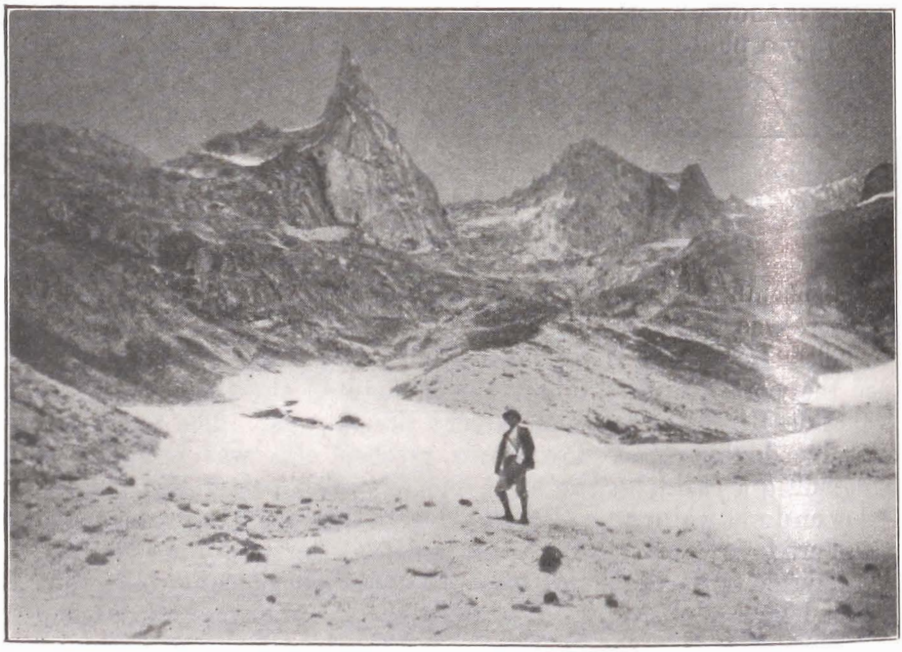
# NEW EXPEDITIONS IN 1913.

## *Dauphiné.*

PAIN DE SUCRE (AIGUILLES DU SOREILLER).—Dr. Guido Mayer of Vienna with the Cortina guide Angelo Dibona. June 27, 1913.

'Dr. Coolidge and MM. H. Duhamel and F. Perrin give the name "Pain de Sucre" to a point on the ridge of the Aiguilles du Soreiller which was ascended in 1877, cf. "The Central Alps of the Dauphiny," 2nd edit., 1905, page 55.



PAIN DE SUCRE.

'According to unanimous local statements the name, however, belongs to the gigantic rock tooth, forming on three sides unapproachable precipices 400 m. high, and which the above-mentioned authorities call the "fine rock needle which forms the S. end of the S. arête of the Pain de Sucre." Aneroid 3120.

'Left La Bérarde 2.40 A.M., walked down to Les Etages and turned N. up the glen of the Ruisseau d'en Bas, and so with some trouble gained the head of the valley where suddenly the indescribably bold form of the giant tower commanding the whole cirque comes into view.

'From the foot of the S. precipitous face of the needle bear W. into a snow bay and mount (steep and very fatiguing from deep fresh snow) into the gap between a range of teeth in the N. arête

of the peak and the Aiguilles du Soreiller. The teeth (5½h. from La Bérarde) were turned by an exposed traverse on the W. side, whereupon the gap at the actual precipitous foot of the peak was reached. The ensuing climb up the often extremely sharp-edged crest inclined 50°, the flanks of which on either side fall away almost in sheer precipices, and which is broken by two very difficult gaps with a smooth rib in between, belongs to the most exposed rock climbs in the Alps. From the very sharp summit another point which juts out to the S. was visited. (From the "Einstieg" to the summit about 20 min. hard going.)

'Descent by the same way. Much time was lost in prospecting the E. flank before embarking on the line of ascent described.'

[Translated from Dr. Guido Mayer's MS.]

*Mont Blanc Group.*

AIGUILLE BLANCHE DE PEUTERET (4109 m. = 13,480 ft., *Imfeld-Barbey Map*) BY THE S.E. ARÊTE.* Herren Dr. Paul Preuss, Carl Prochownick, and Count Aldo Bonacossa, August 28, 1913.—'Left Courmayeur 2 A.M. on August 26 with a porter, halted at Brenva bivouac till 2.25 P.M. Crossed glacier in 1 hr. 40 min. very heavily laden—no porter—to lower bivouac of Dames Anglaises (2800 m.), which was in good order having just previously been used by the Mayer-Dibona party.

