

up, but Burgener, having hurt his leg, was unable to do so. We now found that we had lost ice-axes, sacks, hats, and other trifles, but our rope was still whole. With this we tied Burgener's legs together and slid him down the snow to within 50 yds. of the hut. Here Jossi and I left Burgener and went to the hut for help. Luckily we found three young Englishmen, with a guide named Baumann, who had arrived there after a tour on the glacier. They carried Burgener into the hut, and the guide then went to Grindelwald for assistance, reaching it in an incredibly short time. The Englishmen stayed with us in the hut, and rendered us every kind of help. A doctor was soon brought to the spot, accompanied by about twenty guides, who at 4 o'clock next morning carried all three of us to Grindelwald, which we reached at 9.

'Our injuries were slight. Burgener had his knee badly strained and a sore back, Jossi had a cut on his forehead and also a sore back, and my hurts were only in the back.

'This short account may, I hope, serve as a warning to other climbers who meditate the ascent of the Schreckhorn. It is quite easy to avoid the dangerous couloir, either by going on the rocks to the side, which reduces the danger to about two minutes, or even better by joining the Strahlegg route, which is longer but does away with all danger.'

NEW EXPEDITIONS IN 1899.

Dauphiné.

BRÈCHE CORDIER (8,420 m. = 11,221 ft.). *July 22.*—Messrs. E. H. F. Bradby and W. A. Wills, with Ulrich Almer, crossed this col from the Chalets de l'Alpe to Ailefroide. Leaving the Refuge de l'Alpe at 4.80 A.M., they reached the bergschrund at the top of the Arsine glacier and at the foot of the N. side of the Brèche at 6.30. They crossed this without difficulty to the rocks on the W. side of the couloir leading up to the Brèche. After breakfasting just above the bergschrund (7.30-8.5) they climbed by these rocks, which were somewhat difficult and very loose, the whole way to the col, with the exception of one short traverse into the couloir about two-thirds of the way up. By ascending the couloir itself for 20 ft. they were enabled to turn a difficult, if not impossible, portion of the W. rocks, which were again followed to within 200 ft. of the col itself. For this last 200 ft. the couloir, which was here safe and easy, was followed. On Brèche Cordier, 11-12. From here the easy snow slopes on the S. side were descended to the Glacier Blanc. A point on the glacier opposite the Tuckett hut was reached at 1, and Ailefroide at 8.5. This col had been previously reached by Monsieur P. Engelbach from the S. on July 24, 1887.* Monsieur J. Maître, with Pierre Estienne and Joseph Rodier, on August 23, 1886,† when attempting to follow the ridge from the Pic du Glacier Blanc, which they had ascended

* *Alpine Journal*, vol. xiii. p. 404. † *Annuaire du C. A. F.*, 1886, p. 689.

from the S., to the Pic de Neige Cordier, were caught by bad weather, and determined to descend to the Arsine glacier. They therefore traversed from the N. side of the Pic du Glacier Blanc into the N. couloir of the Brèche, reaching it about 100 ft. below the col, and descended almost the whole distance to the glacier by the couloir itself. This they were enabled to do by the favourable condition of the snow, whereas the rocks were covered with fresh snow and ice, and looked very undesirable. But under ordinary circumstances there is no question that the best and only safe route is by the rocks on the W. side of the main couloir. It is an interesting and at the same time direct route from the Refuge de l'Alpe to Ailefroide.

POINTE DE BALME ROUSSE (10,578 ft.).—On July 9 Messrs. E. H. F. Bradby and C. Wilson, with Ulrich Almer, ascended this peak (previously climbed only from the S.E.) by way of the W. arête. Leaving La Bérarde at 4.15 A.M. the steep buttress forming the S. bank of the Vera Pervoz gorge was ascended, the shoulder of the W. arête being reached at 7.30, and the summit at 10.15. The upper part of the arête afforded some pleasant scrambling.

CRÊTE DE LA VERA PERVOZ (about 10,900 ft.).—This name is suggested for the jagged rock ridge which runs from the Pointe de Balme Rousse in a northerly direction (N.N.E.) towards the Flambeau des Ecrins, thus separating the Vera Pervoz glen from the Vallon de la Pilatte. The ridge is clearly marked on the Duhamel map, where the summits—some distance from each other—are indicated by red dots. In reality there are three summits, all quite near together (the two northern ones being so close as to suggest the name 'twins'), and all of about equal height. The central and southern summits were climbed, on July 9, by the above-named party after leaving the top of the Pointe de Balme Rousse. The col was reached in 15 min., and the sky line of the ridge was followed for about an hour, when a détour on to the S.E. face was made, and the arête regained above some difficulties which looked formidable. The southern summit was reached at one o'clock, and the central one (S. twin) at 1.30. It was thought too late in the day to attempt the traverse of the northern portion of the ridge, so the northern summit was left unclimbed, and a way found down the rocks towards the Flambeau bay of the Vallon de la Pilatte Glacier, the Carrelet hut being reached at 4 P.M. With plenty of time it might be found possible to adhere more closely to the S. arête, and to complete the traverse of this very fine ridge.

Eastern Graians.

TÊTE DE LA TRIBULATION (11,949 ft.).—On July 18 Messrs. Alfred Holmes and J. J. and W. A. Brigg, with a porter from Balme, ascended the Tête de la Tribulation by good but steep rocks from the depression between the Becca di Noaschetta and the Tête de la Tribulation in 1 hr. 35 min. actual climbing. From the summit they descended to the Col de la Lune by the sharp snowy S.W. ridge in 20 min. Both routes new.

Mont Blanc District.

AIGUILLE DES GRANDS CHARMOZ (11,298 ft.) FROM THE MER DE GLACE. *July 19.*—Mr. A. B. Thorold, with the guides Joseph Pollinger and Rudolf Lochmatter, of St. Nicholas, left the Montenvers hotel at 8 A.M., and, mounting the grass slopes under the Trélaporte, went straight up the Trélaporte Glacier to the bergschrund, which they crossed on the extreme right, and then traversed the glacier to the rocks on the extreme left. Bearing slightly to the left up these rocks to a corner, the party ascended, always to the left, to a second corner, and traversed some slabs into a rock chimney, up which they climbed. Traversing to the left into a snow couloir, they mounted by the rocks in the centre of this couloir, and, turning sharply to the right, came to a very difficult overhanging chimney. This chimney, though only some 20 ft. in height, took $\frac{3}{4}$ hr. to negotiate, and was the one doubtful point in the expedition, as it can be seen neither from the Mer de Glace nor from the summit. The remainder of the route up to the arête is comparatively easy, the highest peak being slightly on the left. Owing to falling stones the whole ascent is dangerous, the party having had a narrow escape when within 150 ft. of the arête. The descent was made by the ordinary route. Time from Montenvers to the summit, 10 $\frac{1}{2}$ hrs., including halts.

Central Pennines.

ASCENT OF THE GREAT GENDARME ON N. ARÊTE OF THE WEISSHORN.—On Saturday, August 26, a party consisting of Mr. A. G. Cooke, with the guides Benjamin Rouvinez and Louis Theytay, of Zinal, started at 4 A.M. from a bivouac on the Col de Tracuit to find a route to this prominent point. After ascending the steep snow slope to the arête an attempt was made to pass the four minor gendarmes on the E. face of the mountain. This face, however, proved exceedingly unpleasant, and even dangerous, owing to the looseness of the rocks, so that it was found advisable to re-ascend to the arête after passing the second gendarme. On reaching the Great Gendarme it became evident that this could be easily turned on the eastern face, all difficulty in the route to the summit by the N. arête having been passed. The gendarme itself then afforded a most interesting piece of rockwork, the ascent being made by a crack on the E. face. The highest point was reached at 10 A.M. (5 hrs.' actual walking). Thence it appeared that a most interesting descent could be made—had not baggage and ice-axes been left below—by the minor arête direct to the glacier and Arpitetta Alp. In returning the arête was adhered to closely over the four minor gendarmes, affording capital sport and far less danger than the face. The descent to the Col de Tracuit was effected in about 3 hrs. Herr H. Biehly traversed this gendarme September 21, 1898, when ascending N. ridge of Weisshorn, but does not seem to have climbed the very last tip of rock.*

* *Jahrbuch S.A.C.*, vol. xxiv. pp. 76-90.

Bernese Oberland.

DREIECKJOCH (*circa* 11,000 ft.). **FROM THE GROSSER ALETSCHE GLACIER TO THE MITTEL ALETSCHE GLACIER.** *August 18.*—Mr. G. Yeld, with Sylvain Pession, of Val Tournanche, effected this new expedition. They left the Eggishorn Hotel by the Märjelen See path at 3.5 A.M. in thick mist, and in about 2 hrs. 45 min. actual walking reached the other side of the Grosser Aletsch Glacier about 6.35. They then traversed the slopes of the Olmenhorn to the glacier whose northern arm runs up to point 3,648 m. of the Siegfried map, and eventually reached the ridge, considerably to the S. of peak 3,648 m., and afterwards a little peak to the N. of the place where the ridge was struck. No difficulties worth mention were met with on the way up, but the lower part of the route taken would be dangerous from falling stones late in the morning. The descent on the Mittel Aletsch side was, to begin with, quite easy, but less than two-thirds of the way down the promontory of rock by which the party were descending was found to be quite impracticable, and they had to reascend, so as to turn the head of the deep gully between them and the next promontory to the S. This bit proved rather difficult, but not impossible, and after a severe climb the party gained the Mittel Aletsch Glacier. They returned to the Eggishorn by the Märjelen See path.

