keep up a line of communication, whilst the caravan at the head is occupied in seeking out and preparing the way. The base of the mountain is more than sixty miles from where we landed—sixty miles of ice, where thick fogs, snowfalls that conceal the track, or a fallen bridge, may delay the porters considerably.

The commissariat must be so organised that the foot of the mountain can be reached with food for several days in hand. The caravan of his Royal Highness had the fortune of being able to make the ascent immediately, but it could have waited from eight to ten days if the weather had proved bad.

From what we were able to observe from the summit of the St. Elias perhaps the best way of reaching the Col Russell would be to ascend to the upper part of the Seward Glacier, round the Corwin cliffs, thence to the foot of the west slope of the col on the Columbus Glacier to the foot of the col. Sledges could probably be taken; an advantage which, bearing in mind the difficulty found in carrying our things up the Newton Glacier, would more than compensate for the longer road.

During the ascent we were able to see perfectly well the great west ridge of St. Elias, which is broken down, and in part rocky. This ridge seems to separate the Columbus Glacier from the ice streams that descend on the S.W. side of the St. Elias, and flow down on the south toward the Pacific.

The south side of the Logan, being probably more than 12,000 ft. high, rocky, very steep, and apparently swept by avalanches of ice and stones, is not likely to be practicable.

Besides the photographic illustrations of the group we have explored we brought back a series of meteorological observations, continued for two months, and a mineralogical collection now under study.

Three New Ways in the Cortina Dolomites.

By J. S. PHILLIMORE.

MR. BROOME, in his interesting paper 'A Dolomite Holiday,' in 'Alpine Journal' for February last, concludes with a doubt whether Dolomites are real climbing at all; and I am afraid it is hopeless to contend that scaling the wrong sides of Dolomites is anything but a decadent perversion of taste. However, Dolomites have the effect of making other climbing appear quite insipid; and the comparatively insig-

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nificant heights of most of the peaks cause the climb itself to outweigh immensely all the other objects of the climb. The Dolomite climber is perfectly happy and content if he can get his 7 or 8 hrs. rockwork in the ascent of a thing which hardly gives you a clear view beyond the valley where it stands, when you are up. And I confess I know no kind of climb so fascinating and complete as to spend (as in the case of the Civetta) 11 hrs. on a really stiff face when there is a 'right side' to the mountain which you can trot down conveniently in four.

The Tofanas, like the Pelmo, like the Civetta, like almost every one of the great points of that region, are splendid mountains with a weak spot in them. Those who, thirty years ago, made the first ascents, quite naturally took advantage of the weak spots; for the object was to get up, and nothing else. But for the younger generations who follow, it is impossible not to feel that when you climb the Pelmo or the Tofana by the scree wastes where they have weathered, you are not playing the game. The Pelmo is a big thing—a thing which strikes and captivates the imagination when you see him from, say, the turn of the N. road into the Ampezzo valley, standing like a fortress-cathedral, gradually to get masked behind the Becco Lungo as you descend into Cortina. What one wants, then, is a climb up the Pelmo worthy of the looks of the Pelmo. You make it gratuitously difficult: quite true. You make shooting gratuitously difficult by shooting birds on the wing and not sitting. You make it worth doing: which must pass for the philosophy of 'wrong sides.'

The Tofana, hard though it be to get a really adequate view of his greatness and beauty, is a great and beautiful mountain; high enough to command a view from the Gross Glockner to the Adriatic, and standing within easy reach of the most frequented centre of the Dolomites. Yet, in 1896, the Tofana was climbed, I think, only three times: simply because the climb is no climb, but a mortal grind over unbounded screes. You can do the three Tofana peaks in a day from the Hut; but, as a matter of fact, you don't, because a climb is not worth doing which, like this, can be done by a man without hands and with only a roadster's feet. That being so, the problem was to find a way up the Tofana worth climbing—namely, up the faces and not by the slope. This problem my friend Raynor and myself devoted the second week of our holiday to solving. Antonio Dimai and Giuseppe Colli were our guides, and Arcangelo Dibona did not disdain to act as porter.

After the preliminary exercise of traversing the Sorapis by

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the greatly overpraised Müllers-Weg, and inventing an interesting variation on the Grosse Zinne, we went up to the Falzarego Hospiz on *August* 8. The landlord had reserved a room—the room, in fact—for us with such zeal that we could hardly get him to admit even ourselves when we came. The night was spent in listening first to a Polish officer (quartered on the Pass), who described with needless particularity the physical satisfactions of living at 6,700 ft., and then to a storm which made any attempt for the morrow audibly impossible. Fresh snow and a biting gale, however, suddenly ceased at midday, and in the afternoon we prospected with Colli from the biggest of the Cinque Torri, while Dimai and Dibona did so from a spur of the Lagazuoi. The Gran Torre commands both Tofana di Razes and Tofana di Mezzo. The partial view of the latter was much less encouraging than the nearer peak; and as we hoped to study it better from the top of the di Razes, we were more concerned with thinking how that vantage was first to be gained. Two chimneys of enormous length are here the landmarks—one very large, the other narrow, roughly parallel to it. Otherwise the S. or S.S.E. face seemed impracticable. The W. cliffs are considerably shorter, but of the kind known to Toni Dimai as 'only for flies.' The line of least resistance is the angle.

