

In the woods south of the Stazer See :

<i>Hypnum pratense</i>		<i>Dicranella curvata</i>
<i>Hypnum plicatum</i>		<i>Timmia austriaca</i>

In the pastures above the Stazer See towards Pontresina :

<i>Bryum bimum</i>		<i>Grimmia alpestris</i> (on rocks)
<i>Sphagnum contortum</i>		<i>Splachnum sphaericum</i>

In the dry bed of the Inn between Samaden and Cellerina :

Bryum imbricatum.

In the first or second pool close to the main road about half a mile beyond Bevers :

Angströmia longipes.

On the other side of the road :

Hypnum giganteum.

On the Piz Languard :

<i>Myurella apiculata</i> (growing among <i>Bartramia</i> (Ederi.)		
<i>Grimmia mollis</i>		<i>Hypnum crenulatum</i>
<i>Grimmia Doniana</i>		<i>Cylindrothecium concinnum</i>
<i>Grimmia torquata</i>		<i>Ulota Hutchinsiae</i>
<i>Desmatodon latifolius</i>		<i>Meesia alpina</i>

Species whose habitat I cannot recollect, but I should say in the woods to the west of and above the Curhaus :

<i>Eurynchium strigosum</i>		<i>Webera polymorpha</i>
<i>Leskea catenulata</i>		<i>Mnium spinosum</i> *
<i>Barbula fragilis</i>		<i>Leskea atrovirens</i>
<i>Bryum pallens</i>		<i>Bryum pallescens</i>
<i>Bryum inclinatum</i>		<i>Dicranella Schreberi</i>
		<i>Trichostomum crispulum.</i>

T. HOWSE, JUN.

ALPINE NOTES.

THE WEISSHORN.—On August 11, J. H. Kitson, with Christian and Ulrich Almer, left a bivouac on a hill called the Kastel, three hours from Randa, at 3 A.M., and passing through the ice-fall of the Bies glacier, and over the rocks to the left of the Bies Joch, crossed the upper glacier basin towards the point marked 4,161 in the Federal map. They then ascended the steep slopes of ice and snow to the glacier on the face of the mountain, and mounted from that to the northern arête, which they followed to the top, where they arrived at noon. They returned to their camp at 4 P.M., and reached Zermatt at 7.40 P.M.

Mr. Marshall Hall, accompanied by Jean Martin as guide, and Joseph Möser as porter, left Zermatt at 3.30 A.M., on August 22, 1871, and, following the usual route of the Trift Joch, breakfasted on the

* By the Fletschbach.

Trift glacier at 9, after which they mounted by the Rothhorn glacier, which proved laborious from séracs and crevasses, requiring much step-cutting, to the snow-slopes (50° in some places) near the bottom of the S.W. arête of the Rothhorn. A bergschrund was successfully crossed by a snowbridge of ticklish appearance. Taking to the rocks, they climbed to the ridge, and thence to the point marked 3,878 on the map of the Swiss Alpine Club, which they propose to call the Pointe de Mountet. The views were splendid. Clouds to the W. partially obscured Le Blanc and Lo Besso, but it appeared practicable to cross to the Moming glacier, which would constitute a new col of the utmost grandeur. Having, however, left the provisions and knapsacks upon the Trift glacier, they again descended, and thence crossed the Trift Joch. The weather became cloudy, and snow began to fall. They missed their way among the rocks, and did not extricate themselves till dusk began to come on, and had to cross the glacier to the moraine of Mountet in the dark and rain.

The Swiss Alpine Club have built a comfortable cabane at the Mountet, which there was great difficulty in finding, the darkness increasing; but at 9.30 P.M. they fortunately hit upon it, and spent the night there.

A few days afterwards, Mr. Marshall Hall reconnoitred Lo Besso and Le Blanc from the Pointe de Sorrebois, and felt still more convinced of the great probability of successfully making the new col spoken of above.

From the Trift glacier to the Pointe de Mountet and back took five hours and a half, including an hour at the summit.