FUSSHÖRNER. *July 31.*—Messrs. G. A. Solly and J. Maclay, starting from the Bel Alp Hotel, made the first ascent of the peak on the ridge of the Fusshörner group which lies immediately to the south of the point marked 3,628 m. on the Siegfried map. The party climbed first from the Ober Aletsch Glacier to the gap at the foot of the S. arête of peak 3,628 m., and then, having climbed to the next point south of the col, followed the crest of the ridge until it began to descend again sharply towards the next big gap. From the col the climb is very steep, but the hand-holds are good. On the summit ridge there are four small points of nearly equal height, and from the fourth of these a ridge descends westwards towards the snow field above the glacier. This ridge was followed in the descent as far as practicable, but in places it was very steep and difficult, and the party had to traverse more than once into and out of the gullies on either side. The last pitch of the ridge seemed impossible, and the snow was gained by the gully on the north. From the glacier to the gap took about 3 hrs., many steps having to be cut in hard snow. From the col to the fourth point on the ridge, 1 hr. 40 min., including time spent in erecting cairns; and from the fourth point to the snow, over 3 hrs. The four points are well shown on Dr. Tempest Anderson's photograph.* The point seen on the right of peak 3,628 in the photograph is not on the ridge of the Fusshörner at all, but further back, and on the right of that are the points climbed. The most northerly of the four points is the highest, and it is higher than any other point south

* *Alpine Journal*, vol. xix. p. 316.

of it. The cliffs on the east are¹ exceedingly steep, and it was easy to throw stones from the summit on to the Triest Glacier. Cliffs run along the side of the Ober Aletsch Glacier for a considerable distance, but a perfectly simple way of getting up is to be found about half a mile to the N. of a small waterfall over which the snow from the upper slopes is discharged on the side of the glacier, judging by the large patch of snow lying there. This point is shown on the left of Dr. Anderson's photograph.

HINTER SUSTENHORN (8,320 m. = 10,898 ft.). *August 21.*—Rev. W. C. Compton and Mr. A. V. Valentine-Richards, with Abraham Müller and Siegfried Burgener, made the first ascent of the Hinter Sustenhorn from Stein (it having been previously climbed only from the Voralpthal). Starting at 3.40, they traversed the lower part of the Bockberg, and crossed the Stein Glacier between the two icefalls, reaching the bergschrund at the foot of the smaller and more southerly of two snow couloirs in the W. face of the Hinter Sustenhorn in 1 hr. 55 min. They went up this, crossed into the larger couloir, and by the rocks on its S. side gained the lowest of three conspicuous snow bands at 7.15. They cut straight up this and the one above, and traversing to their left round the third made directly for the summit up ribs of excellent rock, till they came to a couloir which soon led to the S. arête, at a gap some 10 min. below the summit, which was reached at 9.10. Time (exclusive of halts), 5 hrs.

They left the top at 10.15, regained the gap, and then descended to turn the many great teeth on the S. arête by a traverse on the W. face over rotten and not easy rocks till they reached the lowest point on the arête at 11.55. Thence the easy ridge was followed over point 3,840 m. to the summit of the Sustenhorn in 1 hr. 20 min. The descent was made by the ordinary route to Stein.

STÜCKLISTOCK BY THE W. ARÊTE (8,809 m. = 10,857 ft.). *August 28.*—The same party left Stein at 3, crossed the Susten Pass, and reached the Sustenjoch in 3 hrs. 40 min. They followed the easy ridge to the E., and crossed the snow field on the N.W. face of the Stücklistock in $\frac{1}{2}$ hr. to the foot of the icefall of the upper glacier. They passed this close under the rocks of the W. arête in $\frac{1}{2}$ hr., climbed these rocks in 55 min. to the foot of the final cone, and reached the summit by the W. arête and N.W. face at 10.10. Time (exclusive of halts), $6\frac{1}{2}$ hrs. The final rocks are steep, but not always sound. The descent was made by the ordinary route to the Voralpthal Club hut and Göschenen.

In the book at the hut was found a notice of a descent of the Stücklistock by the W. side to the Sustenjoch made by two Swiss gentlemen a month previously, but it is not certain how far their route coincides with that described above.

GROSSHORN (8,765 m. = 12,352 ft.).—On August 26 the Rev. P. Mordaunt Barnard and a friend, with Theodor Kalbermatten, of Ried, traversed the Grosshorn by a route of which part is believed to be new. Starting from a bivouac on the Heimischeggen at 4.30 A.M., the ordinary way to the Schmadrijoch over the

Jägifirn was followed for about 4 hrs. A turn was then made to the N.E., with the intention of reaching a prominent gendarme on a snow saddle to the W. of the rocks of the Grosshorn. A line somewhat too much to the left was taken, and a traverse had to be made across a steep ice couloir directly below the above-mentioned gendarme, and the rocks were reached about 200 ft. below the snow saddle. An obvious rock couloir proving impracticable, owing to the overhanging rocks, a way up was found between it and a snow couloir a little distance to the S.E. After passing up a steep ice slope and working up the arête the summit was reached at 3 P.M. On the descent the usual way along the S. arête was followed as far as the point where there is a distinct dip; thence the party descended over rocks and through a snow couloir on to the Anenfirn, and, passing round the Jägi-knubel, returned to Ried, reaching the hôtel at 10.30 P.M. The great length of time taken was due to the badly crevassed condition of the Jägifirn, and to the fact that the upper slopes of the mountain were mostly ice.

SCHRECKHORNSATTEL (BETWEEN THE SCHRECKHORN AND LAUTERAARHORN).—On September 20 Mr. Gerald Arbuthnot, with Christian Jossi, used the above as a pass from the Lauteraar Firn to the Obereismeer. Leaving the Gleckstein hut at 11.15 P.M. on September 19, they crossed the Lauteraar Joch, and after descending some 20 min. below the col worked their way across the Lauteraar Firn in a S.W. direction to the foot of a broad ice couloir which leads up to the Schreckhornsattel (10 hrs. 5 min.) After passing the bergschrund at a point somewhat to the north of the couloir they ascended an ice slope to the rib of rock which bounds the couloir on its northern side (2 hrs. 10 min.). They followed this, making occasional use of the couloir itself, until a point was reached above the strip of hanging glacier near the top of the couloir (3 hrs. 30 min.). An upward traverse was then made across the final slope of ice to the col (3 hrs. 30 min.). The party descended by the route to the sattel generally used in ascending the Schreckhorn, and reached the Schwarzegg hut at 9.45 P.M.

Dolomites.

COL ROSA (2,162 m.). *June 24.*—The first ascent by the S. face was made by Mr. R. Corry, accompanied by Antonio Dimai and Zaccaria Pompanin. A deep gully divides the S. face on the right-hand side. Just above the point where this gully narrows the party ascended easy rocks to the Einstieg (about 2½ hrs. from Cortina). From this point they ascended, bearing slightly to the left, until a wide ledge was reached about 700 ft. above the Einstieg (3½ hrs.). The climbing was continuously difficult up to this point. The last two pitches below the ledge are both over 120 ft. high, and 280 ft. of rope is required for a party of three.

Traversing the ledge to the left, the party climbed to the top in 1 hr.

Pompanin, who had invented the above 'problem,' and made

two previous attempts by a line more to the left, led throughout the climb.

The descent can be made by the deep gully.

CRISTALLO (8,199 m. = 10,496 ft.) BY THE S. ARÊTE.—Mr. J. S. Phillimore, with Antonio Dimai and Agostino Verzi, made this expedition on August 19. Leaving Tre Croci at 6.30, you follow the ordinary path for $\frac{1}{2}$ hr., then diverge left across the grassy top of the lowest bastion of the arête; from here 1 hr. 20 min. unimportant scrambling (always on the S.W. flank of the ridge) to the Cut—a clean break, easily recognised from Cortina or the Tre Croci road. Here follows a stiff piece of vertical face; then successive ledges and faces lead to the *Cengia Prima* (9.45); then, after a slight bend (r.), a chimney of great merit, undercut, oblique, smooth, and tight (10.15). You touch the old route 10 min. below the top, at the *Bastone del Ploner* (10.45). Top, 11.15–11.40. Tre Croci was regained in 1 hr. 25 min., of which 25 min. rest. Total time out, 6 hrs. 35 min., going fairly fast. The climb resembles the corresponding way up the Piz Popena, but is a good deal more difficult.

POMAGAGNON (2,440 m.) BY THE S. FACE.—This climb was suggested by this year's pleasant invention on the Col Rosà. The same party as for the Cristallo left Cortina at 6.10 on August 21, and took the rocks at 7.35 right at the base, E. of the mouth of the big grava. The climb is distinctly mapped out in partitions by the great ledges: the first ledge was gained at 8, after difficult face work, a minor one passed at 8.15, and the second reached at 9.10. Here you are at the foot of what looks from the Tre Croci road like a large and promising chimney; it is not—you keep mostly outside it (r.), with some crack-work. The second ledge is thick with *Pinus Mugus*; it is troublesome forcing yourself along between the bushes and the bulging upper lip of rock. Third ledge, 10.10 (20 min. halt included); this they followed r. to the *spigolo*. After a few paces descent along the ledge still further r. the way turns straight up the face again. They agreed to describe the next bit as extremely hard; you begin by working up the overhanging upper lip, then force yourself up a yellow and malevolent crack—at one point a *Mugus* is a godsend. The three took 55 min. over 120 ft. Shortly after the difficulty moderates. Fourth ledge, 11.50; from here $\frac{3}{4}$ hr.'s pleasant work to the top, 12.35 (including 10 min. halt).

