

at 11.10 A.M. They did not visit the highest snowy southern summit. They built a cairn on the rocks of the northern peak (14,800 ft.).

In three days' travel they crossed from Sugan to Chegem. At Bezingi they learnt that the well-known tall chieftain had died two years ago. They visited the Jilkisu, a curious and interesting limestone valley, with a narrow and imposing defile. They climbed Kom (12,874 ft.); it commands a splendid panorama, of which photographs were obtained. From the kosh behind the moraine of the Bashilsu Glacier they crossed to the Leksur Glacier. It may be remembered that Mr. Mummery got into great difficulty in crossing the chain near this point. This (the Bashil) pass is not habitually used by the natives of Chegem, although its existence has been mentioned to many travellers, including Mr. A. W. Moore. A Chegem hunter who served as porter pointed out to S. Sella the native pass. It is a narrow gap to the N.W. (right in ascending) of the broader depression at the head of the Bashilsu Glacier. The final climb, which is short, is up a gully exposed to falling stones. The descent soon joins the route of the Mestia Pass.

From Mestia they climbed to an eminence of 11,000 ft. on the Gul Ridge, and observed Ushba with the binocular stereo-telescope. One point only on the south-eastern ridge of the mountain appeared to S. Sella very difficult. He believes that by passing the night at a great height it would be possible to overcome it and ascend the mountain entirely by rocks. He considers that to good rock-climbers this route will furnish the safest way to the south peak of Ushba.

Owing to the many delays from the bad weather he had experienced he was unable himself to stop for any attempt. By the Tuiber Pass the party returned to Chegem with a horse, and two natives of Mujal. Many photographs were taken; two turs (bouquetins) and a few birds and several marmots and vipers were collected.

THE BIETSCHHORN FROM THE BIETSCHTHAL BY THE SOUTHERN FACE.

By J. P. FARRAR.

THE first ascent from this side was made on September 2, 1884, by Drs. E. and O. Zsigmondy, Herr Purtscheller, and Professor Schulz—cf. 'Im Hochgebirge' (p. 305), a reprint of various articles by Emil Zsigmondy: the Bietschhorn paper is, however, by Professor Schulz, reprinted from S. A. C. 'Jahrbuch,' xx., 60–102.

The entry in the Ried 'Fremdenbuch'—apparently written immediately after the ascent—reads as follows:—

'Anfangs durch das am meisten rechts gelegene tief eingeschnittene Couloir, dann aus diesem links, über eine sehr schwierige, steile Felsmauer, auf die zwei Couloirs trennende Felsrippe, dann

an den östlichen Wänden des weiter links gelegenen breiten Couloirs und über den mittleren zum Schneegipfel leitenden Felsgrat. Ab Bivouak 3.30 (ca. 2660 mtr.). Einstieg Felsen 5.10. Auf Gipfel an 3.55. Rast beim Aufstieg, 1 Stunde.'

Translation.—'At first through the deep-cut couloir lying furthest to the right [E.], then out of this to the left [W.], up a very difficult steep rock wall, on to the rocky rib dividing two couloirs, then on the E. walls (or slopes) of the broad couloir lying further to the left [W.], and by the central rock ridge leading to the snow summit. Left bivouac (about 2,660 m.) 3.30. Took to rocks 5.10. Arrived summit 3.55 P.M. Halts on way, 1 hr.'

In short, they crossed the right hand (*i.e.* E.) gully or couloir, ascended its left hand or W. wall to the crest of the rock rib dividing it from the broad couloir next to the left [W.], traversed along the face of this rib overlooking the W. couloir, regained the crest of the rib, and so to the summit.

I will endeavour to extract the chief points from Professor Schulz's very interesting article mentioned above:—

According to this they left their bivouac (under a rock at the head of the Bietschthal, excellently reproduced in Mr. Compton's picture,* and which when we passed nine years later was as perfect as though it had been just made) at 3.30 A.M. on September 2, 1884, reached the glacier lying at the base of the S. face of the mountain, took to the rocks [at its E. corner] at 5.20, and climbed to the right hand, or main S. (strictly speaking, S.E.) ridge, which connects the Bietschhorn and the Thieregghorn. They then traversed to the left along rock ledges—how far not stated—ascended for 10 min. to the right till half-way up the W. slope of the main S.E. ridge, the height being below the junction of the E. ridge coming from the Stockhorn (cf. Siegfried).

The author then distinguishes two gullies or couloirs.

