—	Class of Hotel	Hotel	Bed	Breakfast, Coffee, &c.	Dinner	Service and Bougies
1875						
Luzern	1	Schweitzer Hof	3	1.50	5	—
Grindelwald	3	Aigle Noir	3.50	1.50	5	1.50
Chamonix	3	Union	2.50	1.50	4.50	2
Lausanne	2	Gibbon	3.50	1.50	4.50	1.75
Cadenabbia	1	Bellevue	4	1	5	2
Appenzell	6	Hecht	2	1	2.50	0.60
Heiden	6	—	1	1	1	0.50
1882						
Pallanza	1	Pallanza	3.50	1.50	5	2
Château d'Oex	3	Berthod	2	1.50	3	0
1890						
Coblenz	2	Géant	3.50	2	6.50	1
1894						
Luzern	2	St. Gotthard	4.50	1.50	4	0
Lugano	2	Splendide	4	1.50	5	1
Menaggio	2	Menaggio	5	1.50	5	1
Pontarlier	4	Paris	3	—	3.50	1

The prices are given in francs; where a naught is put for service &c. the price was included in the *appartement*. The hotels are classed as they were at the time, according to the recollection of the writer.

NEW EXPEDITIONS IN 1897.

[Contributors of 'New Expeditions' are requested to observe the following rules:—(1) To forward their accounts in the form in which they are to appear. (2) To prefix the name of the peak or pass from the best map, and the altitude both in mètres and feet in a parenthesis after the name. (3) To give the date of the ascent, and the names of the party. (4) To give exact references to any previously published descriptions of allied routes to which they may have occasion to refer. (5) To write the description with the best existing map before them, and to quote the figures of any measured point their route may touch. (6) To use always the points of the compass instead of the misleading words 'right' and 'left.' (7) To record their 'times' exclusive of halts. (8) To make their descriptions as brief as possible consistently with the above considerations. (9) To write on one side of the paper only, leaving a large margin, and to begin a new sheet for each expedition.]

Dauphiné.

Pic d'Olan by the S.E. Arête (3,578 m. = 11,735 ft.). *June* 26.—Mr. F. L. Littledale, with Christophe and Etienne Turc, traversed this peak, ascending by the ordinary route and descending by the Col des Sellettes. They left La Lavey at 1 A.M., and reached the summit at 6.50. After spending ½ hr. there they began the descent. They crossed two *gendarmes*, which, though not difficult, afforded good climbing; and then the route became very easy for

some distance until they reached a very steep *gendarme*, which they were obliged to descend; in some parts the rocks overhung. Christophe Turc, who was last, had to attach a rope to the rock. This rope was left *in situ*. The rest of the descent was quite easy. They reached the Col des Sellettes about 3.30 and La Bérarde at 8.30 P.M. The expedition would have cost 3 hrs. less if the descent had been made from the Col to La Chapelle, in Val Gaudemar, instead of to La Bérarde.

COL DE GIOBERNEY. *July* 12.—The same party crossed this pass between Les Bans and Mont Gioberney. They slept on the night of July 11 at a shepherd's hut, started at about 3 A.M., and arrived at the Col in about 5 hrs. It was all easy rock-climbing, with the exception of a little glacier at the beginning, until they reached the Col. They descended by the Glacier de la Pilatte, and reached La Bérarde at 1.30 P.M. This pass, *as a whole*, is quite new; but on July 6, 1878, Mr. Coolidge, with Christian Almer the elder, reached it from the Pilatte glacier when making a reconnaissance of Les Bans.*

COL BOURCET. *July* 16.—The same party crossed this col from the Refuge de l'Alpe to La Bérarde. The pass is immediately to the left of the Pic Bourcet when the ascent is made from the Refuge de l'Alpe. They left the Refuge de l'Alpe at about 2 A.M. and ascended the Pic Bourcet by the ordinary route, reaching the summit in about 7 hrs. They got back to the foot of the peak at about 12 noon, and after waiting half an hour traversed a snowfield, which took about 15 min., and brought them to some rocks which led to the Col. After climbing for another 15 min. they descended by rocks for about 1½ hr., and then over a snowfield which brought them to a moraine leading to the Etançons near La Bérarde, which was reached at 5 P.M.

Graian Alps.

COSTA PARASSEUS (3,215 m. = 10,548 ft., Italian map; 3,218 m. = 10,558 ft., Paganini). *August* 9, 1897.—Mr. G. Yeld, with François Pession, of Val Tournanche, reached the eastern end of the Costa Parasseus from the Goj glacier, and traversed the ridge to its western extremity. About the middle of the ridge they found a ruinous little cairn, but there was nothing on the highest point. Between the ruined cairn and the highest point there was a little interesting rock-work. At the western end of the Costa there is a gap, then a tooth, then another gap, then a big tower, the end of the Tresenta ridge. It was apparent to the party when on the spot that the Bocchetta Goj, crossed by Mr. Yeld with Séraphin Henry, August 19, 1883, was identical with one of these gaps. So that the height of that little pass must be well over 10,000 ft. ('Climbers' Guide' to Mountains of Cogne, pp. 149, 150.)

BECCA DEL DEIR VERD (3,209 m. = 10,529 ft., Italian map;

* *A. J.* ix. p. 93; *Ann. S.T.D.* 1878, p. 50.

3,230 m. = 10,598 ft. Paganini; and 3,186 m. = 10,453 ft. Italian map, 3,187 m. = 10,457 ft. Paganini). *August* 10.—The same party, with the addition of Dr. Tempest Anderson and Sylvain Pession, of Val Tournanche, climbed the lower of the above points from the Noaschetta glacier without difficulty, gaining the summit from the W. From it Mr. Yeld and François Pession went along the ridge to the higher point in 15 min., very interesting climbing. The higher point is like a very small Matterhorn, quite startling in its boldness, and certainly deserves a more honourable name than the Roccie del Deir Verd, under which it appears in the 'Climbers' Guide,' p. 149. Becca del Deir Verd has therefore been adopted. The view was extensive and very interesting; the Punta di Gay, for example, appeared in quite a new light.

Becca di Monciair (3,544 m. = 11,627 ft., Italian map and Paganini).—The same party, without Dr. Anderson, made a new ascent of this beautiful peak. From the Vittorio Emmanuele hut they crossed the Moncorvé and Monciair glaciers towards the foot of the N. arête of the mountain. Before they reached it they had to cut down a steep slope of ice under some séracs—doubtless a dangerous place in the afternoon—and then reascend over ice and snow to the rocks on the E. side of the ridge. They went up these rocks to the right, and then, after turning considerably to the left, again inclined to the right, and reached the little projection or shoulder—the first that shows prominently in the ridge. (It was the unanimous opinion of the party that it would probably have been better to strike the ridge at its actual foot, and so avoid the passage under the séracs.)

They then ascended the ridge, sometimes actually along it, sometimes on its right, occasionally on its left. The rocks were not firm, and the climbing in places decidedly difficult. The ascent on the whole furnished much interest, not unmixed with excitement. The only part that was unpleasant was on the slope by the big patch of snow, not far below the summit, where the shaly rocks were very annoying. The ascent took about 4¾ hrs.' actual climbing from the Vittorio Emmanuele hut. The party descended by the N.E. arête to the Col du Charforon, but whereas in 1889 Messrs. Coolidge and Yeld, with young Christian Almer, had been able to go down the very steep snow, on this occasion the descent was made by the rocks. It occupied a much longer time. The party took 2 hrs. from the summit to the top of the moraine between the Monciair and Moncorvé glaciers.

Tour d'Arpisson, *circa* 10,700 ft.—Mr. G. Yeld and François Pession made this ascent from the Arpisson chalets. As will be seen from the succeeding note, this peak is not in the position indicated by 3,252 m. on the Italian map, and identified with the Pointe d'Arpisson in the 'Climbers' Guide,' but it is so much more imposing than the point 3,252 that it seems better to retain the name Arpisson for it, with the slight change of Tour instead of Pointe. The ascent was made by a big couloir to the left (from the Arpisson valley) of the peak. The upper part of the couloir was exasperating

to climb, as the rocks were loose and smooth, though there was no real difficulty—in fact the rope was not put on till the notch to the left of the peak was reached. There the party roped, and, climbing over all the prominent teeth, as they were uncertain which was actually the highest, attained the most western tooth in 35 min. after reaching the ridge. It was then evident that one of the points over which they had climbed was higher than the western one. The descent was made in a N.E. direction. At first it was very easy, but eventually the party found themselves cut off by cliffs, and had to make a long détour to the left towards the Grauson huts. Eventually a very faintly-marked track was found, and the Grauson track reached just where it crosses the torrent. This route took a long time, and Mr. Compton's will no doubt be followed by future travellers. It will also be found much better to ascend the peak from the Col de Pila—on its W. side. The Tour d'Arpisson is probably destined to become popular. It is a finer view-point than the much-lauded Pousset, though it does not command as fine a distant panorama as the Pointe de Garin, and has the additional advantage that it can be ascended from one side, and descended on the other. A fuller account will be found on pp. 517–21.

