a very steep icy gully, at the main S. ridge, about 800 ft. below the summit, and *for the first time saw the highest point*. An easy snow arête led to the top at 12.30. The summit is a double one, snow-crowned, with magnificent cornices overhanging the tremendous Eastern precipice. That on the Northern point was cloven by a large fissure, and was very near its fall. Crossing this twin summit, we descended in a few minutes along the top of the rocky N. arête to the point where it bends sharply down, an angle which in almost all the views from the N. appears to be the actual highest peak. Here we lunched, and remained for a full hour ere we commenced the descent by the N. side. This had a double attraction, as it would provide a traverse and second route, and also because it promised a distinctly difficult and interesting bit of climbing. And so it proved. The ridge is extremely steep, with a sheer precipice on the E., the Northern face falling away at an abrupt angle with glistening ice slopes and rocky belts, and the rocks we had to climb down broken, steep, and occasionally overhanging. The looseness of the formation and the hardness of the icy slopes made it a careful and rather slow progress, and even for our usually quick-going trio 2½ hrs. were needed to descend 1,000 ft. Lower down we were able to go faster, and one snow slope, soft enough to evade step-cutting, permitted us to reach continuous rocks and unrope at 6.10. Forty minutes more landed us on the glacier, and at 7.45 we were in camp, having accomplished the half-circuit of the mountain and a complete traverse in 13½ hrs., inclusive of halts, and enjoyed a grand panorama and the most interesting and difficult climb as yet on record in the Rockies. The next morning found us under snow, and our return to Field was mostly through driving snow, with Mt. Assiniboine clothed anew with her winter mantle, and impossible of ascent again this season.

[Rev. J. Outram, whose address till June is Pacific Grove, California, U.S.A., asks us to state that he proposes to visit next year the region of the unclimbed giants N. of the C. P. R., and will be glad to hear from any good climber who may wish to join him. —ED. A.J.]

ALPINE NOTES.

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