'Left on August 27 at 1.40 A.M. In a few minutes to the great couloir between Aiguille Blanche and Dames Anglaises, snow horrible, soft and unstable. Bergschrund traversed with trouble owing to the darkness, then on 'crampons' up the true left of the couloir, very steep and deeply scored by stone-fall grooves. Towards 4 A.M. we inclined on to the rocks descending from the Dames Anglaises and gave up the expedition. Shortly afterwards an enormous fall of stones swept our tracks in the couloir.

'After climbing for several hours in the rocks we descended the margin of the couloir treading good steps for the morrow in soft and dangerous snow. Bivouac attained 2 P.M.

'August 28. After a good night we left our sleeping-bags at the bivouac and started at 1.5 A.M. First up our tracks of the day before, then by means of 'crampons' alone. Couloir is excessively steep—at least as steep as that of Piz Cengalo [52°–57°, *E.L.S.*]. At first we kept to the left, then up the middle, finally to the right. Snow sometimes hard, then quite soft and dangerous; constant fear of stone-fall. By some glazed rocks to the little gap between L'Anglaise Isolée and the S.E. arête of the Aiguille Blanche which here rises with an insuperable step. Halt 5.20 A.M.–5.45 A.M.

'Descent on to the Fresnay side, *c.* 15 metres, by zigzags over

* For previous expeditions cf. *A.J.* xxiv. 677–80, 690–3.

most atrocious rocks—not a single reliable hold—then a traverse towards a little chimney in the direction of Mont Blanc, up this chimney—not really difficult, but full of crumbling rocks—to a little shoulder visible from aforementioned gap. Now by an easy horizontal ledge to some easy rocks, up these rocks almost in a straight line to the arête, party moving quickly and simultaneously; arête attained, without difficulty, at the base of the great gendarme on the crest. Much lower down we could perceive the cairn erected by the G. B. Gugliermina—A. Zanutti—Dr. G. Lampugnani—F. Ravelli party [see note at end]. Up a small bit of the crest, then quickly on to its Brenva slope which is traversed over continuously snow-clad rocks, not however difficult (here and there danger of falling stones), till we could pass under the Great Gendarme and gain the ridge which descends from that one S. of the peak, just in front of a small well-marked gap. From this gap starts a gully which splays itself out high up in the wall facing the Brenva glacier. Now up the crest over great boulders, covered with snow towards the end, but without difficulty, till we could regain the S.E. arête a few metres short of a small notch. The descent into this notch is accomplished by a traverse along the Brenva slope (the worst bit of the whole expedition). Now up the arête, over the good easy rocks of its crest or Fresnay slope, till it becomes a snow ridge, when we kept a few metres below the crest on the Fresnay slope, not difficult owing to its moderate angle, but some risk (half a metre of snow resting on rotten ice). Summit reached at 1 P.M.; fog; 40 min. halt on the rock rib overhanging the Brenva face.

'Left 1.45 P.M. The snowy N.E. arête in a dreadful condition, Brenva slope plastered entirely with snow, rocks covered with ice, the whole time obliged to move one at a time. The [upper] bivouac at 3700 metres buried in snow. We traversed as quickly as possible the snow terraces at the base of the wall, many falling stones. Halt from 5.40 to 6.25 P.M. at [our previous night's] bivouac; great danger from stones at base of couloir. We halted for the night on the true left of the Brenva glacier, and continued the descent to Courmayeur on the following morning.

'The most difficult and dangerous part of the expedition is the great couloir nearly 700 metres high [leading to the gap between l'Isolée and the Blanche]. The [S.E.] arête itself is easy. It is far better to start from the Gamba hut, as there is no need then for a bivouac and the couloir [on that side, leading to the same gap] is set at a far different angle.' ALDO BONACOSSA.

[NOTE OF THE GUGLIERMINA PARTY'S EXPEDITION.

July 21.—From Courmayeur to the Dames Anglaises bivouac.

July 22.—Ascent of the great couloir partly ice, partly snow, enormously steep (5 hrs.) to the Col between L'Isolée and the Aig. Blanche whence the S.E. arête, above the first great overhang, was

gained up very steep rocks on the Brenva side (stoneman built). The crest of the arête was then followed to the foot of the great gendarme which stands on the Fresnay side of the arête, about 3800 m. (6 P.M.). A blizzard of snow with a hurricane of wind speedily came on, so, to get a little protection, they descended slightly below the arête on the Fresnay side where the night was spent in a snowstorm (wall built).

July 23.—Descent to the Col, about 2 ft. of fresh snow covering the rocks, and, during the night, down the great couloir, continually swept by light avalanches of powdery snow, the Dames Anglaises bivouac being reached early in the morning of the 24th, when at last the snow ceased. This day was employed in crossing the glacier buried deep in snow and Courmayeur was finally regained during the night.

Save for the calm courage and supreme fortitude that never forsook them the whole party must have perished. It is a superb page of Alpine history. Count Bonacossa's comment reads, 'Guglielmina's splendid skill alone saved the lives of the party.'