Descent in 1 hr. 10 min. to Ospitale. The expedition may be compared with the Col Rosà and the Catinaccio by the E. face; it gave 5 hrs.' face-climbing of almost continuously first-class interest. It should be taken fairly from the bottom; the variation made by Herr Wolf von Glanvell next day omits half the difficulty and interest.

CRODA DA LAGO (SOUTHERN POINTS). August 24.—The same party left Cortina at 5.5, reached Alp Federa at 6.35, and the upper alp at 7. The plan (formed on the Becco di Mezzodi the week before) was to follow the Croda's crest from S. to N. Leaving at

7.10, up the big screes in the middle of the face, and bearing southwards over easy rocks, grass bands, and a small snow couloir (halt 7.35-7.45), they got to a forcella at 8.15 which exactly frames the Pelmo between its walls. Kletter shoes were put on here, and they started roped at 8.25. From here in a general W.N.W. direction to a ledge (8.45), whence you look clean down on the left into a cleft which divides the last S.W. outlier of the range; 9.3-9.18 an agreeable chimney with a blockstone, and after a few more easy ones a 100-ft. stretch of remarkably exacting and awkward ascent. It strongly reminds you of the Winkler Turm. All up, 10.15. Next up the knife-edge, a traverse along of 30 paces above Federa, another chimney running W.N.W., and the top was touched at 10.20.

This point had been christened Punta Adi by its first (and hitherto only) climber. The S. way is new, and the hardest bit in the Croda group.

The top was left 11.20, the descent made in a N. direction. Gaining the saddle (between Punta Adi and the next pinnacle) 11.35, they made a traverse of $\frac{1}{2}$ hr. above Federa. At 12.23, on rounding the corner of Point Two, they saw Point Three was impossible—a clean leaf of rock below—though the two approach so near that an 8-ft. bridge would span the distance, and there are good ledges to support it at each end.

Top Two at 12.30. No cards were found, but the symbol *mfx* painted in red on the rock: doubtless 'Michel Innerkofler, his mark,' made in 1884. It is suggested to distinguish this point as Campanile di Federa. As Point Three (next the Croda proper) bore a cairn, and was impossible to traverse, there was nothing for it but to go back and abandon the plan of a grand traverse of the whole Croda system. The face climb wanted great care to descend; they regained the level of the long traverse in 35 min., and, traversing again N., fell in with the Croda path at 2.15. Verzi fetched the boots, and the scree forcella was left at 3; Cortina reached, 4.20. Anyone who does not mind an inglorious day of excellent climbing may do worse than climb these two needles. The points can only be seen in profile from Federa or S. of Acquabuona on the road. Total time out, 11½ hrs.

Verzi led on these three occasions, and led admirably. The expeditions will be more fully described in the 'Rivista Mensile' of the C.A.I.

CAMPANILE DI CASTROZZA, CAMPANILE DI VAL DI RODA, AND CIMA DI VAL DI RODA. August 29.—Mr. Phillimore, with Michele Bettenga, made the first traverse of the second of these points direct from the forcella which unites it with the first. This completes a very fine expedition if you take the Campanile di Castrozza by the enormous chimney from Val di Roda. Times: S. Martino, 4.30; on rope, 6.30; top of C. di C., 8.50-8.58; forcella, 9.15; top of Campanile di V. di R., 10-10.8; forcella, 10.28; top of Cima di V. di R., 10.43-11.45; S. Martino, 1.15. The new bit contains one serious place. The whole climb is about the best rock-work at S. Martino. Total time, 8¾ hrs.

NORWAY.

Erisfjord District.

SKJØDØLA (5,610 ft.).—This peak was reputed locally to have been climbed by one man only, a native of Meringdal, who built a cairn on each of the two summits.

Mr. Victor H. Gatty, accompanied by Ed. Haande, of Osen (who has a good knowledge of the district, gained chiefly in reindeer hunting), left Osen on July 14, at 5.52, and rowed across to the W. bank of the Eikisdalsvand, left the shore at 6.15, and followed the usual route across to Grövdal, past the Honne sæters as far as the head of the lake which lies at the N.W. foot of Nebba, at a height of 2,600 ft. This lake was still frozen over, and partly choked up by the remains of a big snow avalanche. From here the way lay S. up a snow couloir W. of Nebba, then E. by steep snow slopes up to the glacier at the head of which stands the Nyhetind.

This peak was first ascended by the left side of the glacier and easy rocks in 8 hrs. from the frozen lake. They left the top at 12.20, descended N.E., and followed the right side of the glacier down to where the upper slopes of Skjødøla become accessible by a short and steep pitch of rock and *débris* leading to snow and *débris* slopes above. Reached S.W. summit at 2 P.M., left at 2.45, and followed the ridge to the N.E. point in 20 min. This point proved to be the higher by 25 ft.

They left the summit at 3.20, and crossed the glacier to the left side (by which alone it is readily accessible). Here the upward route was rejoined, and the shore of the Eikisdalsvand regained at 6.15 P.M.

LILLE SKJORTA (5,000 ft.).—This is the finely shaped peak conspicuous from Nöste over the right-hand shoulder of Skjorta. The first ascent was made by the above party on July 17.

They left Nöste at 5.27 A.M., lost some time through mistaking the way in ascending the thickly wooded Kvidal, and reached the foot of the small snow field which lies between the Skjorta and Lille Skjorta at 9.20, at a height of 3,000 ft. From here the way lay E. up the snow field, and then S. up steep snow, to a col (4,650 ft.) in 2½ hrs. from the foot of the snow field (including 1 hour's halt). From the col spring two peaks—E. a nameless peak, W. Lille Skjorta. The top of the latter was reached by an easy but narrow rock ridge in 20 min. more, and an hour or more spent in erecting a 7-ft. cairn which is visible through a glass from Nöste.

They returned to the col at 1.12, and reached the top of the E. peak by steep *débris* and snow patches on the S. side at 1.40. This peak proved to be the higher by 200 ft., and a few stones heaped together indicated a previous ascent, perhaps by a reindeer hunter, as it is easier from the S. A thick mist necessitated a return by the upward route. They left the top at 3.25, and reached the foot of the snowfield at 4.30, and Nöste at 6.45 P.M.

FLØTATIND (5,425 ft.).—The first ascent was made by the same party on July 19. They left Osen at 5.48 A.M., rowed across to the E. side of the lake, left the shore at 6.10, and ascended the steep track

which leads to the Ljøsebotn sæters in 1 hr. 10 min., and followed up the stream eastwards for 1 hr. 20 min. more to near where it issues from the (then frozen) lake of the same name, which lies at a height of 3,200 ft., in a snow-filled valley E. of the northern outlier of the Fløtatind. From here the way lay S. for $\frac{1}{2}$ hr. round the snow slopes above the valley to the foot of the Storbær, which covers the whole of the E. face of the mountain, and terminates above a rock wall overhanging the valley. This wall was climbed in 20 min. by means of a moss-grown buttress, and the glacier reached at a height of 4,000 ft. at 10 A.M.

From this point the way lay up the right (S.) side of the glacier, previous observation (from Lille Skjorta) having shown the left side to be crevassed and broken into large schrunds below the summit. Snow slopes, steep at first and again near the top, lead without difficulty to the long ridge of rock pinnacles which fringes the upper edge of the glacier and forms the summit. They reached the highest point at 11.22, and built a large cairn. Left the summit at 1.50, and descended the S. side of the glacier to the E. spur of the mountain, which forms the southern watershed of the Ljøsebotn valley, and thence reached the valley at 2.55, the sæters at 4.30, and the lake, 1,600 ft. below them, in 37 min. more.

Horungtinder District.

STORE SKAGASTÖLSTIND. ASCENT BY S.W. FACE. *August 28.*—Mr. A. W. Andrews and Dr. O. K. Williamson, with Ola J. Berge, having left the Skagastölshütte at 8.45 A.M., commenced the ascent of the peak by the ordinary route. They left the ordinary route just below the foot of the great couloir on the S.W. face. This couloir divides the S.W. face of the mountain, and is conspicuous from all points of view of the peak taken from this side. They ascended this couloir, the rocks of which were firm with good hand- and foot-hold almost everywhere, but the slope was exceedingly steep, being on the average about 80°.

The first pitch, over 100 ft. in height, led up to a commodious ledge. From here an easy traverse to the left led to the foot of the second pitch. This is not so high as the first, but more difficult, about halfway up it being necessary to take a rather awkward step to the right. From the top of this pitch the slope became decidedly less steep, and without further difficulty the summit was reached at 12.28 P.M. The height of the couloir must be at least 300 ft.

Time, excluding halts, 3 hrs. 20 min., of which 1 hr. was spent in the couloir. The party spent no less than 3 hrs. on the summit ridge, and afterwards descended by Heftye's route.