TIEFENMATTEN JOCH, July 17.—Messrs. G. E. Foster and A. W. Moore left Zermatt at 1.35, and followed the route of the Col d'Erin as far as the foot of the Stockje; they then kept to the left up the Tiefenmatten glacier, and at 9.45 reached the col at its head between the Dent d'Erin and the peak marked on the map 3,813 mètres, close under the latter. The Tiefenmatten glacier is much crevassed, and a good deal of the way up it is dangerously exposed to avalanches from the hanging glaciers on the Dent d'Erin. The last slope is very steep, and, at its most accessible point, where the party climbed it, is liable to be raked by falling séracs and stones. Nearer the Dent d'Erin the ascent would be less dangerous, but would require prolonged step-cutting. The height of the pass is about 11,550 feet, somewhat lower than the Col de Valpelline. The descent to the lower Zardezan glacier by its third eastern tributary, reckoning from south to north, was quite easy, and only took an hour and a quarter; so, instead of descending to Prerayen, the party climbed the rocks on the right side of the Zardezan glacier to the Col de Mont Brulé, and reached Evelena at 8 P.M. Guides: Jakob Anderegg and Hans Baumann.

In addition to being a very fine one, the pass has a melancholy interest as being the last imaginable new route out of Zermatt—the col between the two peaks of Monte Rosa and the still more dubious Col du Lion under the Matterhorn, of course, excepted.

LA SALLE, 11-936', and MONT PLEUREUR, 12-161', July 19.—The same party left the Liappey Alp at the head of the Val d'Héremence at 3.50, and, ascending by the grass and stone slopes on the right bank of the small Glacier du Petit Côte de Liappey, got on to its upper snow-field, and so reached the Col de Vasevey, leading to the Val de Bagnes at 7.10. Turning along the ridge, and cutting up a steep ice-slope, which might have probably been avoided by striking to the left below the Col de Vasevey, they attained the summit of La Salle at 8.45, and that of Mont Pleureur, still following the ridge, in 50 minutes more. Descending the eastern face of the mountain, which was entirely covered with snow, the party reached the Gétroz glacier in 45 minutes, crossed to its left bank below the ice-fall, and soon hit upon a track which, passing the Gétroz Alp, led them to the Val de Bagnes, where the inn at Monvoisin was reached at 1.30 P.M.

These peaks have more than once been climbed by members of the Swiss Alpine Club from Monvoisin, and Herr Weilenman is believed to have descended to the Val d'Héremence by the route above described, but the expedition is new to English mountaineers, and deserves to be better known.

FÜSSHORN, August 28.—Miss Brevoort, Messrs. S. P. Cockerell, and W. A. B. Coolidge, with Tschingel, a dog, effected the first ascent of the highest point of the Füsshörner which is visible from the Sparrenhorn, but not from the Bel-Alp Hôtel. Leaving the hôtel at 3.2 A.M., the party passed by the chalets marked Trist on the Federal map, and reached the highest group near the foot of the west of the two small unnamed glaciers. Mounting by stony grass slopes on its left bank, they followed a little valley between the moraine and the rocks of the Geissgrat, and reached the ice at 7.26. Thence, ascending the somewhat crevassed glacier, a sattel was attained at 11.13. Mounting the right-hand peak they found it lower than that to the left hand, which was reached by some steepish rocks at 11.40. This point is the one marked 3,666 mètres on the Federal map. The peak marked 3,746 mètres, and reckoned by M. Studer, in the 'Uber Eis und Schnee,' as the culminating point of the Füsshörner, is locally known as the Geisshorn, and is separated from the Füsshorn group by a well-marked depression. Therefore our peak may be considered the real summit of the Füsshorn. After enjoying the magnificent view (extending over the Pennine and greater part of the Oberland Alps), the party left at 12.25, and regained the hôtel at 5.34. The expedition thus occupied 14½ hours' slow walking, including numerous halts. Guides: Anton Walden and Franz Gasser.