It will be seen that this route is entirely different from that of the later party who only reached the main arête from the Fresnay side at the base of the great gendarme.

Signor G. F. Gugliermina had taken part in a careful preliminary reconnaissance a few days earlier, but was compelled to leave for home when the others started on July 21. He has placed me under a great obligation by giving me very full details, including a series of photographs, of the eventful expedition which shows once more what men of the calibre of his brother, Dr. Lampugnani, and the others can support. In Courmayeur the party was given up for irretrievably lost, as it was considered impossible for any human beings to stand such continuous exposure. J. P. FARRAR.]

AIG. DE GRÉPON (3489 m. = 11,447 ft.) FROM THE S.W. (variation). Messrs. H. C. Bowen and L. W. Rolleston with Joseph and Gabriel Lochmatter. August 26, 1913.—From the bottom of the Dunod Chimney, a traverse was made to the north over a slab with little hold for about 7 ft., whence an ill-defined chimney leads directly upwards to a small ledge 10 ft. above. By traversing a few feet along this, one can reach the well-marked chimney which is parallel to and about 12 ft. to the N. of the Dunod Chimney. This big chimney leads up to the crack by which the highest point of the Grépon is usually ascended, and when once reached, there is no further difficulty.

With the kind help of Mr. Belcher's party at the big gendarme, the Grépon and Charmoz were then traversed.

The climb was planned entirely by the guides, one of them having noticed the chimney on a previous descent. The advantage of the new route is, of course, that by it the highest point of the Grépon can be reached from the south without having to sling a rope in

order to get up the Dunod Chimney. It is suggested that the new chimney be called the 'Lochmatter Chimney.'

Mr. J. H. Wicks, who many years ago made with François Simond what he believes to have been the second ascent of the Dunod Chimney, repeated the ascent by the Lochmatter Chimney on August 28, with Henri Rey and Joseph Simond. On talking over the variation with François Simond on the following day, the latter stated that he had tried the traverse with M. Dunod in August 1885, but had not been able to reach the Lochmatter Chimney.

PETIT MONT BLANC (3431 m.=11, 257 ft., *Imfeld-Barbey Map*). BY THE N.E. ARÊTE ATTAINED FROM THE N.E. Signori G. Scotti, R. and A. Calegari, August 13, 1913 ['R. M.' 1913, pp. 359–60, with marked illustrations].—From a bivouac party ascended Miage Glacier as far as the outlet of the second gully (2 hrs. 55 min.), well shown on map, which rises steeply from the true right bank of that glacier to gap between Petit Mont Blanc and peak called L'Aiguille de l'Aigle (*c.* 3573 m.), not named or measured on the said map, but indicated by patch of rocks immediately N.W. of Petit Mont Blanc. Up this gully, snow at first good then bad, keeping to its true right to avoid continuous stone fall from Aiguille de l'Aigle, to a well-defined depression in the N.E. (really N.N.E.) arête of Petit Mont Blanc. Along arête, first up a steep step covered with fresh snow, then more to the S. either over jagged and rotten crest, or turning great teeth by traversing insecure slabs; mists always dense and fitful snow flurries. Small snowy gap, *c.* 3100 m., finally attained (3½ hrs.). Arête now splays out into a wall very steep in its upper portion; up this wall by snow-covered rocks and a series of unstable ledges and steps all requiring much care, to a kind of false top crowning the rocky buttress rising from Miage Glacier. Arête now bends W.; along its narrow and insecure rocky crest, later covered with snow, to another low black wall; up this wall, then a traverse to the S. to an abrupt gap in Petit Mont Blanc and Aiguille de l'Aigle summit ridges. Then, passing beneath a great tower, by the crest quickly to snow cone forming the summit (5 hrs. 35 min., or 12 hrs., including halts). Descent by ordinary route.

PETITE AIGUILLE DES GLACIERS (3459 m. = 11,350 ft., *Imfeld-Barbey map*). FROM THE S.E. Same party, August 16, 1913. ['R.M.' 1913, p. 360, which gives the height as 3559 m.].—From a bivouac at L'Hognan past the Lac de Combal to the upper Chalets de l'Allée Blanche, thence up moraine and snow beneath Pyramides Calcaires to the outlet of a great steep gully contained by two rocky ribs descending from Petite Aiguille des Glaciers in a S. and S.E. direction towards Col de la Seigne. Up two débris-strewn rock steps to tongue of gully; up gully for two-thirds of its height, then beneath and along rocks of S.E. arête to a snowy notch in its crest, *c.* 3160 m.,

descending N. towards Estellette Glacier (4½ hrs.). Thence up S.E. arête keeping always below crest over loose glazed rocks, till point where aforementioned great gully merges abruptly in the great retaining ice wall of rocky summit. First, up a snowy cone inserted in patch of extremely bad rocks, then by the wall itself, heavy step-cutting, steering towards outcrop of rocks in ridge; up these rocks ['pitons'] to the ridge, then over less steep and better snow to a rock tower, *c.* 3400 m., emerging from the snow (2½ hrs.). Now over plateau connecting with summit, keeping well down to avoid gigantic cornice overhanging Estellette Glacier to a crevasse crossed by narrow bridge. Up steep snow and the N. slope of some dangerously snow-covered rocks to the summit (1¼ hr. or 8¼ hrs., including halts). Descent by N.W. arête to great depression connecting with Aiguille des Glaciers, thence by ordinary route to Col de la Seigne. Conditions, 'as in winter.'