PASS BETWEEN STORE RIINGSTIND AND SOLEITINDER FROM RIINGSBRÆ TO BERDALSBRÆ. *August 29.*—The same party succeeded in leaving Turtegrö at 9.45 A.M. They ascended the Riingsbræ, and approaching the Store Riingstind ascended the hard snow slopes on the N.E. of that peak to the upper level of a side glacier joining the Riingsbræ from the E. The upper part of these slopes was partly of ice. They halted below the bergschrund

at the foot of the snow slope leading to the pass. They started again at 1.35 p.m. They crossed the bergschrund to the rocks just N. of the snow slope, ascended these for about 50 ft., took to the edge of the snow slope, and so reached a horizontal ridge of snow with rock immediately above it. They walked along this until they reached the main snow slope (hard snow). They ascended by this and by a trough to the N. between it and the rocks, again took to the slope (here ice), which they traversed obliquely to the foot of a rib of loose rocks about 800 ft. above the bergschrund. The angle of the slope was at least 45°. They ascended these evil rocks, great care being necessary; again traversed a tongue of the ice slope to the S., ascended by large easy rocks obliquely to the N., and again bore more to the S. Until they reached the final wall of rock the success of the expedition hung in the balance. This, which was about 100 ft. high, was exceedingly steep, but not difficult, and at 5.15 p.m. the party stepped out on to the ridge just above the skar. Here a cairn was erected. Five min. more took them to the skar itself. Two of the party here discussed the provisions, whilst the third photographed, all enjoying the magnificent view. They then traversed the snow slope to the Ravn skar, descended the Berdalsbræ by glissades, and reached Turtegrö at 9.40 p.m.

This is certainly a first-rate glacier pass, affording great variety, and is the only practicable pass between the Riingsbræ and Berdalsbræ. Time of ascent to skar, 4 hrs. 40 min. (excluding halts) from Riingsbræ, or about 7 hrs. (excluding halts) from Turtegrö. Descent to Turtegrö from Ravn skar occupied 2 hrs. 50 min.

STORE AUSTABOTTIND. DESCENT OF S.W. RIDGE, TRAVERSE OF S.W. PEAK. *August 31.*—The same party left Turtegrö at 6.6 a.m. Leaving the foot of the Berdalsbræ at 9.15 they walked along the N.W. ridge of Austabottind to the N. peak. At the foot of the S. peak they traversed the W. face without great difficulty to a point on the S.W. ridge, just above (N.E. of) the gap at the foot of the S.W. peak (12.25 p.m.). From here they ascended the S.W. ridge directly to the summit ridge of Store Austabottind, the rocks being steep but firm, and affording splendid climbing. Summit reached at 1.5 p.m., in 8½ hrs., excluding halts, from Berdalsbræ. They descended to the point on the S.W. ridge which they had previously reached, by the N.W. ridge and W. face, rejoining the previous route before reaching that point (1.25 p.m.). Left this point at 1.50 p.m., descending by chimneys on S. side of ridge, and so reaching ridge once more at its lowest point. They then scrambled along the easy ridge to the summit of the S.W. peak, 2.28 p.m., where a cairn was erected. They left the summit at 2.50 p.m., in a short time reaching a point where the ridge was cut off by a slightly overhanging drop of about 50 feet in height. This difficulty was turned by a traverse over plaques on the S. side of the ridge. These plaques were not very steep, but for a short distance great care was necessary, as the holds were very small. A

conspicuous gendarme here barred the way. A point just on the further side of the top of this was reached by a long step across a gap just to the N. of it. Shortly after a point was reached where all difficulties ceased, 4.22 P.M. The descent of the ridge from here to the Muradnbrac was made by the most execrable loose stones, Turtegrö being reached at 9 P.M., in 5 hrs. 35 min. (excluding halts) from the top of the S.W. peak. The descent from the S.W. peak is undoubtedly a fine climb; the traverse of the plaques on the S. side of the ridge would be in any but perfect conditions of the rocks very difficult or impossible.

STÖLS-MARADALSTIND. ASCENT BY N. RIDGE. September 4.—The same party left Turtegrö at 10.18 A.M., reached the skar between Midtre and Store Riingstind at 1.20 P.M., and so reached Viking's skar at 1.40 P.M. Leaving this at 2.20 P.M. they proceeded along the ridge to the foot of the N. ridge of Stöls-maradalstind. They ascended the ridge itself by easy rocks with some snow on them for a short distance, then traversed on to the steep W. face, thence by a couloir followed by steep but easy rocks again reached the ridge. From a platform a steep slab, at the top of which the leader had to raise himself on to a block, formed the only real difficulty of the climb. From here broken rocks, then steep rocks with the holds filled with snow, followed again by easy broken rocks, led to the summit, 4.32 P.M. Left summit 4.42 P.M. Descended by ordinary route, Turtegrö being reached *via* the Riingskaret at 9 P.M., about 3½ hrs. (excluding halts) from the summit.

DESCENT FROM COL BETWEEN N. MIDTMARADALSTIND AND S. DYRHONGSTIND TO MIDTMARADALSBRÆ. August 14.—Messrs. A. W. Andrews and A. H. Fox-Strangways, with Ola J. Berge, ascended the N. Midtmaradalstind from the col to its S., and descended to the col mentioned above. From there the descent was made by a very steep couloir of ice and hard snow with an inclination of at least 60° in its upper part. At a point about a third from the top some loose and difficult rocks were followed in order to pass a great crevasse extending completely across the couloir. The couloir was then regained and descent made to an ice bridge over the bergschrund by 20 ft. of very steep and wet rock below the icefall. The couloir is about 300 ft. in height, and took 4 hrs. to descend, great care being necessary, owing to bad weather. On a subsequent occasion (August 24) Mr. A. W. Andrews with Dr. O. K. Williamson and Berge descended directly from the col to the Riingsbræ by rocks resembling those of the W. side of the Col des Maisons Blanches in Switzerland, thus completing the only pass leading directly from the Midtmaradalsbræ to the Riingsbræ.

Justedalsbræ District.

UDSIGTENSKEAR (about 5,500 ft.) August 14.—Messrs. C. W. Patchell, A. B. S. Todd, O. Erik Todd, and Wm. Cecil Slingsby arrived at Sundal Farm very late on August 13 with the intention of trying to make a pass over the snowfield to Erdal on the

following day. The writer had been in Sundal in 1876, and was much struck with the wildness of this remote valley, though the weather then was bad. Up to a few years ago, when the new and excellent mountain road was made from Stryn to Grotlid, which caused a general diversion of the horse and cattle traffic between the W. and E., a large number of Nordfjord horses—occasionally as many as a thousand strong—were annually driven in the early summer through the Sundal and over the Kamphammer Pass, which skirts the left bank of the most northern arm of the Justedalsbræ, and by rough mountain paths to Skiaker, and from thence to Christiania. In case bad weather came on, the horses which grazed at the Sundal sæter at the head of the valley ate the pastures as bare as if they had been visited by a plague of locusts or an army of lemmings, so that their absence nowadays is not regretted. In the year 1868 a snow avalanche carried away one of the houses at Sundal gaard and killed eleven people. Strange though it may appear, another house was built exactly on the same place as the former one.

The obliging host, Absalon, and his wife got up and made the party most comfortable beds on the hay in the barn, called them early next morning, and did everything in their power to help them, Absalon accompanying them almost as far as the sæter. They left the farm at 6.40, reached the sæter at 7.45, and then left the Kamphammer route and followed the southern or longer branch of the valley. The intended route planned on the map was to climb one of the two tongues of glacier, or the rocks which bound them due S. of the sæter. However, a fleeting view of these tongues through the clouds which then enveloped the summits dispelled the illusion that they were suitable highways, so the party turned towards the head of the valley, passed three tarns to the foot of the Sognskarbræ, which they reached at 11.10, and for nearly an hour they climbed up bare ice before reaching the névé. Meanwhile every cloud had vanished, and when, at 12.45, the top of the Sognskar (an old pass) was reached, the view was superb. Far, far beyond the Styggevand and numerous ranges of the hog-back type so common in Norway, were the Horungtinder, and their crowning glory, Skagastölstind,* which, from this distance of sixty or seventy miles, seemed to stand, like a veritable King Saul, head and shoulders above his fellows. The whole range looked very grand indeed. Other peaks in Jotunheim also greeted the party.

They then turned S.W., and at 1.20 climbed up to some sun-warmed rocks, where for an hour and a half they sat and enjoyed the scenery, which was then much enhanced by the addition of a glorious view of the N.E. face of Lodalskaupé,† and the unknown range N.W. of this fine peak. A little over an hour's trudge in excellent snow brought them to the top of the Strynskaupé, where, as they anticipated, they found a cairn. They then turned down

* *Alpine Journal*, vol. xi. p. 114.

† *Ibid.* vol. xiv. p. 507.

the steep northern ridge—certainly a new route—crossed an interesting bergschrund, had a long glissade, and so gained a plateau above the icefall of the Lilledalsbræ, which for 40 min. afforded capital sport, and an intricate route until the valley was reached at 5.45.

At 7.5 a sæter was reached, and a *romme kolle*, or bowl of thick curds, was asked for. Alas! with the advance of science and the introduction of cream-separators, one of the chief luxuries of the sæters is now, in most cases, no longer to be had.