We left Falzarego at 4.40 next morning, *August* 10, and by a few minutes after 10 o'clock were on the top. The climb is given in brief detail in 'Alpine Journal,' No. 138, and there is no need to repeat it here. On the whole, we were rather disappointed not to find it harder; but you get 3 or 4 hrs. of respectable rockwork, and the route, mainly following an angle of two great faces of the mountain, is rich in sudden revelations of scenery and picturesque surprises. I think one might rate it as rather more difficult than the Croda da Lago; and, of course, the scale is bigger, the point better worth gaining, and the whole thing had an extra glamour of novelty. We were two hours on the top, waiting for Dibona and the boots: time to look well at the Tofana di Mezzo. Before us stretched an immense face of yellow and black rock, diversified in bulges and vertical stripes of colour; much the conformation that the concrete sacks of an Upper Thames towpath embankment present. The colour was suspect (it looks waterworked), the texture apparently slabby, the 'faults' by which one might hope to negotiate the long bulges, few and precarious. As you face it (looking rather E. of N.) the opposing wall is bounded to the left by the long couloir up which the ordinary way goes before turning round the sloped

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W. flank; and to the right by another, terminating in a natural rock arch, through which we saw a herd of a dozen chamois disappear after scaling the stiff débris slope in a long line at an enviable pace. The descent made by Messrs. Heywood and Mackintosh ('Alpine Journal,' 134), which has left a memory of awe among Cortina guides, was, I believe, near this extremity. Our line is quite at the opposite end, and only diverges from the ordinary way a few minutes short of the forcella.

In ¾ hr. from the top of the Tofana di Razes, by an exhilarating process of short glissades and ledge-jumps, we were at the Tofana Hut, with an afternoon to spend watching chamois, throwing stones at a cockshy, studying the very scanty entries in the book, and listening to an excellent story of Toni's about a Teuton who declared himself anxious to do the Tofana, Pelmo, and Antelao in a day, and eventually was shoved, with the butt-end of an ice-axe and great labour, up the Nuvolau instead!

We were off at 5.10 next morning, with the promise of a really fine day; and at 6.22 we took the rock a little below the forcella on the ordinary way. The face to be climbed can hardly in all exceed 1,200 ft.; 20 min. over a slabby shoulder brought us fairly to the wall. We trusted chiefly to a great projecting column, or, more properly, semi-detached buttress, which joins the face in a chimney, and is itself cut by another. The climb ran round this buttress towards the right, struck the latter chimney and followed it up; we stood on its capital at 7.50, after one very ugly piece of work, where you have to climb out, round, and up a bulge, on finger-tip holds, over something like a clean drop. Two or three yards of iron rope would make the place safe. From the top of the pilaster, where one passed really on to that main wall which had such an unkindly appearance, things became decidedly more tragical. First, one of those uncomfortable chimneys which fall away below, so that fourth man up, unless he is six-foot-three and a jumper, has to start by heaping a little ignominious heap of stones (and stones are few on a ledge only about a yard wide) before he gets within reach of any kind of a hold; then a malignant blockstone; and you emerged within some 30 ft. of the crest. But this conclusion of the climb has a most dramatic uncertainty, for it is a 30 ft. which makes one think seriously what it would be like to descend some parts of the way hitherto made. A chimney—at least, a vertical cut shallowly notched in a precipice, with a ridiculously small ledge for take-off. Toni started up it—and failed after about 6 ft.; the second try did it. The cut runs oblique, so

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that the correspondence from side to side of the chimney is extremely difficult. You wedge your back into the left side, which is broken into jagged downward points (almost every hold is a downward projection here), your foot scrabbles painfully on the right side, which is smooth, and opens at an awkward angle to the other. The great difficulties are the hollow roughness of your back-rest, and the impossibility of getting any purchase for the foot on the opposite wall because of its obliquity; and you cannot face the other way, because the right side would not hold your back from slithering straight out towards the Tofana Hut. The rock is not above suspicion; small pieces fall out on your head as you scuffle; probably a spiky bit catches your cap, and you lose it. We were all up at 9, on the crest; proud, but exhausted. We both agreed with Toni, that for an individual, picked bit of rock-gymnastic we had seen nothing like this last. The bad bit on the Delago Turm, which is no trifle, is not so bad; there you are climbing in a deep, close chimney; while here there is the most ample scope of descent outwards.

A trot of 20 min. to the top, then a great view, with an admirable sunshine for smoking in; and as we reflected upon Müllers-Wegs and Darmstädter-Wegs and the like, we saw no reason why this way up the Tofana di Mezzo should not be named 'Via Inglese'; and so it was. The descent to the Hut, a joyous proceeding of leaps and slides, took an hour; and we returned to Cortina in the afternoon.