Pointe de Garin (3,447 m., 11,310 ft., Italian map); Tour d'Arpisson *circa* 10,700.—On August 24, Rev. W. C. Compton and Mr. A. V. Valentine Richards, with Alois and Siegfried Burgener, ascended the Pointe de Garin from Cogne, by the W. arête, *i.e.*, the sky-line as seen from the Valnontey. This arête is not the same as the N.W., ascended by Signor C. Pavese in 1875, which starts from the Col d'Arbole (Italian map—'Col de Garin,' 2,868 m., 9,410 ft., of the 'Climbers' Guide'), and which carries the edge of the glacier on the N. side of the Pointe de Garin. It is reached by rough stones and good ledges leading to a buttress conspicuous from the Arpisson Alp. If the arête be strictly followed after this buttress some good climbing may be found, though the best bits could no doubt be easily avoided. The summit of the Pointe de Garin, reached in 2 hrs. 50 min. from the Arpisson huts, affords a magnificent panorama, and does not appear to have received the attention it deserves as a view-point. Mont Emilius, 3,559 m., 11,677 ft. (Italian map), only obscures the view of a small portion of the Arolla mountains. In every other direction the panorama of the highest Alps is complete, and the isolated position of the peak must make it a far superior point, in regard to the Paradis group and other mountains of Cogne, to the Pousset, which has the honour of being called 'the Gorner Grat of Cogne' in the 'Climbers' Guide.'

The above-named party found a card of Mr. F. W. Oliver, marked 'by W. arête,' see 'Alpine Journal,' xvii. p. 346. They descended the S. arête by very easy rocks to the Col (not indicated on the Italian map), and continuing along the same ridge by turning most of its many gendarmes (to save time)—some on the E. face, others on the W.—they reached [by its W. face, consequently by a different route from that taken by Mr. Yeld—cf. note above], in 1 hr. 50 min. from the summit of the Garin, an exceedingly

jagged peak, conspicuous on the sky-line from the valley between Cogne and Lilla, the highest part of the ridge, but not corresponding with the point marked 3,252 on the Italian map. On one of the seven teeth of this peak Mr. Yeld had left a cairn and memorandum of his ascent of it exactly a week previously. Mr. Yeld had mentioned this fact before leaving Cogne a day or so later, and had described it as the Pointe d'Arpisson in the visitors' book. Reference to the Italian map makes it clear that 3,252 is the point at which a considerable rib running down to the Fiorito hut (marked 2,575 m.) impinges upon the S. arête of the Garin, and must be identified with a fine gendarme which the above-named party turned by the W. face, though it appeared quite capable of being traversed. As Mr. Yeld wishes to keep the name Tour d'Arpisson for the jagged peak, and this party agree with him that it has the best title to the name Arpisson, it is suggested that the point 3,252 should be called Punta Fiorito. The Tour d'Arpisson has a face towards the S.E., unsupported by any appreciable buttress, and was noticed as rising distinctly above the rest of the ridge S. of the Garin. It would appear to be about halfway between the points marked 3,252 and 3,033 on the Italian map. From it Cogne was reached in 2 hrs. 10 min. by easy couloirs leading in a S.E. direction from the S. tooth of the Tour to a good path on the W. side of the Grauson valley, which descends in a direct line upon Gimilian.

Arolla District.

Dents des Bouquetins (3,848 m.) by the E. Face. *August* 14. With Adolph Andenmatten and Elias Burgener, of Saas Grund, the Rev. L. S. Calvert made this ascent directly by the E. face. From the Col de Bertol they traversed snowfields to a point at the foot of the eastern face, which was immediately below what appeared to be the highest peak and facing midway between the Dent Blanche and the Matterhorn. They then went up some rocks, and, leaving a hanging glacier on the right, crossed a narrow and steep couloir, which was rather difficult on account of fresh snow. Then, bearing to the left until the Matterhorn was directly behind, they went straight up the face to the tower, which had appeared to them from below to be the summit. From the top of this they saw the cairn on the true summit, and then descended about 180 ft. into the gap, and up a second tower, and from thence directly to the top. They found the second tower needed care, on account of the rocks sloping downwards; but with this exception and some trouble from the fresh snow, neither the ascent nor the descent offered serious difficulty, as most of the rocks were sound, and afforded good foot and hand hold. Times: Left Kurhaus at 2.20 A.M., reached Col de Bertol at 5.55, and foot of rocks at 6.55, summit of first tower at 9.30, and highest point (3,848 m.) 9.50. Left at 10.30, off rocks at 12.50 P.M., and reached Kurhaus at 4.30. Total halts, 70 min.

Dent de Zallion (11,542 ft.). *August* 6.—Miss Ethel M. L.

Wood, with Jean Maître and Pierre Maurys, guides (from Evolena), made the first ascent of the arête on the Arolla side of the Dent de Zallion. They followed it up from the 'Gazon de la Za' to the summit. They then climbed the Aiguille de la Za by the snow arête, returning by the Col and Plan de Bertol to Arolla. Time, 13 hrs.

Mont Collon (11,957 ft.), New Descent.—On August 11 the same party started at 3.15 A.M., went up the Arolla Glacier near the Echo du Collon; then followed a little glacier to the foot of the 'Chancellier.' Turning to the left, they climbed some slippery slabs to the little col to the N. of the Mitre; then ascended the arête and traversed four unnamed peaks, making a signal on each, the last climb being a very stiff one. This brought the party to the Chancellier, and from this peak they took the ordinary way up Mont Collon. The party then made the first descent straight over the snow face and down the rocks between the central buttress and the E. arête on to the Arolla glacier. The hotel was reached in 20 hrs. from start.

Monte Rosa District.

The Breithorn (4,171 m. = 13,619 ft.) from the Breithorn Gletscher. *July* 17.—Messrs. H. J. Mothersill and C. S. Ascherson, with Ulrich Almer, Christian Kaufmann, and Christian Jossi, jun., made this new route. Leaving the Riffelhaus at 2.20 A.M. they crossed the Gorner glacier in 1 hr. 40 min. to the foot of the Breithorn glacier. This they ascended, keeping near the E. bank in 1 hr. 40 min. to the point 3,355 m. (Swiss map) on the rock wall overhanging the Schwärze glacier. From here they turned slightly W. for a short distance, and then climbed straight up the very steep and broken nevé at the head of the Breithorn glacier to the foot of the wall leading up to the summit ridge, 2½ hrs. This wall, which consists of steep firm rock mixed with short slopes of ice and snow, was climbed in 3 hrs., and the frontier ridge struck some little distance W. of the col, which lies immediately to the W. of point 4,148. Here the route taken in 1884 by Mr. J. S. Anderson with Almer and Pollinger* was joined, and the summit ridge followed for 3 hrs. over two big rock towers and a long snow arête to the highest point, reached at 4.20 P.M. The descent was made by the ordinary route to Zermatt. This route seems to be quite free from falling stones or ice, and though not easy, the firmness of the rocks both below and on the ridge makes it a very enjoyable climb.

Oberland District.

Tellispitzen (3,082 m., &c.). *August* 28.—Messrs. H. V. Reade and P. M. Barnard, with Theodor Kalbermatten, finding the weather too bad for the longer climb which had been planned, turned their attention to this rock-ridge, running S.E. from the Telligletscher to

* *Alpine Journal*, vol. xii., pp. 121, 246.

the Lötschthal. It consists of a succession of rock-towers, some of which are big enough to be considered separate peaks, and presents a formidable appearance from the glacier. No great difficulties, however, were encountered, though the sound rocks afforded 4½ hrs. of varied and excellent climbing, the top of the ridge being followed throughout. The views are fine, and the precipices on the N.E. side surprisingly sheer. The descent was made by easy rocks to the Tellithal, when the ridge broadened out and the climbing ceased to be interesting, a little S.E. of the subsidiary ridge branching off S.W. (well shown on the Siegfried map). *Times*: Ried to glacier at foot of rocks, 3½ hrs.; to the highest peak (3,082 m.), 2¼ hrs.; to the end of the climbing, 2¼ hrs.; down to Ried, 1¾ hr.; total, 9¾ hrs., exclusive of halts.

An entry in the Visitors' Book at Ried, dated August 1888, states that the Tellispitzen, among other peaks, were climbed by M. Montandon and some other members of the S.A.C., but no details are given, and the 1897 party found no traces of a previous ascent on any of the summits. As the route from Lauterbrunnen over the Petersgrat passes round the end of the ridge, the climb may be recommended to any one coming that way who has a few hours to spare.

Anengrat. *August* 30.—In 'A. J.,' xviii. 46, the traverse of the N.W. portion of this ridge, in 1895, was recorded. Mr. H. V. Reade, with Theodor Kalbermatten, and his brother Stephan as porter, completed the climb this year by the ascent of the remaining peaks, the Anenknubel (3,575 m.) and a nameless double-headed rock peak, both of which are well seen from the Ried hotel. They followed the Lötschenlücke route until about an hour from the top of that pass, then bore away to the l. (N.), making for the rocks of the Anenknubel, and reached the top of the ridge by easy rocks, an ice-couloir, and a short snow-slope, a few hundred yards S.E. of the point where it was left in 1895, and ¼ hr. N.W. of the summit of the peak. They reached that without difficulty, went in another 15 min. to the first summit of the double-headed peak, and in 5 min. to the second. After following the ridge a little further they decided that it was needless to continue right on to the Lötschenlücke (which could have been done without difficulty in about half an hour), and saved time by descending straight to the Ebnefluh Firn, whence the Concordia hut was reached in 2½ hrs. *Times*: Ried to foot of Anenknubel, 6 hrs.; to summit, 1 hr.