Greidung was reached at 8.30, and the night was spent there. Though many tourists sleep here, there is but little improvement in the accommodation obtainable since the writer first visited it in 1874.

FOSDALSKEAR. *August 15.*—The same party intended to ascend Lodalskaupen this day, and then to traverse the little-known glaciers between Erdal and Loen. The truth is that both their host and they themselves got up too late, and after breakfasting on a concoction of coffee and peas they set off to cross over the mountains to Loen by an exceedingly pretty glacier pass called the Fosdalskear, a pass which is fairly well known to the natives. However, as many another Alpine party has done before elsewhere, and as many another will again, they went wrong, turned up a lateral valley N. instead of one to the E., and came to a sort of no-man's-land up in the clouds. When they found out their mistake they had to make a most interesting traverse of about a mile along narrow rock ledges and across steep snow slopes to a point overlooking the Fosdalsbræ some 500 ft. below. After some hunting about, a steep chimney afforded a welcome route down to the glacier and the proper route.

The top of the pass, which was reached in 5 hrs. from Fosnæs, is plainly seen from the hotel at Hjelle, and is almost overshadowed by the fine mountain Skaala, affords lovely views both E. and W. There is no glacier on the W. side, but steep snow gives capital glissades. The walk down to Loen was very beautiful.

WM. CECIL SLINGSBY.

Söndmøre District.

BREKKETINDSKAR AND S. BRUNSTADHORN.—Messrs. C. W. Patchell, A. B. S. Todd, O. Erik Todd, and Wm. Cecil Slingsby left Øie one cloudy morning at 10 by boat, and arrived at Urke at 11. They walked up the lovely Urkedal, and at 1.20 reached the foot of the Langesæterdalsbræ, where they lunched. This glacier, which is overshadowed by a bevy of fine rock peaks, is easy to ascend from the W., but is not quite so easy to reach from the E. The party followed a northern arm of the glacier, and at 2.15 reached the Vellesæterskar* and looked down upon an arctic little tarn on which was a flotilla of little icebergs. They then turned E., and at 2.40 reached the top of a glacier pass between the

* K. Rander's *Söndmøre*, p. 136; see foot note.

Brekketind* and the Vellesæterhorn and overlooking the grim gorge of the Brunstadskar far below. As their main object was to ascend the Brunstadhorn, they went to a rock to 'wait till the clouds rolled by,' and had many fleeting views of a fine mountain across the gorge.

At 3.15 they started to descend the labyrinth of a steep icefall, which afforded not only the leader and the last man, but the middle men as well, ample scope for using their ice-axes to good purpose, at one time on a narrow ridge of ice with a crevasse on each side, at another by cutting down one side of a crevasse and up another, or in walking along a steep glacier watercourse. At 4 o'clock the icefall was cleared, all too soon, for it had been great fun, and then a long glissade was taken almost to the top of a horrid wall which bounds the W. side of the Brunstadskar. The leader discovered a steep, wet, and comfortless chimney, which they bounded down helter-skelter for 25 min., and at 4.45 they gained the remarkable snow-paved gorge below.

'What about the peak; shall we try it or not?'

To this question the youngsters of the party readily answered 'Yes.'

After a pretty climb up grassy slopes and then easy rocks the party reached the top at 6.5. 'The top of what?' Apparently it was rather too far S. to be the Brunstadhorn, but a great cloud-filled gap immediately to the N. prevented them from going further in that direction. Clearly, then, it was the right peak.

They built a cairn, and gazed into the clouds for further information in vain for half an hour; then they turned back and went by way of Skylstadbrækken, that most irritating mountain path, and at 9.25 arrived at Øie.

A few days later, from the summit of Raana, it was clearly seen that the peak climbed was the southern, but not the highest, Brunstadhorn. One of the party even designated it by the appellation, 'The Brunstad Hump.'

MIENDALSTIND (a little under 5,000 ft.). *August 26.*—Dr. Richards and Wm. Cecil Slingsby, with Sivert Urke as porter, made what is, so far as is known, the first human ascent of this pretty peak. The range of the Miendalstinder is well known by sight, if not by name, to all who are fortunate enough to stay at Øie in fine weather, and who often admire the deeply notched ridge and watch the clouds playing at hide-and-seek behind the two pretty little aiguilles on their eastern face; but, oddly enough, until this year they seem to have escaped the attention of mountaineers, probably because there are higher neighbouring mountains.

The party went by steamboat to Sæbø, which is directly under the mountain, and then followed an excellent cattle-track through lovely birchwoods, which brought them with great ease to a fine rocky amphitheatre, which is overlooked by grim needles such as every climber in Söndmøre is accustomed to see.

* *Alpine Journal*, vol. xiv. p. 509.

An ancient moraine led to a little snowfield, which in turn was followed by good rocks, which took the party to a pretty gap in the ridge above the two aiguilles and to the E. of the highest peak. Here they got on to the upper part of a wild glacier whose séracs fall over steep precipices and roll almost as far as the sea itself in a gorge between Sæbö and Standal. After climbing up steep névé for some 300 ft. they struck the rocks, which were steep and good, and led directly up to one of the two rival tops of the mountain. A narrow ridge, about 25 yds. in length, took the party to what may be considered to be the successful rival, and here, close to the top, they revelled in bright sunshine and one of the most glorious views in Söndmøre.

The actual top consisted of two narrow and pointed slabs of *gabbro*, standing on end about 6 ft. high and 18 inches apart. As one was nearly 2 ft. lower than the other, cairn building was a difficulty. Sivert's trade is that of a shoemaker and not of a stonemason. However, with timely help and encouragement, in due time a goodly cairn was erected. During the process the skeleton of a goat was discovered in a corner a few feet below the summit. Poor fellow! To him, no doubt, is due the honour of making the first ascent, but apparently he had not possessed the hardihood necessary to attempt the dangers generally supposed to be connected with the descent of a fine mountain, and when he had exhausted the scanty supply of moss and lichen he lay himself philosophically down to die. The way he had probably taken from ledge to ledge on the western side could easily be picked out. This mountain is one of the most enjoyable, and at the same time one of the easiest, which the writer has ever ascended. Three arêtes meet at the top, and the point of meeting is luckily the very highest on the mountain. The view of Kjålaas, or Gluggentind, is especially grand, and the ascent of the Miendalstind can be most strongly recommended to all who are good walkers, are more or less accustomed to mountaineering, and to whom the ascent of Slogen is somewhat too arduous an undertaking, and the view is superb. Only 8½ hrs. were occupied on the ascent from Sæbö, and there was not a dull yard during the whole time. Capital glissades increased the interest of the descent.

SLOGEN BY THE N.W. FACE AND EASTERN ARÊTE (= 5,280 ft.).
August 28.—This ascent was made by Messrs. Aldred B. S. Todd, O. Erik Todd, Geoffrey Hastings, and Wm. Cecil Slingsby. In the 'Alpine Journal,' vol. xii. p. 267, the present writer says:—'Slogen offers one route, and one only, up a steep snow slope, which affords a very long glissade on the descent; everywhere else are impracticable precipices.' This was in 1884. For at least a dozen years the same writer has recognised that a route might probably be made from the direction of Klokseggen, and he has suggested this course to not a few men, and to climbers of the fair sex too. Fortunately for him, the ascent was not made until he was able to form one of the party, though earlier this very summer two Englishmen led by Vigdal attempted it, had 6 hrs. of step-cutting

up a steep gully, and probably would have succeeded if they had had more time at their disposal. As the details of the climb will probably appear elsewhere, it is sufficient to say that it was in every respect a first-rate expedition of the Chanouini aiguille character, and that a charming uncertainty about the result existed until within half an hour of the summit.

WM. CECIL SLINGSBY.

Lyngen District. Tromsø Amt.

LILLE ISSKARTIND. *June 22.*—This peak lies at the S. end of the Jaegervand (Hunter's Lake), and is the most westerly of the Isskartinder (ice pass peaks). G. Hastings and Elias Högrenning (porter from Stryn, Norfjord) started at 2 A.M. from the hut on the western shore of the Jaegervand. Owing to the exceptionally late spring the lake (height, 10 to 15 ft. above tide-level) was covered yet with thick ice. Close in to the shore it was not strong enough to walk upon. There were in places narrow lanes or cracks of open water, where a boat could be poled where the water was shallow. For some distance from the hut we tried to get to the upper end of the lake in our boat. We poled along the bottom, breaking a way through the ice with heavy birch stakes. Then we came to ice too thick to be broken, on to which we hauled the boat, and while we were dragging it to where the ice was thinner the stem was torn away from the planking, and we had to get ashore, leaving the boat where it was.

To reach the head of the lake we had to cross a river—a torrent—which was now swollen by the melting snows after four days and nights of sunshine. A considerable détour had to be made before we found a snow bridge over the ravine. It lay just above a waterfall. We had crossed it safely 36 hrs. before. We put on the rope. While the first man was on the middle of the bridge it began to crack. He made a rush, and just got across as the bridge collapsed. The second man was able to jump across, supported by the rope, landing on part of the collapsed bridge before it was swept away.

We followed the northern ridge up to a height of about 2,700 ft., and then took over to the left, working round into a gully which looks up the Stortindal. At the head of the gully we found ourselves on the ridge again, and now overlooked the Trollvatn (Trolls' lake); height, 3,800 ft. The snow was in very good condition (time, 8.5 A.M.). We went along the ridge to where it abutted on the mountain. A steep and narrow gully led up towards the top. We followed it up till it disappeared on a face of slabby rocks under the summit.