EIGER-JOCH, July 5.—Miss Brevoort and Mr. W. A. B. Coolidge, under the guidance of Christian and Ulrich Almer, effected from the Little Scheideck the second recorded passage of the Eiger-joch. The ascent of the great wall, which was formed of ice with a thin coating of loose fresh snow, occupied three hours. Owing to very unfavourable weather, no view was obtained, and the party was forced to halt 5½ hours in a tent on the summit of the pass till the violence of the

storm subsided sufficiently to allow them to descend to the Mönch-joch hut.

EIGER, July 14.—The same party ascended the Eiger by a new route. From the Little Scheideck they kept close under the rocky ridge which encloses the Eiger glacier on the left hand, and gained a plateau at the head of that glacier. Turning to the left up a snow wall they reached the crest of the snowy ridge, so conspicuous from the H. Bellevue, following which they attained the summit of some steep and difficult rocks. Tschingel, our dog, accompanied us.

SILBERHORN AND JUNGFRAU, July 17-18.—On July 17, the same party ascended the Silberhorn, and, passing the night in the Silberlücke, the next morning attained the summit of the Jungfrau, which the dog reached also.

MATTERHORN, September 5.—The same party, with the addition of Nicholas Knubel, reached the summit of the Matterhorn at 7 A.M. by the Zermatt route, and descended by the Breuil route. This is the first time the feat of crossing the mountain has been accomplished by a lady.

WEISSHORN, September 10.—The same party, starting from a bivouac on the 'Kastel,' above Randa, made the second recorded ascent of the Weisshorn from the névé of the Bies glacier.

DENT BLANCHE, September 14.—On September 13, the same party crossing the ridge of the Col d'Hérens just below the peak marked 3,595 on the Federal map, bivouacked on the rocks at the foot of the southern arête of the Dent Blanche, and next morning attained the summit at 9.48, keeping below the crest of the jagged ridge, and re-joining the ordinary route from Bricolla at the point where the arête is reached.

BEITSCHHORN, September 20.—The same party, starting from a bivouac on the left bank of the Nest glacier, ascended the Bietschhorn by the northern arête, and descended by couloirs and ridges on the western arête. This line of descent is not recommended. It is believed that this is the first time any of the three last-named peaks has been ascended by a lady.

FROM THE HEAD OF THE GLACIER DE MIAGE TO CONTAMINES BY THE COL 'DIT INFRANCHISSABLE.'—Immediately upon the right or west as you descend from the Col de Miage to the base of the great ice-falls, an abrupt and formidable wall of rock rises precipitously from the Glacier de Miage, and separates it from the head of the Glacier de Trélatête, a narrow and broken arête of rock, which here and there gives place to an almost perpendicular couloir of snow, extends from the Aiguille de Miage on to the Aiguille de Trélatête, and forms the crest of this ridge or ice-shed. On the face of these wild precipices—