A slight correction has to be made in the note on the ridge previously printed ('A. J.,' xviii. 46). The new point of view reached this year made it evident that 'the northernmost and highest peak' reached by the 1895 party, which could not then be identified, was, in fact, 3,895 m. of the Mittaghorn, a peak which had previously been climbed by Herr Dübi, on the 16th July, 1880, according to the Visitors' Book at Ried.

Kranzberg (3,662 m.). *August* 31.—The same party, hearing that no one had recorded an ascent of the Kranzberg, climbed the two lower peaks (3,613 m. and 3,662 m.) in 3 hrs. from the Con-

cordia hut, but did not follow the easy ridge to the highest point, 3,719 m., which was hidden in clouds, owing to a mistake of the guide, who thought it had actually been attained. It was not until the party had returned to the hut, and the clouds had lifted a little, that they discovered the mistake. A stone-man was found on 3,662 m. The ascent was made by the snow and rocks due S. of 3,613 m., then along the arête to 3,662 m., but there was no climbing worth the name. The E. arête looked quite practicable. *Times*: Hut to foot of peak, 1¼ hr.; to ·3,613 m., 55 min.; to ·3,662 m., 20 min.; down to hut, 2¼ hrs. To reach ·3719 m. would probably have taken another 30 or 45 min.

KRANZBERG (3,719 m.)—On August 19, 1896, Mr. C. E. Freeman, with Heinrich Zurflüh and Andreas Stähli, made the first ascent of the Kranzberg. They left the Concordia Hut at 3.45 A.M., and continued on the Jungfrau route for 2½ hrs. till they were near the Roththalhorn, when they turned south-west up a snow-slope, and in 1 hr. reached a col between a point marked 3,784 on the Siegfried map and the rocky ridge leading to the top of the Kranzberg. Thence the top was gained in 40 min., the ascent, exclusive of halts, taking 4 hrs. 10 min. The descent was made by the Kranzberg Firn without going back to the col, and the Concordia was reached in 2 hrs. There are no difficulties, but the rocks near the top are fairly interesting.

Lepontine Alps.

GALMIHÖRNER (3,017 m., 9,898 ft.). *July* 12.—Mrs. George Broke, Mr. C. M. Thompson, and the Rev. G. Broke left Ulrichen at 3 A.M., and in three hours' going reached, *viâ* the Blas-Alp, the stone slopes called Kalkenfriedhof, just N. of the foot of the arête which runs down from the ridge between the Blashörner. Just beyond this they slanted up the Blas Glacier, and for two hours traversed snow slopes to the E., crossing the ridges descending from 2,765 m. and 3,000 m., till they reached a third shorter ridge which comes down from a point on the main crest to the N.E. of the summit. They ascended this over rotten, snow-covered rocks for half an hour to the main arête, which was followed for twenty minutes more to the top. No traces of any previous ascent. The descent was made by returning along the crest to a point rather nearer the Pizzo Gallina, and then descending the steep snowface and glacier to the foot of the Gornerli Glacier in 1½ hr., whence Oberwald was reached in 2 hrs. more at 6 P.M.

The N. peak (3,000 m.), which is the only one mentioned in the 'Lepontine Guide,' and which is described by Herr Kamlah as 'a bold peak of shattered rock' ('S.A.C.J.' xxi. 119), could probably be climbed by either its N.W. or N.E. arêtes; but the main ridge between the two points is desperately jagged, and might easily prove impassable. Both peaks and the ridge are in full view from Münster. From the Furka road the true top is hidden by the point 3,000 m., which is generally mistaken for the Blashorn. This latter peak has hardly any real top when fairly viewed in profile.

Tödi District.

GROSSE RUCHEN FROM THE WEST.—On August 12 Messrs. E. Calvert and T. Gray, with the guides J. J. Trösch and Joseph Trösch des Melchior, made the first ascent of the Grosse Ruchen by its serrated western ridge. Leaving the S.A.C. Hotel in the Maderanerthal on the preceding afternoon, they examined this ridge from the S. to decide on the best route for making an ascent near its western end. As it was doubtful whether the great towers there could be surmounted, it was decided to strike the ridge E. of these, but, as the upper portion of the south face is extremely steep, it appeared likely that a face traverse of some length would have to be made before the ridge could be gained. This proved to be so.

Starting from the Alp Gnof chalets at 3.25 A.M., they waited on the moraine at the foot of the Alp Gnofer Firn for daylight.

Leaving there at 4.40 A.M., they struck across the Firn, up the snow gully at its western head, and took to the rocks just below the great towers, after rounding the bases of which an easterly course was taken for the Ruchen.

A long and rapidly ascending traverse was made on sloping and narrow ledges, the ridge being gained at about a point marked 'Pucher' on the Siegfried map, where there are several large buttress towers. From here a continuation of the ridge brought them to the deep gap which is a distinguishing feature when seen from the Alp Gnof.

The only apparent way of reaching the narrow neck which there connects the ridge with the peak was by descending a long vertical chimney facing it; on account of the looseness of the rocks great care was required in this descent, and the last man had to use a double rope hitched above, and descended hand over hand. There was still an uncertainty whether the Ruchen peak could be climbed from the gap, and, as a return by the ridge would prove a matter of some difficulty, they hastened on as fast as possible, lest during a forced return they should be benighted.

From here, however, the completion of the climb proved less difficult than its appearance indicated, and the summit was reached at 12.35 P.M.

The time taken (9 hrs. 10 min.) could, doubtless, be very much shortened in a second ascent by this route, as much time was occupied in reconnoitring.

The usual descent by the eastern snow-ridge and glacier was made, and the Alp Gnof chalets were reached in a little over 2 hrs.

Between the Bernina and the Stelvio.

PASSO DI LAGO SPALMO (c. 3,150 m. = 10,335 ft.). *July* 31.—Signor G. Sinigaglia and the Rev. W. A. B. Coolidge, with A. Baroni, P. Rinaldi, and Christian Almer, jr., explored this pass, which does not seem to have been previously visited by strangers.

Starting from the Eita Club hut at the head of the Val Grosina,

the party mounted W. by the Val Vermolera to the Vermolera huts (55 min.), and then ascended stony grass slopes in a N.W. direction, till by a stony gully they gained the little Lago Spalmo (1¾ hr.). In 1 hr. 5 min. more the crest of the great moraine on the left bank of the Lago Spalmo glacier was attained, and then that glacier mounted, till at its head a broad and steepish snow wall led up to the snowy depression of the pass (1¼ hr., or 5 hrs. from Eita). This lies between the second peak (3,340 mètres) of the Lago Spalmo group on the W. and the point marked 3,228 m. on the $\frac{1}{25,000}$ Italian map (which is rather W. of the point 3,261). It commands a fine view of the Fluchthorn, Piazzi, and Dosdé ranges. Signor Sinigaglia's aneroid barometer (with corrections) made the height 3,150 m.

Mr. Coolidge (being indisposed) and Almer returned in 3 hrs. to Eita by the same route, save that from near the Lago Spalmo lake they descended direct to the Avedo lakes in the Val Vermolera. The rest of the party descended the steep and crevassed glacier on the N. side of the pass, finding the passage of the bergschrund very troublesome, and then regained Eita by way of the peak 3,261 m., the third summit (3,299 m.) of the Lago Spalmo group, and the Avedo Pass.

Cima di Piazzi (3,439 m. = 11,283 ft.). *August* 2. — Mr. Coolidge and Almer made the ascent of this mysterious summit above Bormio, which though climbed in 1867 by Herr Weilenmann, and a year later by a Mr. Clarke, is rarely visited even by Italian climbers, and has been nearly completely neglected by all others, though it is the loftiest summit between the Bernina and Ortler groups.

Starting from the Eita Club hut the party (hoping to make a short cut on the ordinary route by the Passo di Verva) mounted by the Cassavrolo huts, the slopes above them, and finally by a steep snow couloir, to the depression (Colle Campaccio) between the point 3,029 mètres and the Pizzo Campaccio, 3,148 m. (3½ hrs.). But it was found necessary to descend over the S. Verva glacier and stones for nearly 1,000 feet before the N. Verva glacier could be gained (1 hr.). The rocky barrier on the N. of this glacier was passed some way to the E. of the usual gully, and then the upper snow-field mounted to the S. ridge, which was followed, at the last by a steepish snow slope, to the delicate snowy ridge which forms the summit of the Piazzi. 2 hrs. 20 min. slow walking were taken from the point at which the N. Verva glacier was reached, but not the slightest difficulty was encountered *en route*. The view was extremely fine and extensive.

The return was made by the N. Verva glacier and the Lago Maurignino, the Passo di Verva being reached in 2 hrs. from the peak, and Eita in 1 hr. 20 min. more. This route is by far the easiest and shortest from Eita. A detailed account of this ascent, as well as of the preceding and following expeditions (here indicated but briefly), will later appear in these pages.