The top was reached at 9.30 (height, 4,500 to 4,600 ft.).

Two hours were spent on the top. The descent was made down the ridge on the E. to the col between Store and Lille Isskartinder. The further ridge was ascended for some distance, and photographs taken. The sun was then beginning to shine on the northern snow slopes; so at 1.30 we started down from the col. We crossed

obliquely the snow gully below, and into and over the first gully we had ascended in the morning.

We reached the lake at 3.40, and had to ford the river. The gap in the snow bridge had widened until it was too big to be jumped. The sæter was reached at 4.40.

PIPERTIND. *June 23.*—This is the most northerly fell in the Lyngen peninsula. It is a striking-looking mountain seen from the W. and E., and was noticed by Professor Forbes in 1851. We left the sæter at 5 p.m., and went down the lake to the hamlet of Jaegervand. Here we hired a light boat, and left at 7.5. We reached the Nord Lenangenfjord (distance, 19 miles) at 2.10 a.m. (23rd), with an interval of $1\frac{1}{2}$ hr. for rest and food. There fortunately was little wind, as that and a strong-running tide were against us.

In bright sunshine we lay down on the heather near the shore and slept till 8 o'clock. After breakfast we rowed a short way up the fjord to the narrows, where we crossed to the other side. A start was made at 10.25; the summit of a spur, 2,620 ft. high, was reached at 1.45 p.m. This was the outer ridge of two valleys which run down to the Lyngenfjord on the northern side of Pipertind. It, however, seemed quicker to ascend and descend over the intervening ridge opposite than to follow the main ridge up and down to where it joined the western spur of Pipertind.

A descent of a thousand feet brought us to a small frozen lake (1,630 ft.). Then an ascent of 1,750 ft. and a descent of 520 ft. landed us on the Pipertind glacier (5.10 p.m.). It took us a little over 25 min. to walk across. An easy snow gully led us on to the ridge (3,400 ft.). The ridge up to the summit afforded some interesting climbing; it was firm, rough rock, with a magnificent precipice on the left. Height, 4,390 ft. (the mean of two aneroids). A large cairn was built, and the top was left at 9.25 p.m. The boat and bivouac on the shore were reached at 1.50 a.m.

TVILLINGTINDER (OR THE TWIN PEAKS). *June 27.*—This two-headed mountain lies on the S.E. of the Stortind (Jaegervand), and is on the right-hand side of Upper Stortindal. The Stortindal Glacier half encircles it.

We left the sæter on Jaegervand at 6.50 a.m., and crossed the lake to the S. end. Very little ice was left on the lake.

We went up Stortindal and reached the foot of the glacier at 9.10 (height, 670 ft.). After a long halt for photography and lunch the left-hand moraine was followed to above the lower icefall. At 12.30 we crossed over the glacier below the upper icefall to the Tvillingtind side (height, 2,150 ft.).

We kept on the side of the glacier, and as soon as we were above the icefall and on the snow field we bore away to our left.

The snow was sufficiently hard at first to require steps to be kicked, but towards the top for a short distance, where we worked round to our right, the sun had begun to soften it.

The top was reached at 3.10, the second top at 5.25. We started back at 6.40, and went for some distance along the ridge

toward Stortind, to avoid the soft snow on the slopes we had ascended. Crossed the Forholt pass at 8.40, reached the Forholt Tarn at 10.25, and got back to the sæter at 11.55 P.M.

TROLLTIND AND STORTINDALSKAR. *June 29.*—This peak is very noticeable from Jaegervand; it lies between the two Forholt glaciers and between Stortind and Store Jaegervandtind.

We left the sæter at 6.25, crossed the lake, and reached the Forholt tarn at 7.47 (height, 880 ft.). We went up the Lille (or northern) Forholt Glacier (height of glacier foot, 1,940 ft.), then up the right side of the glacier, and crossed above the icefall to the left side; we then got on to the rocks immediately beneath the summit by means of a short snow gully. We at once worked off to the right, so as to avoid the gully, in which higher up there were some patches of snow, probably in an unstable condition. With one interval of 30 min. for lunch we were 4 hrs. 40 min. winning our way on to the ridge W. of the peak. The climbing was very good—a succession of ledges, which we reached up small chimneys and over slabs. It was 4.10 when we came to the ridge (height, 4,620 ft.). A fine edge ran up very steeply to the top (4,910 ft.), and occupied us for 1 hr. and 20 min. We were on the top from 6.10 to 9 P.M. The descent for 150 ft. was down the way we had come up; then we traversed along the northern face and crossed a very steep snow patch, and then along the ridge to the second summit at 10.10. A descent was made to the Stortindal Glacier, 12 P.M. (height, 3,750 ft.). We crossed over the snow col on to the Lenangen Glacier, making a new pass (height, 4,125 ft.), which we call the Stortindal Skar. Store Jaegervandtind was then skirted, and the Abraham's Skar crossed at 2.45 A.M. (height, 3,980 ft.). We took off the rope at 3.10; reached the lake at 5 and the sæter at 5.25.

DURMAALSTIND. *July 2-8.*—This is the second highest peak in the Tromsø Amt. It lies on the E. side of the Sørfjord, opposite Skjursnøes, S. of Gjövik and the Kjosenfjord and W. of the upper Fornøes Glacier.

We started from Holmebugt in Andersdal at 10.35 P.M. on the 2nd, crossed the Fugledal River at 12.10, and followed up the ridge opposite to Skjursnøes; this led us right out on to the snow dome which forms the summit at 3.55 A.M. (height, 5,795 ft.).

We started down at 5.10 and followed the eastern ridge, a narrow snow arête, to the second summit, which overlooks the Fornøesdal Glacier. A descent was made down a snow gully to the Fugledal Glacier, where a halt of an hour and half was made.

CROSSING OF JAEKKEVARRE FROM EAST TO WEST, AND ASCENT OF CENTRALTIND JAEKKEVARRE. *July 3-4.*—We went up to the head of the Fugledal Glacier and passed the Fugledal Skar (pass) (3,990 ft.) at 8.15, then ascended the glacier which comes down the northern face of the eastern summit of Jaekkevarre, where we arrived at 10.40 (5,850 ft.). Store Jaekkevarre, or the highest point, was reached at 11.45. A descent of 1,100 ft. separated Centraltind from Store Jaekkevarre. The col was reached at 12.45, and Centraltind at 2.50. It had been looking very hazy and

threatening since 9 o'clock; at 2 P.M. the clouds came down, and the rest of the time we had to steer by compass for nearly seven hours. We tried to keep along the ridge, so as to avoid the crevasses which eighteen days and nights of sunshine had developed in the wide-spreading snow cap of Jaekkevarre (Lappish Glacier Mountain).

Shortly after 3 rain and sleet began to fall, and our progress became very slow. At 5.15, through a rift in the mist, we found we were above the crags N. of the Holmebugt Glacier. The condition of the snow lying on the steep upper glacier was too soft for a descent to be attempted; we had, therefore, to retrace our way E. and S.E. to get round the Holmebugt Glacier crevasse basin. Then we turned S.S.W. to reach the southern or S.W. spur of Jaekkevarre. At 7.35 we reached a rocky promontory overlooking Andersdal. Through a rift in the clouds we found we were between two glaciers which fell over the crags on either side, and found a large remanié glacier below (Balgevarre Glacier). Another wide détour had to be made to get round the crevassed glacier basin. At 8.45 P.M. we reached the head of the gully we had descended the previous year. Great assistance in recognising our position was obtained from photos of this face of the mountain, taken last year from Anderstind, which lies across Andersdal to the W. The foot of the Balgevarre Glacier was reached at 10.15 P.M. What had been blue ice and thick crevassed glacier on August 8 last year was now snow-covered glacier with long talus slopes from the icefall débris. Holmebugt was reached at 12.15, after an expedition lasting 25 hrs. 40 min.

RENDALSTIND. *July 11.*—This peak lies north of the Strupen Glacier, immediately over the Strupen (ice-dammed) Lake. It is a fine-shaped mountain, well seen from the Lyngentjord. An attempt to climb it in August 1898 by the same party failed owing to bad weather.

We started from Lyngseide at 7 P.M. on the 10th, sailed and rowed, mostly the latter, to Strupen Bay, where we arrived at 11.20 P.M. We started after a rest and a meal at 1.25 A.M., and reached the glacier above the icefall at 2.10 (1,900 ft. up). The glacier (here clear ice) was crossed in 35 min. The glacier lake we found to be very much lower than it was last year, probably 100 to 150 ft. lower. There were fine cliffs of blue ice at the glacier end. From the lake we turned off up the snow field and gully south-east of the peak. We reached the rocks above the snow field at 5.15 (height, 2,850 ft.). After a halt of 25 min. we took up a lateral gully on our right, the main gully being broken by a curtain of rock, which we managed to turn at a height of 3,420 ft. Here we turned to our left, and so got into the main gully again. We kept on rock wherever possible, as the snow was very soft. The top was reached at 9 A.M. The weather was very dull, and had every appearance of thunder, which is very unusual in Arctic Norway. We heard some thunder as we started down at 10.20. and heavy rain came on before we reached the snow field at 12.55. We crossed the

glacier at 1.30, and got back to the fjord at 2.20. We started back at 4 o'clock, and, helped by a favouring breeze, had an easy run back to Lyngseide, where we arrived at 6.55 P.M. G. HASTINGS.