*Pennines.*

LAQUINHORN (4005 m. = 13,140 ft., *S. map*).—BY THE E. FACE. Herr Carl Prochownick and Count Aldo Bonacossa, August 3, 1913.—From the village of Simplon party bivouacked at Hohsaas, 2430 m. (2½ hrs.). Left 4.40 A.M., weather cloudy. By grass and débris slopes in a S.W. direction to the little glen to the N. of the left lateral moraine of the Fletschhorn glacier; up this glen to its top, then over the moraine and along the N. bank of the snowless glacier; the lower icefall of which is turned by easy rocks and wearisome débris to the N. Upper glacier is now reached and followed due W. by its centre—some great crevasses—to the foot of the great snowy couloir, between the Fletschhorn and Laquinhorn, rising to the Fletschjoch. Over the easy bergschrund and up the S. margin of the couloir, at first exposed to falling stones, for some hundred metres, then on to the rocks of the S. bank of the couloir, attained with difficulty owing to awkward crevasses. Up these rocks, close to the couloir, good and pleasant scramble, to the sort of shoulder shown on *S.* map where the contour line 3600 cuts the rocks. By moderately inclined slopes forming a sort of arête—also indicated on the map—snow in a most watery condition, we attained the final rocks some 80 metres below the summit; these are at first easy, then rotten and choked with snow, water, and ice. A risky scramble then brought us to an excessively steep snow slope some 20–25 metres high, by which the summit ridge two rope's-lengths N. of the top was attained, 1 P.M.

Descent by the corniced N. arête to Fletschjoch, then over vast quantities of snow to Balen and Stalden reached in the night. A splendid ascent without serious difficulty; the day was very hot, snow in a dreadful state, so our time could easily be shortened by 2–3 hrs.

ALDO BONACOSSA.

*Bernese Oberland.*

SCHIENHORN (3807 m. = 12,491 ft. *S. map*).—BY THE E. ARÊTE.—Miss Rosamund Botsford, Counts Ugo di Vallepiana and Aldo Bonacossa. September 6, 1913.

From the upper Aletsch hut up the Ober Aletschfirn in the direction of the Sattellücke over crevassed slopes to a point near the rocks of the N.E. arête of the Distelhorn, then a traverse in a semicircle to the S. always between great crevasses, snow very bad, finally up an avalanchy slope on to the E. slope of the E. arête of the Schienhorn; by this way, after crossing the easy bergschrund, the arête is attained just where it forms a small shoulder before falling in a great step to its base (3½ hrs., slow owing to bad snow). Arête descends vertically on the left, S.—and for some way is easy, although affording a splendid granitic scramble, interspersed with little snow crests. Always over the crest till arête becomes steep, here a great gendarme is turned by its N. slope [same difficulties approximately as the traverse of great tooth on E. arête of Süd-Lenzspitze]. Arête again followed, most interesting, till it turns to very steep snow leading to first top, the junction of E. and N. arêtes, from which a few steps lead to the base of the abrupt 'step' connecting with the final ridge. The 'step' was so choked with snow and the cornice so great that it was impossible to halt at the top (7 hrs. 50 min., including 45 min. halt). Descent by ordinary route, over half a metre of bad fresh snow.

A very interesting route of moderate difficulty throughout, quite the best expedition about the basin of the upper Aletsch glacier. When the rocks are dry not more than 7 hrs. from the hut will be needed. ALDO BONACOSSA.

## CAUCASUS.

*Adai Khokh* or Tsaya Group* (= Freshfield's *Zea*).

*Tsaya Aiguilles.*

TŪR KHOKH = 13,500 (aneroid).—The name is proposed for one of the 'bristling fence of granite teeth' (see Freshfield and Sella, 'The Exploration of the Caucasus') on the N. side of the Tsaya Valley. The tūr is the Caucasian representative of the bouquetin of the Italian Alps, and the animal is fairly abundant on and about the mountain. On July 11, 1913, a party consisting of Messrs. W. G. Johns, W. N. Ling, Rembert Martinson, Harold Raeburn and J. R. Young made the first ascent of the peak, from a camp near the upper limit of the Tsaya forest, 6300 ft.