Cima Viola (3,384 m. = 11,103 ft.). Cima di Saoseo (3,277 m.

= 10,752 ft). *August* 4.—The last-named party effected these two ascents from the Dosdé Club hut, which is on the crest of the Passo di Dosdé (2,850 m.) itself. The former summit rises to the E. of the pass, and thence appears as a round mound. The ascent (which took but 1¾ hr.) was made by the glacier on the N.W. slope of the peak, and the S. ridge of the peak itself. The view was extremely fine, ranging from the Tödi group to the Adamello. This summit is the highest of the Lago Spalmo group, and was first ascended in 1875 by Dr. Sassella, as, probably owing to defective maps, two English parties in 1866 ('A. J.' ii. pp. 406, 408–9) only succeeded in vanquishing the two lower summits (3,340 m. and 3,299 m.) to the N.E. The Cima Viola does not seem to have been visited since 1894, but is a charming expedition and an admirable panoramic view-point. The return to the Club hut took 1 hr. In the afternoon the Cima di Saoseo, W. of the pass, was climbed in 1 hr. 50 min. by way of its easy E. ridge, the point marked 3,061 m. being turned by steep snow slopes on its N. slope. Light clouds unluckily hid most of the view, while a sudden hail storm drove the party back in 55 min. to the Club hut. The Saoseo was first climbed in 1894 (by the same route) by Herren Purtscheller and Blodig, and does not seem to have been visited again till the ascent above described. It falls in great rock, corniche-crowned precipices towards the Val Viola Poschiavina, whence it makes a great show, as well as from the Val Vermolera, while as it rises at the meeting point of four ridges it ought to command a most interesting view of the very little known ranges round the head of the Sacco glen on the S.

Dolomites.

Grosse Zinne from the N.E. (9,850 feet).—The Rev. A. G. S. Raynor and Mr. J. S. Phillimore, with guides Antonio Dimai and Giuseppe Colli, of Cortina, made this ascent on *August* 6. Leaving at 7.28 the couloir dividing the Grosse from the Kleine at a point not very far above the usual starting-point, and perhaps twenty paces below the pass, they took the face, skirting outside to the right the large black chimney, which must be dangerous from stones. The climbing was pretty stiff and the rock rotten. Tending first left and then right they reached a scharte connecting a buttress with the face, at 8.50, and climbed out on to a tower projecting N.E. conspicuously, at 9.15. From here the great chimney was gained; this presented at first no difficulty beyond loose stones, but three hard blockstones (first passed 9.45) barring a canalone filled with ice and snow proved serious obstacles, and the last in particular a ticklish turn. From the head of this the peak was easily gained at 10.40, and the descent made by the old way in an hour and six minutes, expedited by an approaching thunderstorm.

Running from E. to S.E., the climb is not a true traverse. But the new way is more interesting than the old, being, if anything, harder than the Kleine from the S. Total time out from Misurina, 9½ hrs.

Tofana di Razes (10,550 ft.), First Traverse from Falzarego.—The same party left the Falzarego Hospice at 4.40 on *August* 10 and reached the rocks, just below the Col di Bos, at 6.5. A huge buttress projects from the bulk of the Tofana (towards the Col), divided from it by two parallel chimneys in a red crumbling rock. The left was taken at first, then the right gained by climbing round the partition ridge, then up the right (E.) wall of the second, till the neck connecting buttress and mountain, and commanding Val Travernanzes, was reached at 7.20.

Then up the face direct for ten minutes, after which they rounded a projecting shoulder (right), turned into a chimney, crossed it, and passed into it again higher up by a pretty piece of work. The landmarks of this W.S.W. ridge of the Tofana di Razes as seen from, say, the Cinque Torri, are an immense black perpendicular chimney with a narrow grey one running up parallel to the left of it, and over both a high red prominent tower. At 8.25 the wall of this tower stood immediately above the party, below them on the left a great gully running down toward Travernanzes; the alternatives being apparently to traverse the head of the gully or face the wall. However, a traverse was effected south-eastwards, and a point gained from which Falzarego is visible, and shortly after by a chimney and a strip of face-work the top of the tower reached, 8.45. Thence W., just avoiding the gully-head, up ice-chimneys and a glazed watercourse, followed by a long passage of slabs, to a point just below the highest practicable scree-ledge on the main wall. Bearing right in general, they gained, at 9.45, a scharte which for the first time opened the view S.S.E., and finally by a long disagreeable stretch of steep slabs loaded with loose stones, got by the ridge to the top at 10.8. Left peak at 12.32. The descent by the usual way to the Tofana hut took ¾ hr., mostly glissading and ledge-jumping.

Total time out, 8 hrs. 36 min. On this, as on the two following expeditions, Arcangelo Dibona, of Cortina, carried up the boots and axes by the old way.

Tofana di Mezzo (10,635 ft.), First Ascent by the S.W. Wall.—The same party left the Tofana Hut at 5.10 next day, and followed the ordinary route to within a few minutes of the Forcella. Taking the rocks at 6.22, they climbed slabs steep but good, inclining to the right, and after 20 min. gained a ledge of the great pillar which projects from this face. Following this round still to the right (= roughly S.E.), they struck into a chimney which cuts the pillar, slightly tending back to the left, presently passing out again to the right on the face up to a second ledge, 7.15. The next bit was very hard; you climb round and up a bulging face highly exposed, 7.45. Five minutes later brought them to the top of the pillar, certainly within a hundred feet of the ridge. The next thing was a stiff chimney, entered by a nasty *passo lungo* and barred by an awkward blockstone. Rest at 8.20, within some thirty feet of the crest. The last bit, which begins here, can only be described as extraordinarily difficult—a smooth oblique chimney absolutely

without handholds on the left, and only to be negotiated by a most laborious use of back and feet. The crest was touched at 9, and the peak at 9.22. Descent by the old way in an hour to the hut.

The crux of this expedition is a place which may be compared with the worst chimney on the Delago Turm for difficulty, only this is absolutely exposed. The Ampezzo section of the D.Ö.A.V. proposes to place a few yards of iron rope here and at the other hard bit before described. The route (which, at the guides' suggestion, was named Via Inglese) can be recommended as a very fine climb; it keeps always far left (N.W.) of Messrs. Mackintosh and Heywood's descent with Zangiacomi in 1896.

In the case of each of these Tofana climbs the old way (which is so tedious an ascent that the mountain is hardly done three times a year) makes a delightful descent, glissade nearly all the way. The Tofana hut is admirably convenient as a halting-place if the two climbs are taken in succession.

Pelmo from Forcella Forada (10,395 ft.), First Ascent by the N. Wall.—The same party slept in deplorable quarters at the Malga Corotto (2 hrs. from S. Vito), and started at 5 A.M. on August 14 for the Pelmo. Forcella Forada 5.50, then over the great spur which bounds the Nevaio di Val d'Arcia on the N., across the Nevaio itself, to a point in the Bergschrund where the snow comes up highest into the rock, a little W. of the Forcella Rossa. The rocks were begun at 8.20. The first passage is of extreme difficulty; a shallow, polished, wide watercourse-chimney, which took forty minutes for a hundred feet. Traversing out of the blocked head of this to the right (= W.), they climbed the face, rather trying and precarious work. A second chimney and more face-work led to a wet red watercourse-basin (9.30), which was traversed to the left. Then up a rib, a part conspicuous from below by evidence of recent rock-falls; in fact, this was the most rotten piece of a climb where almost literally every stone was treacherous. This rib was subsequently left, and a line of ugly traverses westward taken, which ended in a prominent broad ledge formed by the head of a red buttress. The head was left on the right, and the next big ledge gained 10.45, by a climb over a greenish flaked-off face. Leaving this 11.5, they worked to the right, for some twenty-five yards, along an exposed crumbling traverse, then took the face again 11.45; conditions slightly improved after a stiff ten feet of chimney. The high snow patch, which assured success, was gained at 12, and from this point pleasant climbing of no particular difficulty brought them, at 12.50, to the summit-ridge, at a point easily identified as falling between the two most easterly of the three blocks which break the straight line of the crest. The top was reached in twenty minutes from here by the ridge, left at 2.45, and the descent made by the Lange Band to the Rifugio Venezia (4.25), and, after half-an-hour's rest, eventually to S. Vito (6.28). Total time out from the Malga to S. Vito, 13½ hrs.

The whole length of rock is surprisingly less than distant views lead one to suppose; it can scarcely exceed 1,400 ft. The general character is ledges strewed with stones, connected by vertical faces and occasional ribs. The climb is interesting and trying because of the extreme caution necessary, but can hardly be recommended as a regular traverse way because of the utter rottenness of the rock. Perhaps a better might be found on the face towards the Forcella Rossa.