strange as it may appear—a silver-mine (*argentifère*) bearing was worked for many years, chiefly by speculators from Cormayeur, until the smallness of the gain and the large loss of life among the miners, owing to constant avalanches and falling rocks, compelled its abandonment. All that is now left to mark the site of these strange operations are the crushed and broken remnants, at different levels, of three wooden cabins, with occasional strands of rope and iron rivets, by aid of which the men pursued their perilous occupation. Every trace of the dangerous track that once just faintly indicated the direction which must be followed to reach the mines, has long been worn away, and the cabins themselves will probably soon disappear under the combined influence of storm and frost. The most elevated of these huts is perched at an enormous height above the glacier, and beyond it, as is believed, no one had ever ascended. Last year, however, Michel Clement Payot climbed to the summit with Mr. Eccles, and descended on the other side down the whole length of the beautiful Glacier de Trélatête to Contamines. Payot made the passage again this season with myself and one of his younger brothers, Alphonse, who came with us as porter, and as I do not think that any account of the pass, which is a remarkably interesting one, has yet been given, a brief note of the expedition may be useful. We crossed the Col from the chalets of Miage on September 16, and having descended on the southern side nearly to the bottom of the last steep ice-fall, crossed the glacier diagonally to the west, and then, by a rapid snow-slope and rocks, climbed for several hundred feet up to the second of the above-mentioned cabins. When Payot was there on the previous occasion, he had found it still entire, but winter storms had since done their work, and it was now a roofless ruin. With a little labour, a temporary shelter was soon built up again, and a blazing fire, for which ample material was afforded by the timber of the deserted huts and out-houses, enabled us to pass the night with sufficient warmth, and as much comfort as a resting-place on bare planks admitted of. We started next morning at a few minutes after five, but a thick mist which long hung about the rocks, and filled the valley, rendered it at first somewhat difficult to preserve a true direction. The limits, however, within which the ascent is practicable, are so narrow that it is not possible to diverge far without coming to a standstill. It must be made at some point between the cabin in which we had halted, and a broad steep couloir filled with snow to the south of it, which could only have been crossed at imminent risk, owing to the falling rocks that raked it with a withering fire. All the night through we had heard the dull thud of the rolling masses as they bounded down and fell with a sharp crash on to the glacier below. It took us rather less than three hours to attain the summit, and during the whole of this time it was good hand over hand climbing. The danger consists in the utter disintegration of the rocks, which causes vast splinters to crumble to pieces as you touch them, and sometimes a large boulder which looked firm enough to support a house would break away, and once dislodged would fall in three or four terrific leaps on to the glacier many hundreds of feet beneath. With rocks in such a state, it is clear that caution is

necessary, and it would probably be unsafe to be upon them except at an early hour of the day, and under favourable conditions of weather. At about two-thirds of the way up, we came close to the last of the three cabins, and crossed over to examine it. It is now nearly choked with ice and snow, but, with the adjoining sheds, is of considerable size, and it is extraordinary how the materials for its construction can have been got up and into position. We reached the Col at eight o'clock, and, the clouds lifting grandly off the mountains, had a splendid view. I imagine that the western face of Mont Blanc can from no other point be seen to such effect, and the out-look on that side is magnificently wild; while on the other, to the west, the Glacier de Trêlatête, falling away from the arête on which we stood, winds between fine ranges of rock and snow, and sweeps in a graceful curve round a distant promontory of cliffs. The descent is quite without difficulty; three hours of pleasant walking brings you to the Pavillon de Trêlatête. It is not easy to find a distinctive name for the pass as that which would most accurately describe it. Col de Trêlatête has been already twice appropriated. In some of the Swiss maps it is marked, probably on account of its evil reputation for falling rocks and avalanches, 'infranchissable;' but this designation is scarcely accurate, as it has now been crossed at any rate twice, though the name may be allowed to stand until a better one can be devised.

A. MILMAN.

THE ENGADINE AND NEIGHBOURHOOD.

PIZ QUATERVERS (10,358 feet), *August 7.*—Anxious to avoid the dull monotony of the drive up the Engadine, and to profit by a fine morning, François and I left the high road half an hour above Zernetz, just before it crosses to the left bank of the Inn. An indistinct track through a dense pine forest led us into the narrow funnel by which the stream of Val Tantermuozza makes its escape. We remained on the right bank until we had passed a corner where the forest had been destroyed by spring avalanches. The upper part of the glen is more open, and affords pasturage for a few sheep and heifers. Looking backwards, Piz Linard and the snowy peaks of the Silvretta are seen picturesquely framed between the golden-tinted crags of the ridges close at hand. The stream soon disappears underground, and it is necessary to climb over a waste of boulders and avalanche-débris, in order to reach the level of the upper pasturages, which fill a considerable recess at the back of Piz d'Esen, the sugar-loaf peak conspicuous from Scans. Here a fox, an animal I saw for the first time in the High Alps, scurried across our path. Judging by his leanness, Reynard had not found marmot-hunting on the mountains much of a success. The glacier of Piz Quatervers was now close at hand on our left; we avoided the ice, mounting by a long and tolerably steep snow-slope to the névé basin. It was difficult to feel sure from below which was the highest point of the range above us. We decided to lose no time in gaining the ridge on our left. The sun was just beginning to tell on the rocks