Leaving the tents at 5.15 A.M. a good track was followed for 45 m. after clearing the forest, up left moraine of Tsaya glacier. Here a wide scree-floored corrie opens out on right. This leads above to a

* Khokh is pronounced strong guttural, like Scotch 'loch' or German 'hoch.'

col, the lowest depression in the ridge between points 4193 and 4294 of Merzbacher's map (G. Merzbacher, 'Aus den Hochregionen des Kaukasus'). Snow was reached at 7 A.M. Up this and an easy snow gully—later probably almost all rocks or ice. Col reached 2.35 = 13,100 ft. Descent on N. side to Karissart * glacier and Dunti looks easy.

Up snow arête to left (west) to rock wall of final peak, steep good rocks to summit (granite) 3.25 = 13,500 ft. Return same way. Very long, good glissades (clin. angle 40°–42°).

Camp was regained at 6.50 P.M.

ULLARGH KHOKH, 14,170 ft. (aneroid).—This seems to be the point marked 4294 m. = 14,085 ft. on Merzbacher's map, but that map is very imperfect and inaccurate in this part of the range, and the Russian 1 verst map, though much more accurate, only names one or two summits (there are more than twenty of over 13,000 ft.), and gives very few heights. Ascended July 13, 1913, from a camp at 9800 ft. on N.E. slope of ridge (many huge gendarmes) running S.E. from Songuta and dividing Songuta or Adai Khokh glacier from a small nameless glacier (Ullargh glacier?) lying on S. slopes of points 4347 and 4294 (M. map). The name is said to be the local word for the great rock partridge, *Tetraogallus caucasicus*, which bird is abundant, its musical reveille call ringing round the rocks at dawn. Leaving camp 4 A.M. the party traversed steep grass slopes, then moraine and glacier, and ascended a steep snow gully, finally by rocks to a col on ridge overlooking Songuta or Adai Khokh glacier. Fine view of the great N.E. face of Adai Khokh with its immense hanging glacier. The ridge to Songuta looking as if it would take several days, descent was made to Ullargh glacier again. Traversing below point 4347, ascent was made to watershed ridge between 4347 and 4294, mostly by steep rock ridges and snow arêtes. Progress slow, much loose rock and large party. One great rock tower only passed with difficulty on W. after defeat by steep hard ice on E. side.

Summit ridge reached at 1 P.M., 13,370 ft. Turning right or N.E., an ice arête, with just enough snow on it to obviate cutting, led easily to summit of Ullargh, height 14,170 ft. (aneroid). An easier way down a steep snow gully was found for the descent, and, helped by several thousand feet of good glissades, high camp was regained 5.45. Tsaya forest camp, 8.30.

*Peak, height* 14,400 ft. (?), *proposed name The Curtain.*

Not ascended. Height of lower peak on ridge ascended, 13,800 ft. (aneroid).—This expedition was for the exploration of the peaks from which the S. Tsaya glacier flows. The only one of these previously climbed is the TRIPLE PEAK of Dott. Vit. Ronchetti (see

* Skatikom on Merzbacher's map, Songuta of Freshfield.

'A.J.' vol. xxiv., p. 218). The peak is unheighted and unnamed on both Merzbacher's and the Russian 1 verst maps. It is not marked on Freshfield's. I estimate its height—eye measurement only—as between 14,400 and 14,500 ft. This peak is a near neighbour of Tshantshachi and looks almost as high. It is mainly a snow peak, while T. is a rock peak. It is marked Mamison on a photograph of Dr. Ronchetti's, but if we take the most usual and convenient way of naming a mountain from the valley it overlooks and the river to which its snow gives birth, then this peak has no claim to the name of Mamison, as it lies entirely outside the Mamison watershed and is almost entirely a Tsaya peak.

Camp was pitched July 16, 1913, on grass slopes above lower icefall of Tsaya glacier, and just below where the great cataract of séracs comes in from the N. branch of the glacier. Height of camp only 9400 ft., but could not get porters any farther.

July 17.—Camp left 1.45 A.M. Descended to glacier, forced right across almost to S. side by enormous crevasses caused by inflow of N. glacier. Crossed back again above to foot of spur separating the N. and C. Tsaya glaciers. This appears as a sharp-pointed tower, for which I propose the name of Woolley's Rock. It is the pivotal point in his panorama taken from the Tsaya glacier. From the foot of the rock a way was found through the second icefall, steep and intricate, but not seriously difficult. 3.30, foot of third icefall, height 10,800 ft.; 4.36, above third icefall, height 11,550 ft. Almost flat circular ice basin above.