Punta della Madonna (9,075 ft.), First Direct Traverse from the S.—Messrs. Raynor and Phillimore, with guides Michele Bettega and Antonio Tavernaro of S. Martino, made this expedition on August 22. Leaving S. Martino at 5.10, and following the ordinary Sass Maor route for some 20 min. from the beginning of the rocks, they then struck off to the left—8.35. The way cannot be mistaken, as it is the only real chimney of any length on the S. side of the Punta. The chimney itself is very narrow, shallow-cut, and mainly vertical, consequently not safe from falling stones; but the chief difficulty lies in the traverse that leads from it to the continuation line, which is more to the left. The ascent ends in a chimney, the head of which unites with the head of the Winkler-Kamin on the opposite side. The top was reached at 10.40 and left at 11.10, Forcella between the two peaks 11.35, S. Martino 2.43. Total time out, 9½ hrs. This is a remarkably pretty climb, giving much greater length of chimney than either of the ways from the N.

Cima di Pradidali, First Traverse from S.E. to N.W.—The same party, with Giuseppe Zecchini substituted for Tavernaro, made this traverse on August 25. Till just before the crest it is entirely free from difficulty or interest, but might conveniently be practised in the reverse direction by those who take the Cima di Pradidali *en route* by the Passo di Ball, as the Pradidali hut may be reached in under ¼ hr. from the foot. Time from the hut to the top, 1 hr. 50 min.

Campanile di Dresda (in Val Canali), First Ascent and Traverse.—The same party ascended this virgin point on August 26 from the Canali hut. It shows as a small sharp peak in front of the Sasso Cavallera, and is connected with the Pala della Madonna by a low neck of grass and rock. Leaving the hut at 5.50 they followed the path leading to the Forcella d'Oltro by the valley known as 'I Van della Madonna,' and striking left where this divides, and again up the left side near its head, reached a grassy shoulder covered with dwarf cembra at 7.40. Beginning the rocks at 7.50, after about half an hour's mixed climbing, they succeeded in entering the long chimney which cuts nearly the whole S.W. face of the mountain, but is inaccessible in its lower part. This chimney now afforded a very good climb, being tight, precipitous, and exposed, further complicated by loose stones and rotten rock, and offering several difficult blockstones and projections. It leads to within a few minutes of the top, where the

whole party assembled at 10.30; the character of the chimney necessitates long intervals. A pyramid was erected, and the point christened as above. The descent was begun at 11.25 by an easier way, following the crest in an easterly direction, then close under it on the S., and leaving the rocks close to the little pass known, by a local legend, as 'Forcella dello Svries' (spelling doubtful, given phonetically), under the Pala della Madonna, 1 hr. and 20 min. rock work. Hut 2.50. Time out, 9 hrs.

Punta and Pala del Rifugio, First Ascent and Traverse.—The same party on August 27 left the hut at 6.7 to try the point which immediately overhangs the hut itself. Following the path leading to the Forcella delle Mughe (between Sasso Ortiga and Pala della Madonna) they gained the Vallon delle Mughe in about ¾ hr. This remarkable valley is walled on the N.W. (left hand) by an unbroken line of cliff some two miles long and apparently practicable only at one single point. Two chimneys, a vertical and an oblique, start about 40 yds. apart, and unite at about 150 ft. up. Taking the vertical chimney, they began the rocks at 7.18, and by a difficult climb, including a very hard blocked passage, reached the above-mentioned junction at 8.37. Here the chimney widens and presents no exceptional difficulties. Leaving it at 9 and taking to the face on the right they gained the crest at 9.40, and followed that to the first peak in 20 min. more. The mountain is a ridge joined to the wall of the Sasso Ortiga by a low neck and rising into two distinct peaks. This first was now named Punta del Rifugio. Starting from it at 11.10, by climbing down the N.E. face and then coasting by long traverses and finally up again, the second point was touched at 12.5; this was named Pala del Rifugio, as its N. precipice immediately dominates the hut. This top was left at 12.40. Retracing the same line, the descent was begun *viâ* the Punta, and continued along the main crest to the Forcella, between the new peaks and the Sasso Ortiga. Reached 1.45; left 2. Along the wall of the Ortiga ran a good ledge which apparently should lead direct to the Forcella delle Mughe. It is broken, however, by a precipice which was only negotiated with the greatest difficulty by climbing down the face and round by a crack where the rope can be attached. The ledge thus regained the Forcella delle Mughe was arrived at by 3.5 and (40 min. halt) the hut by 4.55. Time out, 10¾ hrs.

Both these climbs are to be recommended as very interesting expeditions throughout; the guides judge them to be the hardest things in the group. The heights of both are insignificant, probably below 8,000 ft., and on each the flora is abundant to the top. Both contain, and stand among, rock formations of a boldness remarkable even in the Dolomites. The new names are intended as a compliment to the Section Dresden of the D.Ö.A.V., whose commodious new hut has opened up a most attractive new province of the S. Martino region.

NORWAY.

Søndmøre.

During the past season Messrs. Gerald Arbuthnot and E. C. Oppenheim with Johannes Vigdal spent three weeks in exploring the little peninsula which lies to the N. of Øie, between the Hjørundfjord on the W. and the Velledal and Søkkelvfjord on the E. Hitherto this part of the district has been rather neglected, as climbers from Øie have practically confined themselves to the ascents of some half-dozen peaks in the immediate neighbourhood. They made the following expeditions, all of which they believe to be new.

Vellesæterhorn (1,448 m. = 4,750 ft.) and the Søndre Ringdalstind or Urkedalstind (1,485 m. = 4,870 ft.) *July* 18.—Left Langesæter at 6.10 A.M. Ascended Vellesæterhorn by scree gully and easy rocks on S. face, striking the ridge a little W. of the summit (2 hrs. 55 min.). Returned from the summit along the ridge to a point somewhat W. of the top of the gully (30 min.), and descended the glacier on the N.W. face to the Skar (or Col) between the N. ridge of the Vellesæterhorn and the E. ridge of the Urkedalstind (1 hr. 40 min.). Ascended latter peak by the E. ridge (1 hr. 10 min.). The view was in the opinion of the party even finer than that from Slogen. Descended to the Skar and thence to Urke (3 hrs.).

Tranhulstind. *July* 20.—This is a peak to the S.W. of the Nordre Ringdalstind and has no name. It has therefore been called the Tranhulstind. Left Trandalsæter at 7.55 A.M., scrambled up steep grass slopes and rock terraces on W. side of the valley to the glacier which descends into the Trandal from the cliffs W. of the Tranhulstind (2 hrs.). Crossed the glacier, which might be called the Tranhulsbræ, above the lower icefall, and ascended the mountain by a gully in the W. face and by the W.S.W. ridge (2 hrs. 15 min.). Returned the same way to the Sæter (3 hrs. 30 min.).

Pass from Trandal to Riksheim. *July* 24.—Left Trandalsæter 3 A.M. Walked up little side valley between Trandalhatten and the Storevastind (1 hr. 45 min.). Climbed a steep chimney which runs up the face of a nameless point at the head of the valley, turning some of the pitches by the rocks on the N.E. (2 hrs. 20 min.). From here it was necessary to cross to the lowest part of the ridge which connects the nameless point with the Molaupfield in order to get on to the glacier on the E. side of the ridge (45 min.). Descended glacier (50 min.) to the little lakes at the head of the Riksheim Valley. The direct pass is further to the N.E., and is between the nameless point and the Storevastind.

Stromseimshorn.—Walked up side valley which lies S.E. of the lakes (1 hr.), and, ascending the little glacier beneath the W. face of the Stromseimshorn to the Skar in the N. ridge (30 min.), followed the latter to the summit (25 min.). Descended S. ridge (1 hr.). From here to the glacier lakes in Riksheim Valley (1 hr.) and thence to Riksheim (3 hrs.). The view from the Stromseimshorn is very fine. This valley forms the peasants' pass from Riksheim to Trandal.

Passes From Urke to Trandal (Urkedalskar and Trandalskar). *August* 2.—Left Urke 7 A.M. Walked up the Urkedal to foot of the broad gully in the S. face of the Urkedalstind (2½ hrs.). Ascended to the Skar (3 hrs.). The gully is débris with snow patches and one difficult, though short, bit of rock about half-way up. On the N. side the Ringdals glacier comes right to the ridge. The pass was named the Urkedalskar. Descended glacier to the moraine at the foot of the deep Skar in the N.E. ridge of Raana (2½ hrs.). Crossed this ridge at a point further to the E. where it splits up into two, forming the E. and N. arêtes. Traversed the little snowfield on the E. side of the N. arête and crossed the latter at a convenient point (45 min.). Thence to Trandalsæter (2 hrs.). The above is a very interesting glacier walk. Perhaps the second pass might be called the Trandalskar.

Nordre Ringdalstind (Raana) by N.E. Ridge. *August* 3.—On the Amtkart the Midtre Ringdalstind is marked Raana, but, locally, this name is given to the northern of the three Ringdalstinderne, which is also the highest. The Amtkart does not seem to be accurate just here. Tranhulstind is not connected with the Midtre, but with the Nordre Ringdalstind; nor is there any ridge connecting it with Elsantind. Raana is about 5,000 ft.