Sörfjord District.

KRISTIANSTIND. FIRST ASCENT.—On June 29 Mrs. Main, with the two Imbodens, set out from Holmebugt at 8.30 P.M. to attempt the ascent of the rock peak, which is the nearest mountain to Holmebugt. They proceeded up near the right bank of the torrent from the Holmebugt Glacier until in about an hour they were able to cross the water. They then steered straight for the W. ridge, which they followed with few deviations, over three distinct points, to the summit, arriving at 3 A.M. Excellent climbing was afforded from time to time by firm, slabby rocks. The last part of the ascent was the easiest. The mountain was in perfect condition, and the weather could not have been better. The ridge is extremely long, and in its lower portion is tedious by reason of loose stones. A direct and easy descent could be made by the N. face to the Andersdal. Holmebugt was regained at 10 A.M., after long rests while coming down. Exactly the same route was followed as in the ascent. A circular rainbow was visible for some hours.

HOLMEBUGTTIND. FIRST ASCENT.—The same party left Holmebugt on July 1, and, proceeding up towards the great Holmebugt Glacier, followed a broad couloir to their left, the top of which is filled with a tongue of glacier from the huge snowfields above. This glacier they followed to the sky-line, which is not a ridge, but a great, nearly level, snowfield. Turning to their right, they followed snow-slopes, and then a snow-arête to the snow-dome, which forms the highest point, the sharply-pointed rock peak seen from Holmebugt being considerably lower. The weather was perfect, and the view magnificent. Time, Holmebugt to the top, 5 hrs. 40 min.

DURMAALSTIND. SECOND ASCENT. FIRST BY THE N.W. FACE.—On the evening of July 3 the same party set out from Holmebugt for this peak. They followed the shore of the fjord for an hour or so, and then struck off to their right through birch woods, past two small tarns, and later over three ancient moraines, till they reached the river descending from the Fugledal. A shatter of boulders rendered the crossing possible, though even so it was not easy, and then the party steered straight up the face of the mountain, keeping near a torrent till they gained a snow-basin. From here snow couloirs enabled them to rise rapidly to a point where a secondary ridge, much pinnacled, merges in the face of the mountain. They then made a long traverse to their left, across rather steep snow-slopes, and gained another secondary, ill-defined ridge, which they followed to the great snow-cap which forms the summit. The party were at this time under the impression that their peak was the Loddevarre, and they knew Mr. Hastings was on the Durmaalstind. The surprise of both parties was therefore great when they met on the top, Mr. Hastings having arrived about half an hour previously.

T T ?

The inaccuracy of the map makes it often very difficult to identify mountains in this part of the world.

The descent was made to Holmebugt by the same route. On this route hardly any loose stones were met with, though doubtless later in the season this would not be so.

JAGGISJOKKA. FIRST RECORDED ASCENT.—On July 8 the same party set out from Holmebugt at 2.30 P.M., and rowed to the shore of the fjord just opposite Laxelv. The mountain they intended to ascend is a sharp cone, conspicuous from Holmebugt, and situated just between the two terminating arms of the Sörfjord. Leaving the boat at 3.30, they gained the top at 7.15 P.M., and found a small and old stone-man. The ascent which was made on the side of the peak overlooking the Laxvand was up steep but sound and easy rocks. Holmebugt was regained at 11.30 P.M. The party are unable to learn anything relative to a previous ascent, except the fact shown by the existence of the cairn.

ÖSTLIGE LAXELVTIND. FIRST ASCENT.—On July 9 the same party, leaving Holmebugt at 3.30 P.M., rowed across the mouth of the Andersdalselv and proceeded up the (true) left side of the Andersdal for 4 hrs. (including several halts for photography), past a frozen lake, to a second frozen tarn beyond. Here they turned up sharply to their right, over steep and stony rocks, up a very steep snow-slope, and gained the red rocks above, where the arête merges into them. These rocks were then followed over an easy arête, giving grand views towards the Laxelvtinder and down the valley to Holmebugt, visible in the distance. When the first abrupt declivity on the ridge was met with, the party traversed to their left, on the broken E. face, and passed along till nearly below the summit. They then steered straight for it, arriving at 11.30 P.M. The descent was made over the firm rocks of the N. arête till the first drop was reached, and then the E. face was again taken to, and descended direct to the glacier. It offered no difficulty apart from its steepness. Passing along snow-slopes, the little saddle at the foot of the peak, where a knapsack had been deposited, was reached.

SFINX. FIRST ASCENT.—The same party, having had breakfast on picking up their knapsack, continued along the broad ridge towards an isolated and sharply pointed rocky peak which rises to the S. of the Andersdals pass. They gained the vertical W. face at 1.30 A.M. (July 10), and thought it just possible to get up a chimney giving access to easier ground above. It was better, however, to traverse to their right and gain the S. arête, which, after a short descent, they did. This arête, though nowhere really difficult, is for a short distance composed of such extremely loose and steep rocks that the utmost care is necessary. The top was gained at 3 A.M. The descent was made by the same route as far as the bottom of the arête. Here the party turned abruptly to their right, and crossing the head of a large glacier—with a curious ridge like a snow-covered moraine across its upper plateau—reached the

ANDERSDALSKAR (FIRST PASSAGE), which is at the head of

the Andersdal and leads from the Sörfjord at Holmebugt to the Lyngenfjord at Dalen. The peak just ascended, when seen from the slopes about 10 min. below the pass on the Holmebugt side, bears a remarkable likeness in profile to a sphinx. Snow-slopes made the descent good going for a considerable distance, but were succeeded by stones. Holmebugt was reached by the right side of the water. The left side of the valley, however, affords decidedly better walking, and should be adhered to throughout.

HUNDBJERG TIND. FIRST ASCENT.—The same party, on July 11, set out from Holmebugt at 6 P.M., and went up the left side of the Andersdal, keeping in an upward sloping direction, and eventually reaching the frozen tarn at the foot of the Hundbjergtind mentioned by Mr. Hastings in his account of the ascent of the Anderstind. The Hundbjergtind is the massive mountain which forms the most northerly summit ridge of the range of the Laxelv-tinder. It immediately overlooks the Andersdal. The weather was cloudy and inclined to rain, and after mounting a snow couloir and making several traverses to avoid precipitous cliffs, the party found themselves at 11.30 P.M. on the top of the N. end of the ridge. From here the top would have undoubtedly been accessible with some little trouble along the ridge, but rain was now falling steadily and a high wind getting up, so the party descended.

Next evening, in lovely weather, they again started, and taking the same route to the upper end of the tarn, mounted by a couloir, and afterwards by chimneys and little ridges which occasionally afforded good climbing over firm rock, till almost immediately below the summit, which was gained at 2.40 A.M. on the 14th. This peak is accessible by the E. face up very stony slopes. The descent was made by the same route as the ascent.

TOMASTIND. SECOND HIGHEST POINT OF LAXELV TINDER. FIRST ASCENT.—On July 15 the same party left Holmebugt at 9.20 P.M., and, crossing the Andersdalselv, kept a diagonal upward course, till in about three hours, when just above the hamlet of Laxelv, they reached the foot of a great snow and ice couloir which separates the two highest peaks of the Laxelv-tinder. Of these, the southern peak looked decidedly the highest, from the various points from which the party had seen it. The couloir is from 1,500 to 2,000 ft. high—nearer the latter than the former height, and is steep in places. By keeping close to the (true) right side shelter from falling stones is available. The gradient is occasionally steep. In under six hours from Holmebugt (halts included) the party gained the saddle, or Tomasskar, giving access to the Laxelv Glacier beyond. This glacier drains into the Laxelv. The summit of this fine peak was reached in an hour from the pass, over a firm and easy rock arête. From the top the N. peak looked the higher.

As the weather was lovely the party decided to try another ascent the same morning, and singled out a high and easily accessible peak on the opposite side of the Laxelv Glacier.

IMBODENTIND. FIRST ASCENT.—This peak was reached by snow slopes and steep but easy rocks in about 1½ hr. from the

pass, and turned out to be a magnificent mountain, conspicuous on its N. side from most of the peaks near Joekkevarre. Its summit is supported to the N. by a vertical and unbroken wall of rock, which is one of the grandest things of the kind the party thought they had ever seen. Holmebugt was regained by twelve midday, the party descending direct to Laxelv, and thence taking a good little path which follows the fjord at some distance above it to Hundbjerg, whence the Andersdalselv has to be crossed to Holmebugt. The same afternoon a terrific thunderstorm burst over the locality, and is worth mention because for more than half an hour the thunder never ceased, roll immediately following roll, each roll commencing before the previous one had ceased. The lightning which accompanied it was very vivid. A heavy shower followed, and from the neighbouring mountains great boulders could be heard smashing down the couloirs.