(a) His E. couloir, a long narrow gully leading up to near the summit, and lying close to the S.E. ridge referred to above. Up this couloir his attempt with Burgener (cf. S. A. C. 'Jahrbuch,' xix.) in 1888 was made. He considers the map (Siegfried) does not show this gully.

(b) His W. couloir, a very broad deep cut couloir lying more to the left and leading direct to the summit, its lower end being to the right of point 3,058 (Siegfried).

By the rock ridge dividing these couloirs, or rather by the W. slope of this ridge, lay their route to the summit.

The Professor states (p. 312) that the W. couloir or the snow-field filling its lower end is connected with the glacier at base of S. face by a gully, but I do not reconcile this with p. 311, where both couloirs are stated to be cut off from the glacier by precipitous rocks (see below).

Their chief difficulty consisted in reaching the crest of the rock

* See *Im Hochgebirge*, p. 309.

ridge between the two couloirs, and in turning the towers on the ridge.

From the W. slope of the main S.E. ridge, *i.e.* the right-hand wall of the E. couloir, the party apparently crossed this couloir to the rocks on its other side, and then recrossed higher up to the entrance of the very narrow upper portion of the couloir (see p. 313) Even with local knowledge I find it difficult to grasp very readily the author's interesting narrative at this point). They climbed into this narrow portion and out of it on the E. slope (*i.e.* to the W.) of the rock ridge dividing the two couloirs above referred to (8 A.M., 3,520 m.).

From this point the main S.E. ridge and the almost parallel ridge on the E. slope of which they stood were seen to be crowned with grotesque towers and deep notches. Emil and Purtscheller ascended to a notch in this ridge, looking into the W. couloir, but decided to continue traversing along the E. slope of the ridge. This they did for 25 min.; in fact, were again so close to the E. couloir as to be driven by falling stones to regain the crest of the ridge between the couloirs by a difficult rock wall 75 ft. high, splendidly climbed by Purtscheller (10.15 A.M., 3,610 m.); see illustration in 'Hochgebirge,' p. 316. They turned the next tower on the ridge on its left side, but were not able to descend into the W. couloir, although the Professor states they were above the black pitch or cliff in the couloir. They continued to follow the ridge, now snow, and reached (12.5 P.M. 3,660 m.) after some difficult climbing, and traversing another gap in the ridge from which the way to the summit seemed clear, the only difficulty appearing to be a frozen waterfall* at the head of the W. couloir. They again traversed the W. face of the ridge to just above a small rock tower set in this face (1.5 P.M. 3,720 m.), and saw that above the frozen waterfall † the W. couloir branched into two arms, down which snow, ice, and stones fell. The ridge bore away E., forming a bay, and continuing their traverse they were able to turn the frozen waterfall after again nearly climbing to the crest of the ridge (2.30 P.M.). They then bore away to the left to reach the floor of the now narrow W. couloir above the waterfall (3.6 P.M., 3,860 m.), whence the summit was reached at 3.55 P.M.

Second Ascent.—Daniel Maquignaz and I bivouacked on September 14, 1893, on a green plot under the lee of a big rock (4 to 4½ hrs. from Raron, about at the source of the most E. branch of the stream flowing down the Bietschthal). It is about ½ hr. below Zsigmondy's *gite*, and offers no shelter against rain; but in fine weather is preferable, as water is closer.

The key of the ascent by the S. face is a broad snow-filled couloir, descending straight down from the summit to the glacier at the foot of S. face, but cut off by a cliff at its lower end, and hence this couloir has to be gained by a series of traverses. Pos-

* I only saw the upper cliff or waterfall in this couloir—not two.

† Compare also *Ueber Eis und Schnee*, second edition, vol. i. pp. 335–338.

sibly early in the season avalanche snow might be found banked up against the cliffs, rendering direct access to the big couloir possible. This is the Professor's W. couloir; but it will be seen below that I distinguish more couloirs than he does. My notes were very carefully made on the spot, so as to help to elucidate the very complicated *terrain* of this S. face. I am inclined to think—if such a degree of accuracy can be expected from any map—that this W. couloir is the *second* from the S.E. ridge, and not, as the Professor considers, that immediately W. of the S.E. ridge, as shown on the Siegfried map. This latter, in my opinion, represents the Professor's E. couloir, and the others mentioned in my notes.

Stones fall down the W. couloir, and I by no means wish to imply that it could be safely followed its whole length, or that it would be safer than the series of traverses we made to gain it.