The party left Trandalsæter at 11 A.M. (an absurdly late hour) and followed their tracks of the previous day to the moraine on the N. side of Ringdals glacier (3½ hrs.). Climbed to the Skar in N.E. ridge (30 min.). Made a little traverse on S.E. face to turn a loose block and took the ridge. It was easy at first, but shortly got more difficult, and they thought it advisable to make a traverse on the N.W. face in order to save time. There was a thick mist, and as the rocks were rather moist they found the traverse not very pleasant and soon returned to the ridge. This was followed to within about sixty feet of the shoulder, which was turned on the N.W. face. From the shoulder to the foot of the final tower the ridge was not difficult, though so sharp that a good bit of it had to be straddled. Beneath the final tower they had to turn an overhanging crag by the N.W. face, entailing a very awkward traverse. They regained the ridge and climbed to the summit without difficulty (4 hrs.). Here a small cairn was found, presumably one built some years ago by Mr. Hastings (K. Randers' 'Søndmøre,' p. 115) when he ascended the mountain from Urke. They descended to Urke by the rocky débris and miniature glacier on the S. side (3 hrs.). Although the ridge is short, it is an excellent climb.

Blaabrætind (1,472 m. = 4,828 ft.). *August* 6.—Mr. Oppenheim and Vigdal, starting from Trandalsæter, walked up the grass slopes and débris between the Storevastind and the Blaabrætind to the little valley enclosed by these peaks and the Stromseimshorn. They then climbed the Blaabrætind by the S.W. ridge, traversing occasionally on to the W. face. The summit was reached in 3 hrs. 20 min. from the Sæter (exclusive of halts). They descended by the N. ridge in 1 hr. From this point down the valley (which is probably a perpetual snowfield), and so back to the Sæter in

1 hr. 45 min. A magnificent view was obtained from the summit.

Skaartinder or S. Ridge of the Saebø Storhorn (1,368 m. = 4,487 ft.). *July* 29.—This peak lies to the W. of the Hjørundfjord. Mr. Arbuthnot with Vigdal left the farm Skaargaard at 3.25 A.M. and reached the commencement of the S. ridge in 3 hrs. 50 min. It affords capital climbing in parts, and one can have as much or as little as one likes, since it is always possible to turn difficult parts by the W. face, which is broken up into easy ledges of débris. A very long day would be necessary to complete the whole ridge, even if it were found possible. On this occasion 7½ hours were spent over about one-third of it. Descent to Skaargaard or Saebø from the summit is merely a walk over débris and patches of snow.

There are still on either side of the Hjørundfjord some peaks to ascend. Some nice passes could be made from this fjord and the Norangsfjord to the Søkkelv Valley, and there are plenty of new routes, some of which should certainly be very well worth doing. The peasantry are quite unspoilt, and the party were received everywhere with great kindness and hospitality. At Øie itself there is a very comfortable and quiet little hotel. The peaks and glaciers are of course small; and none of the above expeditions, with the exception of the N.E. ridge of Raana, which was thought by all concerned to be an uncommonly stiff little climb, presented much difficulty. They were, however, very pleasant and interesting days, amidst most beautiful surroundings, and the party enjoyed the additional pleasure of having the mountains quite to themselves. It seemed to them that no better district could possibly be selected by mountaineers who might wish to climb for the first time without guides, since ample opportunity presents itself of doing work which, though new, is not very difficult, and the expeditions are mostly short. Randers' 'Søndmøre' will be found useful as a general guide-book to the district, and there is now a climbers' book at Øie.

Lofoten Islands.

This district contains few hills higher than 3,500 ft.; but the scenery is most beautiful, and the rock-climbing in Öst Vaagö very interesting. The following notes may be of use to future visitors to the Raftsund.

Messrs. G. Hastings, H. Priestman, and H. Woolley left Digermulen on August 2, crossed the Raftsund, and camped at the head of the Troldfjord.

Troldsadel (994 m. = 3,261 ft.).—Leaving the camp at 6.30 the same evening, the party followed the tourist-track to the Troldfjordvatn, passed round the E. end of the lake, and gained the end (1,500 ft.) of the glacier on the N. side of the Store Troldtind. They then ascended the main arm of the glacier in a W. direction to its highest point, in the hope of finding a route up the rocks of the Store Troldtind above it, but without success.

After supper a descent was made on to a second glacier lying between the Store Troldtind and a saddle-shaped peak about a mile to the W. This glacier was ascended to a height of 2,900 ft., where the highest snow-slopes ended under a broken rock-ridge, which was reached by very rotten rocks.

The summit, where the party arrived just before sunrise, at 1 A.M., lies some distance along the ridge, and showed no sign of any previous visitors. Although too late in the season for the midnight sun, there was plenty of light for rock-climbing during the whole night; and from 10 P.M. till 2 A.M. the view to the N. was a scene of striking and impressive beauty.

The camp was regained at 5 A.M. on the 3rd.

The peak, being unnamed on the new Amtskart, was named Troldsadel, on account of its shape as seen from the E.

STORE TROLDTIND (1,046 m. = 3,432 ft.) FROM THE N. *August* 5.—Having gained the Troldtind Glacier by the route taken on August 2, the same party went due S. up a small branch of the glacier which falls from the E. side of Store Troldtind, and, after ascending a hard snow slope to a height of 2,200 ft., avoided further step-cutting by taking to the rocks on the W. of the slope.

Skirting the E. face of the mountain, they crossed some large snow-slopes to the foot of the S. face of the final peak, and gained the summit by a series of ledges and gullies in the granite rocks, which are for the most part smooth, rounded slabs on this side.

On the top was found a cairn, erected in 1890 by the party who made the first ascent, and a bottle, containing the names of Miss Jeffrey, of London; Herr Ole Landsund, of Trondhjem; and a native of Digermulen, but no reference to their route.

As they ascended direct from Digermulen, it is probable that their ascent was made entirely by the S. face. No other ascent seems to have been made since 1890.

ISVANDTIND (993 m. = 3,061 ft.). *August* 6.—Leaving the camp at 11.30 A.M., the same party followed the valley due W. of the Troldfjord to a lake (1,000 ft.), in which small icebergs floated, and, turning S. on to a ridge of ice-worn granite which lies between the lake and the Troldfjordvatn, followed this ridge westward to the foot of the final peak of the Isvandtind. This is bell-shaped, with very steep granite slabs intersected by ledges and chimneys lined with grass or moss, which rendered great care necessary. The ascent was made by the E. face, and the two points of the summit gained at 5.30 P.M. After building a cairn on the western summit, the descent was begun on the N.W. side, towards a slope of névé falling directly towards the ice-lake. About half-way down the slope a wide crevasse, extending from side to side, forced the party to descend a difficult chimney in the rocks on the W. side, after which steps were cut down the lower part of the slope to the rocks below; but, after descending to within a few hundred feet of the lake, further progress was stopped by a wall of steep, smooth granite slabs. All endeavours to discover a passage being fruitless,

the party were obliged to retrace their steps. The summit was reached again at 12.40, and the camp at 4.20 A.M. on the 7th.

The name given to this hill was suggested by the lake above which it rises. It has no name in the new Amtskart.

LANGSTRANDTIND (CENTRAL PEAK, 3,160 ft., *aneroid*). *August* 9.—Leaving Digermulen by boat, the same party crossed to Storvik, at the N. end of the Öihelsund, and ascended the valley in a due W. direction to a col about 2,000 ft. at its head. They descended on the W. of the col to a glacier which drains into a glen to the S.E., and ascended the glacier to the rocks of the central peak. The summit was gained without difficulty, and, although it proved to be the lowest of the group, afforded excellent views of the hills in the S. and W. of Öst Vaagö. The point ascended is the most western of the Langstrandtinder, which is visible from Digermulen.

BLAAFJELD (EASTERN PEAK, 3,200 ft., *aneroid*). *August* 11.—Starting from a camp at the head of the Grundfjord, the same party ascended the Grundfjorddal to the point where the stream forks, and then followed the western branch up to the glacier. Crossing the lower end of the glacier, they struck the lower rocks of the peak, and traversing to the left gradually ascended to the eastern ridge, but were obliged to descend, and to make a détour to turn a rock-tower. The final peak was then ascended mainly by gullies filled with loose débris.

The descent from the E. ridge was made by the S.E. face, past a small lake, marked 340 m. on the new map.

This peak is the lowest of the Blaafjeld group, and the nearest to the head of the Grundfjord.

SVARTSUNDTIND (1,054 m. = 3,485 ft.). *August* 15.—The same party left Digermulen at 7.15 A.M., rowed 10 kilometres up the Raftsund, and landed in the little bay called Fallvik. From this place the summit of the Svartsundtind is visible, a little S. of E., above a glacier, from which a stream descends in a series of cascades. Starting at 1.30 P.M., in bad weather, they forced their way up through the deep fern and thick birch scrub on the right bank of the stream to a wall of glaciated slabs of rock, which were turned by a long diagonal traverse to the left.

Inclining to the right again they gained the glacier, and ascended it to a well-defined belt of rocks, which separates it from the upper névé. From this point the eastern ridge can be easily reached, but in order to avoid the rock pinnacles on it the party ascended the snow-slope below it till a deep notch was passed, and then had a most interesting and enjoyable scramble up the huge blocks of the ridge to the summit, which was gained at 5.30 P.M.

The descent was made by the same route. Fallvik was reached at 8.10, and Digermulen at 11.30 P.M.

SPITZBERGEN.