BALKISVARRENEBBE. FIRST ASCENT.—The same party on July 17 left Holmebugt at 8.30 P.M. and proceeded up the (true) right side of the Andersdal, steering for the glacier which drains into the blue lake about an hour and a quarter from Holmebugt. The mountain they proposed ascending is in part visible from Holmebugt, though the actual top cannot be seen from there. It overhangs the Andersdal in a fine rocky precipice. The ice-fall was turned by mounting a snow couloir in the rocks to the (true) right of the glacier, and then crossing the rocks back to the glacier by a broad and easy ledge. After mounting the glacier nearly to its head, another snow couloir, followed by a stony slope, led to the ridge. Turning to their right, the party gained the snowy summit along a broad ridge at 4 A.M. It commanded a magnificent view of the Laxelvtinder.

BALKISVARRE. FIRST ASCENT.—The same party on the same day ascended the higher glacier-clad mountain between Balkisvarrenebbe and the head of a deep valley which either is, or runs into, the Lyngdal, in something over an hour from that peak. Its summit was a great field of ice. This mountain falls to a large ice-bound lake in the valley to the E., and is quite distinct from the Joekkevarre group, being separated from it by the deep valley mentioned above, and forming the boundary to the pass at the head of this valley between itself and Joekkevarre.

NJALAVARRENEBBE. FIRST ASCENT.—The same party on July 28 ascended this magnificent peak in nine hours, including halts from Holmebugt. They went first to the Andersdals Pass and from there struck up the S. arête which rises from the pass. This they followed, except where driven on to the E. face, the whole way to the top.

This mountain is a fine rock peak, sharply pointed when seen from the Andersdal (from which it is not visible till some way above the osprey's nest), but shows as the considerably highest peak of a long ridge when viewed from the side of Joekkevarre. It is isolated, and on the E. side rises from a large glacier which fills the head of one of the branches of the Lyngdal. It com-

mands a view of the Lyngenfjord near Dalen. Its height appears to be but little, if at all, inferior to that of the highest of the Laxelvtinder. The descent was made from the northernmost end of the summit ridge, straight down steep rocks and snow couloirs to the upper plateau of a great glacier, whence the Andersdal Pass was reached in a few minutes. Both the ascent and descent offered short passages which needed climbing, and the whole required the greatest care owing to the steepness of the gradient and the extreme looseness of the rocks.

FUGLEDALSTIND. FIRST ASCENT.—The same party went up this little peak on August 9 in $5\frac{1}{2}$ hrs. from Holmebugt. It is close to the entrance of the Fugledal on the (true) right side of the valley, and is separated from the Durmaalstind by a glacier, the snout of which hangs at a steep angle over the Fugledal. The weather since July 23 had been hopelessly bad, and abundant fresh snow lay to within 2,500 feet above sea. The ascent was made by steep but easy rocks up the S. face, the descent down steep stony gullies rather more to the E., direct to the Fugledal lake. Except for two hours after the start, it rained and snowed all day.

LERBUGTTIND. FIRST ASCENT.—The same party, on August 13, went up this peak, which is a sharply pointed high rock mountain near the N.W. end of a ridge which circles round the Lerbugt Glacier from a high flat-topped peak between it and the Durmaalstind. The Lerbugttind is not to be confounded with another sharp peak, a miniature aiguille, on the same ridge but nearer to the Sörfjord. Leaving Holmebugt at 12.30 P.M., the party rowed across the bay nearly to Holmebugt, and then crossed the low hill to the Fugledalselv, then a small shallow stream. Beyond it they gradually ascended through woods and over screes till about 6 P.M. they gained the slopes overlooking the (true) right bank of the Lerbugt Glacier. This small glacier possesses a gigantic moraine. The Lerbugttind was now immediately above them, and they progressed quickly up a couloir full of fresh snow. The last 150 ft. alone needed care, for the steep rocks were covered with fresh snow which was in a condition unknown in the Alps. The snow, falling through the comparatively warm and damp air, had formed a mass of short opaque icicles. These had become a nucleus for more fresh snow which hung in great cornices from every ledge, and was even plastered on vertical faces of rock. The higher rock mountains were, therefore, absolutely white, and reminded the party of the conventional common pictures often seen of winter scenery. Unluckily, a fog coming on when near the summit, photography was impossible. The snow was too sticky for avalanches, so ascending a very steep short couloir, the party gained the top at 8.15 P.M. The summit ridge is about 20 ft. long and very narrow. No stone man could be built, as everything was covered by three feet of fresh snow. The descent was made by the same route.

SOMMERBUGTTIND. SECOND ASCENT.—On August 19 the same

party ascended this peak, which had been first climbed three days earlier by Mr. Claud Rawlence with the two Imbodens. It offers a magnificent point of view, and was ascended for the purpose of obtaining a photographic panorama of the district. The summits were clear and the sky cloudless, but mists filled the valleys. A circular rainbow was again seen. The valleys on the W. side of the fjord are a pleasure to walk in, thanks to the abundance of turf under foot, in contrast to the stoniness of the valleys on the E. side.

JOEKKEVARRE. THIRD ASCENT.—The same party, on August 21, went up two of the peaks of Joekkevarre from the Fugledal. They ascended by the route for the Fornoesdalskar as far as the plateau of the glacier, and thence went up a crevassed glacier slope to the higher snows. Bearing W., they soon overlooked the peaks between Gjövik and Joekkevarre, and noticed a sharply pointed rock peak connected with the most westerly summit of Joekkevarre by a rock ridge. In shape it was very like Crast' Aguzza, when seen from the plateau above the labyrinth. Bearing E., they gained one of the highest of the several snow mounds composing Joekkevarre. It seemed to them that the peaks to the E. of the Holmebugttind is decidedly higher, but none of these snow peaks—Joekkevarre, the Holmebugttind, and the Durmaalstind—can vary much in height from each other. Returning in their tracks, the party quitted them on the W. summit and diverged towards the

JOEKKEVARRENEBBE (FIRST ASCENT), referred to in the paragraph above. This was easily approached over a broad stony ridge, which narrowed to a sharp arête for a few steps near the peak. The last bit of the short climb gave good scrambling for a couple of ropes' lengths. The top was small and supported on fine precipices of rock. These rose from a valley with several tarns in it, just N. of the valley enclosing the Fornoes Glacier. The height of the peak must be little inferior to that of Joekkevarre. Returning to the snowfields, they steered N.W. till they came to the last snow couloir before the Fornoesdalskar. This was very easy, and was quickly descended. The pass was then visited for the sake of the view towards Gjövik, and the rest of the way back to the Fugledal must have coincided with Mr. Slingsby's route of last year, when he crossed from Gjövik. The weather until July 20 was beautiful, and after that there was not one really fine day. Thus, while twelve ascents were made during the first three weeks the party were climbing, only five were accomplished the last five weeks.

SWEDEN.

Sylmassivet—W. Jämtland.

STORSYLEN (1,730 m. = 5,680 ft.). FIRST ASCENT BY THE E. GLACIER. August 8.—Mr. H. L. Joseland, with Jakob Fjellberg, started from Sylhyddan at 10 A.M., and followed the route usually taken in ascending Storsylen till within sight of the E. glacier.

They passed to the S. of the little lake at its foot, and mounted the glacier by its S. side, considerable step-cutting being necessary. On reaching the rock arête running from Storsylen S. towards Storsola they found the lower part of the ridge impracticable, owing to the masses of ice on the rocks, and were compelled to attack the very steep rock face somewhat to the N. of the S. end of the arête. After a climb of two or three hundred feet, rendered very difficult by the amount of ice that had to be cleared from every rock, they gained the crest of the arête, and followed it to the summit of the peak. The last few feet of rock are very steep, though not difficult. The summit was gained at 4 P.M., after about 5 hrs. of actual going, of which more than 2 hrs. were spent on the iced rocks above the glacier. The descent to Sylhyddan was made by the ordinary route.

The expedition is recommended to any who may be in the neighbourhood, as, though under ordinary conditions it would involve no difficulty, it is interesting and affords splendid views of the fine precipices of Storsylen.

ALPINE NOTES.

PUNTA DI CIAN (10,896 ft. = 3,321 m.). *September 7.*—Mr. G. Yeld, with Sylvain Pession, of Val Tournanche, left Cignana (8 hrs. from Breuil), where they passed the night in a hay barn, at 5 A.M.; at 8.30 they reached the Colle di Cian, having spent at least 90 min. in halts. They left the Colle at 8.50 and reached the summit at 9.10—i.e. in 20 min. This seems to be the usual route to the peak. The view was quite first-rate. The great peaks of the Graians, Mont Blanc and his satellites, and nearly all the summits from the Grand Combin to Monte Rosa were well seen; while immediately to the S. of the peak a great basin of pastures and pine woods led the eye to the Aosta valley, in which, near Fort Bard, the Dora Baltea could be well seen. In the descent the party followed the E. ridge, and then traversed under the summit to their morning's route, this portion being apparently new. It was decidedly interesting. The party varied their route after descending from the Colle to the Bananselmo Glacier by going N.E. to the Bananselmo Lake. They reached Breuil at 6.5 P.M., walking leisurely and taking several halts. It would appear that no English party had previously made this charming expedition, though the mountain is deservedly a favourite with Italian climbers, to judge by the cards found on the summit. Amongst them was that of S. G. Bobba, whose party seem to have made several new routes on the mountain.

SCHWARZHORN (GRINDELWALD) (9,618 ft.) BY THE N.E. ARÊTE. —On August 4 the Rev. Walter Weston, Dr. Brushfield, and Dr. Owen made what is believed to be this new route from Rosenlaui, with young Abraham Müller, of Kandersteg. After a leisurely