overhead, and to set them free from the fetters of the last night's frost. Showers of small stones took advantage of their opportunity, and whizzed past our ears at a pace which made us prefer a more difficult climb to the easy but exposed gullies. A few steps along the crest of the mountain brought us to the top of its northern peak, which it was now evident was considerably the highest. No traces of a stoneman were visible, and I have every reason to believe that our ascent was the first. The top of Piz Quaternals is a long and deeply indented ridge, falling gradually towards the south. The northern peak overlooks the heads of Val Cluozza and Val Tantermuozza (the glen by which we had come); the southern, which is much lower, lies on the watershed of Val Cluozza and Val Muschem, a branch of Val Trupchum. The easiest way to ascend the mountain is probably through Val Cluozza and the Valletta.

Piz Quaternals is the highest summit of the range enclosed between the Casana Pass, the Spöl, and the Inn. The panorama is therefore complete. The Bernina and Orteler are almost equidistant, and are both seen to great advantage. Between the latter and the Weisskugel there is an unexpected view of the Venetian Alps, amongst which the peaks of Primiero stand out very distinctly.

In order to descend into Val Muschem, we were obliged to scramble over the whole length of the final arête. Our way then lay down a steep face of rock and snow. The head of Val Muschem is enclosed by a cirque of precipices which render a direct descent into it difficult, and perhaps impossible. We were rewarded for our patience in bearing considerably to the left round the top of the cliffs by finding a snow-filled gully, down which we shot in five minutes to their base. The torrent-bed, often entirely choked by snow-avalanches, offers the best means of escape from this narrow and savage glen. After some tiresome walking a goat-track came to our relief, and we soon entered the broader Val Trupchum. Thence to Scansis is an easy walk over meadows and along a good path, which soon broadens into a car-road. Time—four hours up, three down.

PIZ ZUPO (13,120 feet), FROM THE ZUPO PASS, *August 14.*—The lowest point of the ridge between Piz Zupo and the Bellavista, was one of several points at which on the same day Mr. Tuckett, in one of his most rapacious moods, crossed the Alpine watershed. As however, he and his friends reached the Col from the south, viâ the Cresta Agiuza Sattel, and abandoned the proper descent to Poschiavo, to go in search of a third novelty, somewhere south of Piz Verona, there seemed something left to be done by a party who would content themselves with the one pass. Although the highest in the Bernina group, the Zupo Pass had never attracted any attention or been traversed in its entirety. It can now be recommended as enabling a mountaineer on his way from Pontresina to Poschiavo to go up and down the entire length of the two noblest ice-falls of the district, and to climb with singular ease a peak of over 13,000 feet.

The séracs of the Morteratsch glacier offered this year no obstacle, and we found five hours amply sufficient to reach the watershed from

the Boval hut. Leaving my companions, Messrs. J. G. and R. T. W. Ritchie, on the pass, Henri Devouassoud and I took to the ridge of Piz Zupo. For some distance we enjoyed an easy rock climb. About half way the character of the work suddenly changed, and we passed on to a gently inclined but narrow snow arête. Fortunately the snow was in such good condition, that we were able to tread it down under our feet into a sufficiently firm pathway. Holding our ice-axes as balancing-poles, we walked steadily but quickly along the beautiful crest, which continued to rise before us in wave-like undulations, each higher than the last. At length rocks appeared below us on the right, and in forty-five minutes from the Col we stood on the top of Piz Zupo, gazing down into the depths of Val Malenco. It was the first time the summit had been gained from this direction, all previous ascents having been made by the N.W. face of the peak. The descent to Poschiavo from the pass commences with a long and laborious tramp across the névé of the Fellaria and Palu glaciers. As soon as possible we struck down the centre of the latter, and, after dealing successfully with its four ice-cascades, quitted the glacier at its lower extremity for the meadows of the Palu Alp in less than three hours after leaving the Col. Our only difficulty was in the lowest ice-fall, where we were stopped for a moment by a small but smooth cliff. Henri Devouassoud proved equal to the emergency; and after lowering us successively by the rope, solved the problem of the last man's descent by using the porter as a buffer, and dropping judiciously upon his back.