FOX GLACIER (RECHERCHE BAY) AND MOUNT FOX (2.400 ft.).—This glacier (named after the nearest headland, Fox Point) with

the surrounding ring of peaks, occupies the promontory between Recherche Bay and the sea, and terminates in an ice wall in the bay.

Dr. Woodman, Captain Stronge, and Messrs. A. Waddell and Victor H. Gatty left the shore at 3.20 P.M. on August 5, and mounted the little valley lying under the right (or S.) moraine, which brought them in ½ hr. on to the ice, 450 ft. up. From here a diagonal course was steered up the glacier, which was snow-covered and enshrouded in mist, but practically free from crevasses. One thousand feet up the mist was left behind, near the base of Mount Fox, 2 hrs. from the shore. This peak is the culminating point of a long ridge which bounds the N. side of the glacier. The glacier runs W. from the bay to a large snow basin surrounded by peaks. A second branch, longer and narrower, runs N.W. behind Mount Fox. This branch was mounted to the W. foot of the ridge, from which point Dr. Woodman and Mr. V. H. Gatty ascended the peak up a steep slope of snow-free screes, reaching the top at 7.35, and enjoyed a clear and extensive view in all directions, the water only being hidden by a sea of clouds which lay about 1,700 ft. below.

At 10 P.M. the whole party again left the foot of the ridge, and mounted the N.W. branch of the glacier in ½ hr. to the well-marked snow col at its head. Height, 1,750 ft. A short, steep, and little-crevassed glacier on the reverse side runs down to a small valley leading to the N.W. shore of the promontory. The col was left at 11 P.M. in brilliant sunshine, and the upward tracks followed down the glacier, over the now hard-frozen snow, in 1¾ hr., to the point at which the ice was left. The shore was reached at 1.35 A.M., the last 800 ft. of the descent being through dense fog.

CUMBERLAND.

MOUSE GHYLL, BLEA CRAG, MAIDEN MOOR, BORROWDALE (about 320 ft.).—On September 3 Messrs. Cyril and Eric Todd, Wm. Cecil, and W. E. Slingsby made the first ascent of what Mr. J. W. Robinson described as 'the last known great unclimbed ghyll in Cumberland.' It is near the top of the fell directly above The Hollows Farm, and is well seen from the head of Derwent Water and the Borrowdale Hotel.

It contains a very pretty double staircase, and two especially fine pitchers where the *hymenophyllum* grows with rare profusion. The lower pitch is one of the most sensational in Lake Land, and, for some distance, it affords little hand- and no foot-hold, and, on account of the wet weather then prevalent, it was unusually difficult. Mr. Cyril Todd led over all the difficulties. A party of four men has here a distinct advantage over one consisting of only three. The second pitch, which is immediately on the top of the lower one, is also a very pretty climb, and is easily surmounted by giving the leader a back and shoulder to stand upon.

During the climb a mouse fell or jumped down from the lip of

the upper pitch to a ledge 90 feet below, and was afterwards discovered by the boy of the party little or no worse for its rapid descent. This episode naturally suggested a name for the ghyll, which has met with the approval of Mr. Robinson. This ghyll will, undoubtedly, become a favourite with climbers, and it may fairly be ranked amongst the best of the many excellent rock-climbs in Cumberland.

EASTERN CAUCASUS AND KASBEK GROUP.

Mr. Maurice de Déchy, with the guide Moser, travelled this year in the Eastern Caucasus, to continue the exploring work which he began many years ago. The N. side of the Pirikitelian chain was first visited and crossed to the S., whence the Khevsurian Alps were reached. The N. side of the Pirikitelian chain* was visited in 1889 by the indefatigable Caucasian traveller and explorer, Dr. Radde, but glacier expeditions and high ascents were not attempted. In 1892 Herr Merzbacher made a long and most successful exploring journey on the S. side of the chain, and ascended some of its highest peaks. The inner Khevsurian Alps remained *terra incognita*.

Mr. de Déchy approached the mountains by the Argun valley, leaving Shatoi on July 12. The journey was favoured, on the whole, with fine weather, only rarely interrupted by short rains with thunder storms, and the travellers moved on without resting. The region is inhabited by the Mohamedan Chechen people. On July 13 Sharoi was reached, and the next day, in a side valley of the Argun, the village of Khulundoi. On the morning of July 15 a hill amongst the Diklos glaciers was ascended to photograph. It was a long day; the party descended again to the Argun valley, and reached (at 9 P.M.) Sundukhoi.

Ascent of Datakh Kort (14,020 ft.).—The next days were devoted to the glaciers in the background of the Donoilam valley. The highest peak of the chain, Datakh Kort, was climbed on July 18 from a bivouac on the rocky slopes at the left side of the Datakh glacier. The party took six hours from their bivouac to the top. The greater part of the ascent was over very steep snow slopes and sharp arêtes, necessitating much step-cutting. In the lower part of the ascent some intervening rock ridges had to be crossed. The porters—who followed to the bivouac, while Mr. de Déchy with Moser went on a photographic excursion—having refused to carry wood, there was no possibility of cooking the provisions, or of making soup or tea. An attempt to make some tea for the ascent, by soaking tea in cold water for a few hours, failed. The travellers were not handicapped through this accident in the ascent, but felt it rather more severely when returning to the bivouac. The porters had already left the evening before, refusing to stay, two of them even not coming as far as the bivouac place. The weather was not favourable on this day, low clouds hanging

* This designation was suggested by Herr Merzbacher. The rivers on the southern slopes of the chain are tributary to the Pirikitelian Alasan.

over the mountains. Still most splendid glimpses into glacier-filled depths were gained, over a confusion of sharp ice arêtes and steep snow slopes, which are characteristic of the peaks in this chain. In descending the top arête and arriving on a saddle-like part of it, the clouds broke and the travellers were seen by the native hunters who arrived at the tent place. On July 19 the party returned to Sundukhoi.

Kachulam Glacier Pass (11,650 ft.).—The tent was pitched on July 20 at the head of one of the western sources of the Sharu-Argun river. The next day the glacier pass of the Kachulam was crossed to Parsma, in the valley of the Pirikitelian Alasan. The Kachu glacier is one of the greatest on the N. side of the chain. The snow peaks are magnificent. The pass is known to the natives, and very easy.

July 22.—Up the treeless Alasan valley. Interesting villages with high towers. The Christian Tushin people inhabit the country. Camp below the Adzunta pass.

July 23.—Crossed this horse pass. Fine views over the Amugo group. From the grass slopes on the N. side and below the pass, the Tebulos Massiv is seen, towering over an intervening deep cut full of wood. Rain with thunderstorm. Had to wait. In the evening it cleared up. Camp near some huts, where in the summer large herds of cattle are driven.

July 24.—Descending to the Kharokis-zkhali. The Parsma men returned from the huts of a small hamlet in this valley. The Tushin only reluctantly followed so far, fearing the Khevsurs, among whom the party now arrived. Greatest difficulty to get, after hours' wrangling, one horse and a few men as far as Shatil. No possibility to get men to carry loads to a camping-place at the head of the Uroshevi valley, from which it was intended to climb Tebulos. The party had to give up most reluctantly this splendid-looking ascent. At night Shatil in the Argun valley was reached, entering again the same river system which had been left a few days previously.

The morning of the next day (July 25) was rainy, and employed in photographing this most interesting place. Great difficulty to settle the route to be followed in the planned exploration of the Khevsurian Alps. No notes exist in Caucasian literature, and Dr. Radde says that no European traveller has ever crossed these wild mountain recesses. In the afternoon the party started, following magnificent gorges, which, for the ever-varying aspect of the mountain-sides, for the gracious outlines of the ridges, for luxurious vegetation, mighty woods, and the abundance of water, form without doubt the most splendid defile of the Caucasus. Turned to the right to Guro, where the night was passed.

Anatoris Gele * (about 10,000 ft.).—No way from Guro known to the natives over the mountains in the western direction. Returned again to the main valley, following it high up, and entering the dreary, stony side valley of the Kistanis chale.† Crossed

* Gele = pass. † Chale = river.

the pass at 6.30 P.M. Camped a few minutes below on the other side. Rain began to fall, and lasted all the night with a strong storm. In the afternoon, as the weather cleared up, a fine view over the Tebulos group, the Amugo mountains, and the southern chains, opened from the height of the pass. The mountains in the W. remained overclouded, only an Ushba-like mountain showed his head for a few moments—a beautiful apparition. Late in the night the village of Zinkhadu was reached and the tent pitched. It is out of the question to enter the holes of Khevsur people, which are much dirtier than the huts of the dwellers in the Central Caucasus; compared to them, for instance, the guest-house of the tall chief of Besinghi, of classical fame, looks like a palace.

KALATONIS GELE (10,175 ft.).—On July 28 the party crossed this pass (snowless, like the Anatoris gele), descended to the Kalotanis-zkhali and entered the Arkhotis-zkhali valley. After the party had passed through the villages of Amga, Akhiel, and Chemga, a high camp was pitched near the sources of the Chemgis-zkhali.