The col at head looks very difficult. Turning right, the party attacked the E. peak of the 'Curtain' by a rocky ridge falling from it in a S.E. direction. Just at the point where the ridge steepens and becomes difficult, a cairn was discovered. This was later ascertained to have been built by Dr. Ronchetti's party, who tried to cross the ridge here to gain the N. Tsaya glacier. The ridge is very much towered higher; the rocks are also very rotten in places, and, owing to large number (five) in party, the pace necessarily very slow. Some snow fell and wind got cold. At 2.15, on reaching a lower peak, 13,800 ft., and the E. peak still a long way off, it was felt prudent to turn back. Fine views of the S.E. face and ridge of Adai Khokh, route of first ascent of M. Déchy with Alex. Burgener and J. Ruppen, also partial, of great N. wall of Tshantschachi. Mamison Khokh to the S. shows also a great rock precipice with much dirt-streaked ice couloirs.

Descent was made mostly by same route to Upper Camp, everything packed, and Base Camp regained 9.30 P.M.

MAMISON KHOKH (13,850 ft. aneroid)—Russian 1 verst 1897 S.= 13,279ft.; Merzbacher 3⅓ verst 4048 m. = 13,279 ft.; Freshfield 5 verst not marked.

This discrepancy in height is easily explained. The peak is triangulated but not named on the Russian map. Merzbacher on

this occasion has placed the name correctly, as it is the dominating peak of the Mamison glacier, and looks the highest part on the ridge *as seen from the S.* Its continuation northwards, however, is considerably higher, and the height of the N. peak given here is very nearly correct. Mamison Peak was traversed and the peak to the N. ascended by the same party on July 24, 1913. Camp was left 3.30 A.M. It was placed above highest grass below left lateral moraine of Mamison glacier at a height of 9600 ft. Getting on moraine—high ridge—at once it was ascended until close below the rocks of the Triple Peak. Then up the glacier to the S. ridge of Mamison, 11,800 ft. From here the E. face of Tshantschachi looks little less formidable than the N. The opinion of the leader coincided with that of Devouassoud, Freshfield, Moore, and Tucker in 1868, that no explorer's route exists here. Continuing up the ridge, point 1897 on R. 1 verst map was gained at 7, aneroid marking 13,300 ft., 21 ft. higher than the Russian figures equivalent.

After 30 mins. halt and a slight descent, a steep slope was climbed to a narrow summit ridge of almost bare rock, 9.50, which was traversed to the highest point. This almost overhung a precipice of about 2000 ft. overlooking the circular snow basin at the head of the Tsaya S. glacier. The aneroid here gave 13,850 ft. Return was made mostly by the same route, but more direct, and good snow and glissades aided much. Camp was regained at 1.30 P.M.

SARAMAG, 13,800 ft. aneroid; Russian 1 verst map 1970 S. = 13,790 ft.; Merzbacher $3\frac{1}{3}$ verst map 4055 m.=13,300 ft.; Freshfield 5 verst not marked.

This summit has been reached before, as there is a large cairn on it (Russian surveyors?), but the route is almost certainly new. I could find no record of its ascent before our party went out. Merzbacher is here quite wrong. His height and name are attached to what is merely a lower part of the S. ridge, and on the wrong side of the Saramag glacier.

The same party made the ascent from the same camp from which MAMISON was climbed. The mist and threatening weather of July 24 developed into thunder and heavy rain, which continued the following morning, delaying the start till 5.45 A.M. on 25th.

The right lateral moraine of the glacier, which has very appropriately been called the Western Saramag Glacier by Dr. Ronchetti, was ascended to the top, and the glacier crossed to N. foot of icefall, gained 7.15; height 11,400 ft.

Two hours up icefall and slopes above to col, 12,700 ft. The watershed ridge between Saramag and Mamison valleys was then attacked and gave a good deal of interesting rock work, not easy in places. One or two towers might fairly be called difficult.

The final peak was easy slopes and led up to a boulder-strewn summit with a well-built cairn. A tent platform had been

constructed a few metres lower. It is evident that the peak can be gained from the S.E. side by the Saramag glacier without serious difficulty. Descent was made to the upper part of E. Saramag glacier by a very long and steep snow couloir, snow very good; traversing to col. The left hand of W. Saramag glacier was followed to icefall, and first-rate old snow then led by standing glissades to the moraine. Camp was regained 3 P.M. Weather cold, windy, and misty all day.

TSHANTSHACHI KHOKH (14,500 ft. aneroid) Russian 1 verst map, no name or height, but placed correctly and delineated very well. Merzbacher 3⅓ verst map, 4420 m. = 14,497 ft.; Freshfield 5 verst 14,063 ft.