TARASP AND PIZ PISOCH.—In the communes of Tarasp and Schuls, in the Lower Engadine, on the verge of Switzerland, and within a few miles of the Austrian frontier at Martinebruck, there issue from the ground on both sides of the Inn a number of mineral springs. Their properties are various, but the most in repute with patients are of a strongly saline character. Of late years a large bath-house—the largest in Switzerland, as advertisements continually inform us—has been built near to the principal sources.

The first disease on the long list prepared by the local doctor of those likely to be benefited by a course of the waters, is 'general fattiness.' Thither, accordingly, from the furthest parts of Germany, and even from Spain and Denmark, repairs a crowd of patients to seek relief from the bonds of corpulency to which nature or their own appetites have condemned them.

In short, if St. Moritz is, as Mr. Stephen thinks, the limbo of Switzerland set apart for the world—that is for kings, millionaires, and people who travel with couriers—Tarasp is its purgatory, providentially provided for the class whom the flesh has rendered unfit for such Alpine paradises as Grindelwald, or even Pontresina.

The bath-house, planted as it is beside the river at the bottom of a steep-sided trench, in a position very like a deep railway-cutting, is never, I think, likely to become a favourite resort of mountaineers. It is difficult even to feel mountain enthusiasm in an establishment tenanted chiefly by invalids or Italians whose walks are limited to the

extent of their own bowl's throw. The social atmosphere of the place is, as might be expected, not Alpine. The use of guides is unknown, as excursions are habitually undertaken in carriages, and have villages for their object; riding-horses for ladies are a rare luxury, and their owners attempt to bargain that they shall never be taken off the car-roads of the valley. But for the energy of Mr. Whitby, the resident English chaplain, mountaineering would be an unheard-of pursuit.

It is only fair, however, to say that travellers need not stay at the baths. They have the choice of two neighbouring villages, at both of which inns have sprung up of late years. Neither of these situations, however, struck me as attractive. Schuls, on the left bank of the Inn, lies on a bare hill-side, at a considerable distance from the commencement of all the pleasantest walks; while the 'pensions' at Vulpera, although better placed for excursions, look straight on to the dreary slopes behind Schuls—a prospect to which eyes accustomed to other Alpine scenery will scarcely reconcile themselves.

The neighbourhood of Tarasp is not, however, so wholly ugly as appears probable to the traveller who arrives at the bath-house by the high road. The slopes on the northern side of the valley remain, it is true, from whatever point they are seen, amongst the most naked and featureless in the Alps, and the knobs which crown the lower spurs of the Silvretta can only by an extreme stretch of courtesy be called peaks. But the natural features of the country on the opposite bank of the Inn are far bolder and more varied. There the ground rises above the river in a succession of wooded banks and grassy terraces, cut by the deep ravines of torrents issuing from wild lateral glens. Copses of birch and fragrant pine woods afford shelter to a host of rare ferns and wild flowers, while the sides of the path are garlanded with dog-roses blooming with a profusion and brilliancy peculiar to the spot.

On the lowest and broadest of the meadow-shelves or terraces stands the hamlet and castle of Tarasp; the latter a whitewashed building perched on a rocky knoll, and mirrored in a shallow tarn. Seen from a certain distance, it forms a picturesque element in the foreground. From this point, where an hotel ought to be built, a charming forest-path follows the right bank of the Inn to Steinhaus, and numerous sledge-tracks, commanding fine views of the stern limestone peaks which encircle the entrance to the Scarl Thal, lead to upper shelves of the mountain.

The Piz Pisoch, Piz St. Jon, and Piz Lischanna, are in their own way really fine objects, challenging of course no comparison with the snow-clad giants of the Upper Engadine, but rather recalling to mind the wilder portions of the Venetian Alps.