SHIBU GELE (11,212 ft.). *July* 29.—The Shatil men left in the night. They came so far, as nobody could have been procured at Amga or Akhiel, but on the promise that the Starshina would arrive at night with his people. Struggle to get off. Sent down the interpreter. Left at about midday. Crossed the pass late in the day amidst clouds. In the descent remarked that the scenery, which during the last days had been very dull, with no glaciers and small peaks, resumes a greater scale. Camp an hour below the pass, on the slopes falling to the Shanchach valley.

The following morning returned towards the pass to photograph. On this side is a fine glacier, guarded by a broad snow peak, Selis Mta. Shan peak (14,534 ft.) is probably the rocky peak in the chain opposite, rising as a very steep wall from the stony, narrow valley at our feet. No peak was attempted in the Khevsurian Alps, not even the Shan, the highest, although its ascent was on the programme. Mr. de Déchy pressed forwards to succeed with the still good weather in ascending Kasbek, his first aim on this journey.

INKVARI (?) PASS (about 11,200 ft.).—The party did not descend to the bottom of the valley, but crossed over to a glacier-filled gap, which opened at the head of it. They wished to cross over to the Kistinka valley, but great uncertainty reigned about the direction in which to go, and when the pass was already reached, about the locality, which was difficult to identify with the map. The party followed in descending steep grassy slopes, and only discovered when reaching the main valley, which comes from the S., that they were in the valley of the black Aragwa. It was 10 P.M. on July 30—after a very long day—when the travellers arrived at the Kasbek station on the Grusinskaja doroga.

ASCENT OF KASBEK (16,545 ft.).—Without stopping at the Kasbek station, the first place of civilisation and the first bed after three weeks' camping out and continuous travelling, the party left next

morning, and going straight on to the Ortzveri glacier, determined to reach a point, on the south side of this glacier, where the slopes begin to rise to a rock wall. (This was wrong altogether, as the right direction for an ascent by the Ortzveri glacier is to camp on its right side, where Freshfield also passed the night. But unhappily no notes of the former ascents of the mountain were at hand.) The porters, tur-hunters of the country, left the party on the glacier, declining, apparently, to traverse a short frozen slope, and the travellers had to carry all the loads, again descending and ascending to the camping-place. The weather not permitting the ascent next day, it was made on August 2, although, in the morning, the prospects were very uncertain. But, as the party was left alone, the wood was nearly burnt, and provisions running short, a longer stay would have been somewhat difficult; besides, there was the fear of coming new snow, and of losing the mountain altogether. The travellers started at 5 A.M. from the sleeping-place, which was cut off from the glacier by precipices; first the ridge had to be mounted, then by slopes a descent to the glacier was made, and this crossed to the ice-wall, which lies under the saddle between the two peaks. Snow was higher up in bad order. The crossing of the bergschrund was somewhat troublesome. The route followed seems to have been from the foot of the ice-wall between the two peaks, exactly the same as that taken in the first ascent, 1868, by Mr. Freshfield and his companions. The ascent by this route is no easy one, and demands travellers of Alpine experience. It should, indeed, be plainly stated that, at least on this side, ascents by natives or inexperienced travellers can hardly be taken as possible. The ascent took 8 hrs. The fatigue of the ascent and the effect of the high air were severely felt. The state of the weather may partly account for this. On the top a snowstorm began. In the descent, shortly after leaving the top, the traces were lost, the travellers failed to find the line of route, and the situation became very critical. The cold, which at the time of reaching the top was already $-4°$ Cels., became intense. The storm raged, the travellers could not hear their own voices; frozen snow fell, and the clouds were so thick that steps, even a few feet away, could not be seen. A great rock on the saddle proved at last that the right direction was found. From leaving the moraine under the ice-wall, till returning to it, in all more than 8 hrs., no rest was taken, no food eaten. Nobody was at the tent. Next morning, August 3, six men arrived; they had been sent from the Kasbek station, as there was some anxiety felt as to the party's safety, as they had been left alone for days in such bad weather. After a tremendous storm, which lasted all the night, the sky was clear in the morning and the natives could clearly see with our field-glass part of traces on the ice-wall, and the steps along the highest arête leading up to the highest peak. Vladikafkas was reached the same evening.

A large series of photographs were taken, and botanical and geological collections made.

As already stated, the scenery in the Khevsurian Alps is mono-

tonous, the valleys stony, the peaks comparatively insignificant, the glaciers small, and the snow cover in general, despite the great height of the ridges, very unimportant. To the mountain world E. of the beautiful Shatil gorges, too high praise cannot be given. The rich vegetation, the wood and water in the deeper valleys, the ever-varying configuration of the mountain-sides, the green of the meadows and the woods, which reach up to the pure white snows of the glaciers in the side valleys, and over them the long line of finely shaped, ice-covered peaks, compose landscapes of great beauty.

CANADIAN ROCKY MOUNTAINS.

Mount Lefroy (*c.* 11,400 ft.).—On August 3 this peak was climbed by three parties: (1) Messrs. Fay, Dixon, and Sarbach (Swiss guide from St. Niklaus); (2) Messrs. Michael, Van Dulip, and Noyes; (3) Messrs. Thompson, Parker, and Collie. The start was made from the chalet at Lake Louise; the glacier coming down between Mount Lefroy and Mount Victoria was followed to the col lying between the two peaks, then turning to the left between 1,500 and 2,000 ft. of steep snow and ice, interspersed with rock, had to be surmounted before the top was reached.

Mount Victoria (*c.* 11,500 ft.).—On August 4 a party of four, Messrs. Fay, Michael, Collie, and Sarbach, succeeded in reaching the top of this peak by a somewhat long climb on the ridge which stretches from the col mentioned above.

On August 7 the party was joined by Mr. G. P. Baker, and proceeded up the Bow valley, camping about a mile below the lower Bow lake. From this point they had intended to explore the large snow fields lying in the centre of the Waputtehk range, and, if possible, climb Mount Balfour (the Mount Daly of Wilcox), reputed to be the highest summit of the group. The weather, however, proved unfavourable, so the camp was moved further up the valley to the shores of the upper Bow lake.

Mount Aberdeen (*c.* 11,100 ft.).—From here on August 10 this double-headed snow peak was ascended. It lies about 3 to 4 miles north of Mount Balfour, and is on the continental divide. From the summit an extensive view was obtained, and several higher peaks were seen about 30 to 40 miles to the N.W. The party then returned to the lower Bow lake, intending to ascend Mount Balfour from that point, but the weather being unsuitable, all that could be accomplished was the exploration of the snow and ice fields that lay at the head of the lower Bow lake. The party afterwards returned to Banff.

On August 17 Messrs. Baker, Collie, and Sarbach, having made arrangements for an extended tour of about 4 weeks in the mountains, started with the intention of exploring the district that had been seen 30 to 40 miles north-westward of Mount Aberdeen. On August 20 they ascended a rock peak on the west side of the pass leading north from the head of the Bow valley into the Little Fork of the Saskatchewan river. On the summit a fossil trilobite was

found. Continuing their journey northwards, the Saskatchewan was reached on the 23rd; this river was followed up in a S.W. direction.

Mount Sarbach (*c.* 11,100 ft.).—On the 25th this most northerly peak in the Waputtehk range was climbed by the party. From the summit the highest of those peaks seen from Mount Aberdeen on August 10 was found to be about 8 to 10 miles distant in a W. direction. The camp was therefore moved on the following day as near as possible to the base of this peak (probably the Mount Forbes of Hector and Palliser) (*c.* 14,000 ft.). Up to this date the weather had been perfect, but on the 27th a change for the worse began, rendering climbing on the high peaks impossible. However, whilst waiting for the snow to melt off the precipices of Mount Forbes, on August 30 a lateral valley coming from the south-west was explored. At its head a large ice-field (Freshfield glacier) was discovered surrounded by snow peaks. An attempt was made to climb one of these (Mount Freshfield, *c.* 12,000 ft.), but owing to want of time the party was unsuccessful. From the highest point reached (*c.* 10,000 ft.) a very high peak (*c.* 15,000 ft.) was seen lying 30 miles away in a N.W. direction. Probably this was either Mount Brown or Mount Hooker.* On September 1 an attempt to push a camp up Mount Forbes was unsuccessful, and rain, snow, and wind finally drove the party off the lower slopes of the mountain. The camp was then moved S.W. across the continental divide into the Bleaberry Creek. On September 3 an ascent was made on the westerly side of this valley, in order to ascertain whether it was possible to force a route through the mountains separating the Bleaberry Creek from the north branch of the Kicking Horse valley. This was rendered necessary because the fallen timber lower down the Bleaberry Creek absolutely prevented the horses from proceeding further, and the only outlet from the mountains lay down the north branch of the Kicking Horse valley to Field on the Canadian Pacific Railway. A depression in the mountains to the south was seen, and three days later on September 6 the party camped at the head of this new pass (*c.* 6,700 ft.). On the night of the 6th snow fell heavily in camp. On September 9 Baker and Sarbach ascended Mount Field from the W. The party reached Field on the railway on September 9.

During the first week in the Bow valley Mr. Parker carried out a plane table survey of the Balfour group. This survey was continued by Mr. G. P. Baker during the next four weeks. J. N. C.

---

* Cp. *Alpine Journal*, vol. xvii.