The Russian figures of 2071 S. = 14,497 ft. are placed without a name on a snowy peak which Merzbacher has called Tshantschachi in his map. It has no connection with the Tshantschachi glacier and valley, and is Tuilisis. The real mountain lies to the S. on the opposite side of the Tuilisa glacier. It is by far the finest shaped summit in the whole group. It has the form of the 'perfect' mountain, three ridges meeting in a sharp point, and was the summit which excited the admiration of the first British explorers under the name of Adai Khokh. (See Freshfield, 'Exploration of the Caucasus,' also C. C. Tucker's paper in vol. iv. of the 'A.J.' p. 241). It is easy to understand how confusion arose between it and the true Adai Khokh or Vilpata, as I have heard the natives apply the name Adai Khokh to half-a-dozen different summits of the group. It is a generic term like Mont Blanc or Elbrus.

Having seen the vast black cliffs of the N. wall or European side, and the great hanging glaciers of the E. face, the expedition resolved to seek a weakness on the W. High camp was pitched July 28 on rocks above lowest icefall of Tuilisa glacier, height 10,500 ft. 4 A.M. 29th, left bivouac; rain and snow during night, and morning misty and doubtful. The lowest icefall had been explored the previous day, which saved perhaps an hour. It is intricate, but not difficult, easiest on right or S.E. side. Tracks of *mice* showed the bridges. Marten-cat tracks in second icefall. Passed same side 6 A.M. Third icefall harder; crampons very useful. Up centre, inclining to W. or left at top. At summit entered easy sloping snow valley leading up to col below N.W. ridge of T. (Here pass is marked on Merzbacher map, but the real pass—Freshfield's—is three great mountains farther E.) 'Snow bog' here, deep soft snow, letting one in past mid-thigh.

Nine A.M., foot of ice couloir between first rocks on W. face of T. and very steep slope of almost bare ice, leading up to snow col on the very jagged S.W. ridge of the peak.

After passing bergschrund—much cutting even with crampons necessary—the rocks on left were tried, and an overhanging chimney led to a good rock platform. Rocks above too steep and slabby,

so bed of gully was cut up, and open ice-slope above gained through crack in ice of gully wall.

On this becoming too steep and hard for crampons to hold, the party cut back across to rocks on left. These very steep, but good, though the new snow which covered them rendered it advisable to keep on the crampons. Mounting the W. face by a series of rock ribs and snow-ice arêtes, often very little snow on the ice, the S.W. ridge was at last reached not far from the summit. No farther difficulty was thence experienced to the summit, 3.45 P.M., a narrow rock ridge with a couple of feet of new snow on the top. It was misty, blowing very hard and extremely cold, so only 15 mins. was spent there in building a cairn, fixing flags, &c. 4 P.M., descent was begun by same route. Darkness overtook the party in the ice couloir, and the night was spent on the rock platform above the overhanging chimney, height of over 13,000 ft. The weather was bad, some snow fell, but no serious effects resulted, owing to precautions taken. Starting again at 4 A.M., on the morning of the 30th, the bivouac was regained at 8.30, and after a rest of two hours there, and a meal, Tshantschachi Kasarma, on the Mamison Road, reached at about 1.

### *Shkara Group.*

NUAM QUAM,* aneroid 14,100 ft. W., 14,200 ft. E.; Merzbacher, W. Peak 4250m., E. Peak 4281m., S. peak 3877m.; Freshfield 13,975 ft.

From a camp at 10,100 on débris slope above lower part of N.Q. glacier on W. side, 6 hrs.—a meal and many delays, catching horses, &c. included—above Ushkul.

The tents were carried first on horses, then by the porters or horsemen, but at the steepish rocks by which the snout of the glacier was passed the men struck and absolutely refused to proceed farther. This was 9500 ft. The last 600 had to be done heavily loaded by the Expedition members themselves.

Camp was left 3 A.M. August 9, same party, with exception of Mr. W. G. Johns, who had returned to England.

Crossing the moraine they descended slightly to foot of first icefall. This was very much broken, intricate and difficult.

It was attacked first on right or E. side, but party were forced into centre and then to left at 6 A.M., only getting through by means of tunnels and chasms below huge séracs. Crampons very useful; lot of cutting. Forty minutes through second icefall.

6.40, 12,550 ft. (aneroid).

7.15, mass of seracs on slope, 13,200 ft.

8.10, up steep snow slope to schrund, 13,350 ft.

This was passed by an avalanche bridge. Slope above at first snow at 57°, soon turned to ice at 54°.

* Freshfield's *Nuamkuam*.