Piz Pisoch (10,427 ft.), the highest of the group, enjoyed for long a local reputation for inaccessibility, until, in 1865, Fluri took the trouble to come down from Pontresina, and, in company with a young native of Schuls, no longer to be found there, planted a flag on the summit. Some details of the ascent have been furnished for Herr Tschadi's 'Schweizerfuhrer;' and, I presume, it is on Fluri's authority that in

the new Grisons guide tariff the mountain is described as 'schwierig,' and taxed at thirty francs a guide. No one had followed Fluri and his friend until I climbed the mountain on August 3, this year, in company with François Devouassoud. Our experiences differed considerably from those of our predecessors, both as to the length and difficulty of the expedition; and the following directions will, I think, be found useful by future climbers. Turn off the road leading from Vulpera to Schloss Tarasp by a cart-track, mounting steeply at first, and then traversing meadows to the entrance of Val Zuort. At the corner take the higher of two paths, following a water-course until it reaches the stream. Cross, and ascend by an ill-marked track, which soon fails, and leaves you to find your own way through rhododendron bushes and over stony slopes beside the rocky barrier closing the glen. Climb the snow-slope above the barrier to the level of the Zuort glacier. A large snow-filled couloir now opens on the left, offering an unexpectedly easy means of surmounting the lower cliffs of Piz Pisch. Ascend the couloir for some distance, until above a slight bend in its direction a recess is seen on the left, with a small bed of snow in it divided from the couloir-snow by a bank of shale.

This spot is the gate of the mountain. A short sharp scramble places one on the rocks above the small snow-bed, and there is no further difficulty in climbing straight up them towards the gap at the northern base of the final peak. A few yards only before reaching it, turn sharply to the right, and, by keeping below the ridge and choosing with some care the easiest spots at which to pass a succession of low cliffs, the summit will soon be gained. The blindness and intricacy of the route form the only difficulty. If the right course is hit off, there is no hard climbing on the mountain; but the general steepness and abominably loose nature of its stony slopes render mountaineering experience or a good guide essential.

Of the panorama as a whole we saw and can therefore say nothing. The near view has a strong character of its own. The corn-fields and white villages of the Engadine enhance by contrast the savage effect of the wild limestone crags and gloomy glens which surround the peak on every side but the north. The drop from our feet on to the path which threads the defile of the Scarl Thal was absolutely terrific, and the precipices did not appear less tremendous when I looked up at them afterwards from their base.

The return to Tarasp may probably be varied without difficulty by turning to the left at the foot of the great couloir, and crossing by the col at the head of the Val Zuort into a branch of the Scarl Thal. Times—to foot of couloir, 3 hours; ascent of peak, 1 hour 45 minutes; descent to bath-house 2 hours 40 minutes.

VAL BEVERS.—The tour of Val Bevers may be rendered more complete and interesting by turning to the left (coming from St. Moritz) just before reaching the little tarn on the Suvretta Pass, crossing the ridge east of Piz Suvretta and descending over the glaciers of the Cima da Flix into the head of Val Bevers. A rope is necessary on the glacier.

THE TINZENTHOR.—From the Baths of Alveneu a most interesting path, unnoticed in guide-books, and unmarked even on the Federal map, affords access to the valley between the Tinzenhorn and Piz St. Michel. A series of ladders leads up the cliff beside the fine waterfall seen from the high road. The highest of them abuts against the mouth of a tunnel blasted through the rock. After groping through the darkness, one emerges in the gorge of the torrent, just on the brink of its boldest leap. The path climbs fearlessly into the wild ravine, and by a succession of ingenious contrivances, crossing numberless bridges and passing along wooden platforms, finds a way for itself beside or overhanging the roaring stream. It is throughout in good repair, and the only difficulty of the passage is an encounter in a narrow spot with one of the heavily-laden charcoal-burners for whose use it has been made and maintained. When at length the track leaves the waterside, it wanders for about an hour through a gigantic wild strawberry-bed.

From the opposite cliffs the stream bursts forth full grown, with a volume of water which recalled to us the fountains of the Lebanon. Beyond some untenanted chalets, built of massive unsmoothed pine-logs, the traces of a path become indistinct. Two steep ascents have yet to be climbed in order to gain the strange boulder-strewn wilderness which fills the space between the cliffs of the Piz St. Michel and Tinzenhorn. At the base of the latter lies a lake, the cobalt waters of which were flecked even in August with large patches of white ice. But a short distance from the lake is the foot of the great snow-couloir of the Tinzenthor. The slope is steep enough to require in places the use of the axe.