On September 15, from our bivouac, we ascended over moraine, passing Zsigmondy's *gite*, to the strip of glacier at the foot of the S. face (1 hr. 20 min.). In ignorance of the details of Zsigmondy's route, we spent $1\frac{1}{2}$ hr. in examining the cliffs which bar direct access to the S. face, and attempting to find a passage. We finally returned to the N.E. corner of the glacier, whence a convenient, though from a distance formidable-looking, ledge led (in 20 min.) to the main S. arête, looking 'in der Trift' (Siegfried).

From the arête we traversed back to the left (N.W.), along convenient ledges ascending only slightly, and then descended a short wall into a big, broad couloir (No. 1)—hard snow (40 min.). In this, we mounted straight up for 20 yards, then cut across it, and followed the well-defined ridge on its left, or W., side till the ridge flattens out (25 min.). Then we crossed the head of a small couloir (No. 2) to the W. of the ridge, took to the rocks on the other (W.) side of this small couloir, always traversing to the left, and climbed to the crest of these rocks (12 min.), beyond which is a big couloir (No. 3), cut off above by a black waterfall.

This couloir is crossed horizontally to a flat rock on its other side, forming a convenient platform. From here the way lies straight up a steep crack, and the couloir (No. 3) is regained by a traverse, not easy (53 min.). This couloir is at once quitted by mounting its left (W.) wall, from the crest of which a descent of 40 ft. leads at last into the great snow-filled W. couloir (No. 4) (35 min.).

You skirt the E., or right hand, edge of this couloir close to, or partly on, its bounding wall, the steep rocks of which offer good hold, until you are above a narrow island of rock contained in the couloir (40 min.). The couloir is blocked by a characteristic black cliff, with the usual waterfall (cf. Schulz). To circumvent this we climbed the very steep rock wall forming the E. bank of the couloir, bearing away to our right to gain, just above a big-pointed tooth, the main S.E. ridge overlooking the Baltschieder Glacier (55 min.). From this point we traversed back to the left (N.W.), below the crest of the main ridge on the Bietschthal side (difficult), re-entered

the W. couloir, now quite narrow, immediately above the black cliff and waterfall, crossed the couloir where it forks about 30 yards above the fall, and mounted the rocks between the forks (30 min.), and so regained the ridge overlooking Baltschieder (10 m.), which is then followed to the first, or S., summit (12 min.), and to the final summit (4 min.).

	Hrs.	Min.
Actual climbing time from bivouac	6	56
Time spent examining cliffs	1	45
Halts	0	55
Total	9	36

The ascent was made on a quiet September day; the rocks are sound, very superior to the W. arête, and there was a little snow in the couloirs. A big stone ploughed down the big W. couloir (No. 4) as we sat looking into it, otherwise we saw no falling stones.

Against my experience must be set that of the Purtscheller-Zsigmondy-Schulz party, who were constantly endangered by stones, as were also Professor Schulz and Burgener on their attempt in 1888. In 1895 an attempt, with Maquignaz as leader, was also abandoned early in the day, for the same reason.

The continual traversing requires care; the climbs to outflank the black cliffs and waterfalls alone would be called difficult in a moderate degree. It will be noticed that we spent but a very few moments in the couloirs themselves, where we could be exposed to stones, and on the intermediate ridges one was safe enough.

The Austrian party appears to have encountered difficulties, due, I think, in a measure to that admirable determination they so often exhibited—not least in their famous first traverse of the Meije arête—and which in this case led them to persist in a too direct attack. We contented ourselves with outflanking the difficulties, and met with none that would have at all taxed the powers of a Zsigmondy or a Purtscheller. Thus we were enabled to considerably shorten the time without undue exertion, and hence minimise any risk.

Daniel Maquignaz led all day with tireless energy, a *bonhomie* that neither hardship nor danger ever ruffles, and that incomparable 'flair' of the great guide.

P.S.—The starting-point is Raron, a station in the Rhône Valley, where there is a decent inn, kept by Herr Schröter, where good provisions can be had very reasonably. Porters can be obtained there (in 1893 the local shoemaker acted for me).

As to bivouacs, the Gîte Zsigmondy 'im Rami,' in the Bietschthal, is under an overhanging rock, open only to the S., and has room for four or five people. It is quite dry. It is about the middle of the valley, and is a bit hard to find among the surrounding similar 'Geröll.' It is about 5 hrs. from Raron, and about 1 hr. below the glacier. Our bivouac is only suitable for quite fine weather.