A line had been made for the lowest-reaching rib of rock leading up to the arête connecting N.Q. with Shkara some way E. of the lowest col. This arête was gained in 1 hr. 35 mins. from bergschrund. 9.45; lot of cutting, and rocks not quite easy. One hr. 25 mins. along ridge to E., and a rocky top was reached (aneroid 13,980 ft). Here cairn, flags, and record were left. It seems possible that this is the originally triangulated peak, and the aneroid was right. Freshfield gives 13,975 ft. for N.Q. After 40 mins. halt the ridge was continued to E. and two almost equal snowy summits were visited. 12.20, 14,200 ft. by aneroid. These are the highest points on the massif. Fine views of all the great peaks of the central group. Summit was left 1.10 and easy snow slopes descended for about 600 ft. to a snow col, then up again to summit of S. peak, 14,030 ft. aneroid. Over this and down the S. ridge, partly on rocks, partly steep, sticky avalanchy snow. Crampons removed, as they became dangerous from the formation of 'sabots.' A snow col and couloir was then reached overhung on N. by a great beak of rock, visible from many miles down the Ingur Valley. The ridge to S. of this is studded with huge gendarmes. The leader explored the E. face, climbing down between 300 and 400 feet, rocks very steep but good, but could find no way of turning the first tower, and it overhangs badly on the S. Return made to col. Much avalanche and rock traffic down couloir but by 4 sun was off and soon thereafter ceased, 4.5, descent begun, snow on ice thin and bad, and unexpected strips of ice low down rendered glissades inadvisable. Camp was not regained till 8; half an hour from bergschrund across the glacier.

### *Ushba Group.*

Ushba, N.E. Peak, 15,400 ft. F.—This expedition was unsuccessful, but a height of 14,000 ft. was attained by a route entirely novel, and the party was not stopped by technical difficulties, but by their unanimous refusal to take unjustifiable risks from falling rocks, ice and snow.

The central couloir was, in the leader's opinion, quite too dangerous this season to attempt. An attack on the S. peak by two members of the party, Messrs. Ling and Raeburn, was stopped at 13,400 ft. by tremendous discharges of stones. The 'Untere Schneefeld' of Schultze was a sheet of bare ice, almost ceaselessly swept. Leaving a camp under the left moraine of Gulba glacier, height 9200 ft., at 4.15 A.M. on August 15, Messrs. W. N. Ling, R. Martinson, and H. Raeburn walked up the little glacier under the S. ridge of Gulba to the lowest col.

Six tūr seen here, height 10,550 ft. Down broken rocks and a steep snow couloir to W. Chalaat glacier, 9300 ft., at 6.30. Up glacier. It took four hours to work through steep and very much shattered icefall and reach the rocks at the foot of the E. face, height 10,450 ft., time 10.30. The rest of the day, apart from halts,

was spent ascending this face by rocks, generally good, and by snow-ice arêtes, generally bad. The face is very steep ; just below the snowcap of the summit the rock is as nearly as possible vertical for over 1000 ft., falling stones flew far over the heads of the party.

At 5 P.M. a good gîte on a well-overhung ledge was found, height just 13,000 ft. Even here the after eddy from the wind produced by the great avalanches down the couloir just ahead reached the party, almost carried away their hats, and sprinkled them with chilly snow-dust.

Leaving the gîte at 4.45 A.M. on 16th, the couloir was descended into and crossed, nothing now falling. Progress directly upwards being impossible on account of the vertical wall, the route followed led slanting to N. along its base, the nature of the climbing only permitting one man to move at a time. About 9 o'clock 14,000 ft. was reached. Here the narrow crack across the slabs vanished in the face. It was just possible to descend from here into a great ice couloir. On the far side of this could be seen the comparatively easy angled edge of the icecap of the summit, and the ice-chimneys leading up to this, though very steep, were evidently possible. The party watched, debated the matter for an hour—and then turned back. The almost incessant falls of snow, ice, and stones down the couloir rendered the risk too great. Owing to the great care required to be taken on the descent, the pace was very slow and the glacier was not regained till 7.45 P.M. The very difficult icefall was successfully descended without lanterns—a splendid moon.

The pull of 1300 ft. up to the Gulba col was not done fast, as the party were all decidedly tired. It was gained at 2.20 to 2.30 by the various units. Leaving the col at 2.35, tent was regained in twenty-five minutes at 3 A.M. on the morning of the 17th.

---

## VARIOUS EXPEDITIONS IN 1913.

### *Mont Blanc Group.*

L'INNOMINATA (3717 m. = 12,192 ft.), BY THE W. FACE.—On Wednesday, July 15, 1913, Messrs. S. L. Courtauld and E. G. Oliver with Adolf Aufdenblatten left the Gamba Hut at 4 A.M., following the ordinary route up the Brouillard Glacier towards the Colde Fresnay.

When almost opposite the top of the Innominata they turned to the right and crossed without much difficulty two bergschrunds, breakfasting on some rocks on the face of the peak just above the second bergschrund (3½ hrs. from the hut).

From here the ascent proceeded directly up the steep face which was at first partly rock and partly snow. Towards the top there was ice covered with loose snow and the ascent finished with about thirty steps in ice, the party arriving directly on the summit (5 hrs. from the hut, 1¼ hr. from the breakfast place).