The western side of the pass has already been described in the Journal. On the present occasion we crossed a second pass over the ridge south of the Tinzenhorn, and descended to Bergun after a walk of seven hours through the most varied and romantic scenery.

MONTE DELLA DISGRAZIA.—So much has been written of late in Swiss Jahrbücher about the difficulties encountered and time required in the ascent of the Disgrazia, that it may be worth while to mention that on the same day I was on Piz Zupo my friends Mr. Tucker and Beachcroft, with François Devouassoud only as guide, reached the top of the Disgrazia in five hours from the highest châteaux in Val Sasso Bissolo. The final ridge, from the col beneath the Pico della Speranza to the summit, took two hours to traverse. Much of this time was spent in step-cutting.

THE ORTELER GROUP.—The remaining notes refer to the Orteler group.

It does not seem to be generally known, even so near the spot as at Pontresina, that the Stelvio road is now in thorough repair and crossed daily by two diligences during the summer months. A large new house is being built by the Ortelers at Trafoi, as a dependance to the old inn. A new inn, 'Gasthaus zum Orteler,' was opened this year at St. Gertrud, in the Suldenthal. The rooms were only half furnished this season, and the fare very rough, but the goodwill and intelligence

of the landlord made amends for many shortcomings, and give good promise for the future of his house. It stands in full view of the Orteler, on the meadows on the right side of the valley, immediately opposite the church and 'widum,' where travellers are still accommodated. The ascent of the Orteler, without local knowledge and with the snow-slopes in bad condition, took less than ten hours (all halts included) going and returning from St. Gertrud.

The most direct pass from St. Gertrud to Santa Catarina, is undoubtedly that between the Kreilspitze and Schrottenhorn, called by Lieut. Payer the Passo di Forno. In a snowy year, when the crevasses on the north side of the col are choked, it is easy even for a lady, and involves scarcely seven hours' actual walking. The name selected by Lieut. Payer can hardly be accepted, as the pass has no more connection with the Forno glacier than the St. Theodule with the Gorner. Passo di Cede, or Kreiljoch, may be suggested as more appropriate.

Ladies will be glad to learn that competent donkeys and a side-saddle may be procured at Santa Catarina. By such aid not only the Confiale, but the Tresero and Pizzo della Mare (Punta di San Matteo of Payer), are brought within the reach of moderate walkers.

The route over the Passo dei Tre Signori to Pejo, seems proverbially dull and monotonous, and Mr. Tuckett found it occupy eight hours. Mountaineers thinking of taking this road will do better, and only add an hour to their walk, by passing over the top of the Pizzo della Mare, ascending by the Gavia and descending to Pejo by Payer's route. The whole expedition is free from any serious difficulties, and offers a series of most glorious views of the Orteler and Adamello groups, besides the chance of a panorama unsurpassed in the Alps. Beware in the descent of being beguiled by a tempting path leading along the hill side to the left, which comes to a sudden end in a wood. It is better to go down at once into the bottom of Val del Monte.

DOUGLAS W. FRESHFIELD.

REVIEW.

TYNDALL'S HOURS OF EXERCISE IN THE ALPS.*

WE should perhaps have noticed Professor Tyndall's book sooner. Most of the articles, however, are already familiar to our readers; we know the history of his assaults on the Matterhorn, of his conquests of the Weisshorn, and of the various adventures in which he has proved conclusively that, if distinguished as a scientific observer of Alpine phenomena, he has no less claim to be distinguished as an active mountaineer. We may, however, briefly express our satisfaction that he has collected articles scattered in various places, where reference to them was more or less difficult. Some writers, perhaps, though we should have a difficulty in mentioning any name except that of Mr.

* *Hours of Exercise in the Alps.* By JOHN TYNDALL. London: 1871. Longmans.