The two expeditions are much to be recommended; they are most conveniently taken with a night between, slept at the Tofana Hut, because—though, as far as time goes, one could start from Falzarego, do both peaks, and regain Cortina in the day—the exertion of the di Mezzo climb is so great [out of all proportion to the length] that it goes better with fresh muscles and a matutinal enthusiasm. The guides were going to move the Ampezzo section of the D.Ö.A.V. to put a few yards of iron rope at the two cruces of the ascent. The ethics of iron rope need not here be discussed; one may say, though, that the climb would still be well worth doing. The Tofana Hut is quite a nice place to stop a night or so in good company. There is a pretty little pinnacle just behind it (the Punta Marietta), said to be a respectable climb; the scenery there, inside the Tofana, as you are, is very noble; and since Mrs. Potts, who owns the shooting, made the Tofana a refuge ground for chamois, one has the rare pleasure of seeing them in considerable numbers. I know some people think Cortina one of the most charming places in the world, if only there was more

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to climb from there, without going days' marches to get to your peak; the Tofana is an addition to the immediate resources of the place.

As we had the services of the incomparable Toni till the 15th only, we started in very questionable weather from Cortina on the evening of the 13th to try the Pelmo. Diligence to S. Vito; then a showery walk, to the tune of two thunderstorms, up the pleasing valley of the Orsolina, which brought us in 2 hrs. to an alp dairy known as the 'Tabia Corotto.' The various paronomastic significances of the name only appeared later. We had meant to sleep out beside a big fire, undeterred by an unhappy experience of such a bivouac at the foot of the Civetta three years ago. But, with all the goodwill in the world, you cannot start out wet through to a climb of this scale; so we accepted the hospitality of the inmates of the Tabia. The dairy is a fortress entrenched in a great rampart of fertilising substances; the inhabitants four men, three boys, two pigs, a puppy, a donkey, thirty cows, and minor fauna as the sand of the sea for multitude. All contributed in their measure to the compound miseries of a deplorable night. One had never perhaps properly realised before how important it is for repose that the bench on which you sleep should not have one plank 3 in. higher than the other, that a cow's tongue should not come through holes in the bedroom wall with a sound like a file, and that large obscene grubs should not fall at stated intervals from the woodwork upon your head. However, the morning was fine, and we departed with alacrity just before daylight, and before 6 we were admiring a glorious sunrise from the Forcella Forada. A great spur divided us from the Nevaio di Val d'Arcia; topping this by a pretty stiff hour's scramble, we were on a point of vantage to survey the Pelmo himself, full in face. He had still that wonderful air of a great castle which had first inspired our attempt when we saw him from the top of the Civetta, but we were surprised to see that the height of rock face was very much less than distant views suggest. Enormous wastes of scree and snow, filling the basin of the Val d'Arcia, encumber the foundations of a wall only some 1,200 to 1,500 ft. high, bounded by the Forcella Rossa (E.) and the deep cut between Pelmo and Pelmetto (W.).

But if the quantity of rock to be climbed was a surprise, the quality was a shock: a rotten cliff consisting of precipices, pale and sickly-coloured from the constant scaling away of stone, connected by narrow horizontal ridges heaped with their débris. We crossed the Nevaio, left our boots and axes

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with Dibona, to carry round by the Forcella Rossa and the ordinary way to the top, and at 8·15 were in the bergschrund, at the head of the longest of the snow couloirs running up into the rock, not far from the Forcella Rossa. Toni started up; and a nastier start need not be wished. A great wrinkle in the rock (too shallow and open to be called a chimney), polished by water and steeply pitched: the only real holds were got by jamming your fingers into the central crack, down which fell a small icy stream that ran straight up your arm as you levered yourself painfully forward. We were forty minutes doing 100 ft., measured by the rope. Colli's stature gave him rather an advantage in flinging out for footholds, but nobody thought it an agreeable place; and a rule-of-three sum for 1,500 ft. at that pace gave a discouraging figure.

However, we found nothing afterwards of the same order at all for gymnastic difficulty. This cold, wet place was at least sound rock; we now entered the region of rottenness, which extends in varying degrees up the whole climb. A minute description of the detail would convey nothing of interest or information. Now it was the broad, tilted basin of a watercourse, now a rib of the sugar-candy formation; straight pitches of crumbling face alternated with narrow traverses along encumbered ledges. For a continuous exercise of the balance and the climbing touch I know nothing like this climb, where you are constantly in the presence of—and, indeed, trusting to the good offices of—masses of insecure rock. Occasionally it was discouraging work, pulling away rotten piece after piece in the hope of eventually finding something to support even a part of your weight; but we experienced no spontaneous stone-falls. Long intervals were necessary, and while waiting one had splendid views; no place commands the Tofana face and the Cristallo to the same advantage.

We aimed generally for a high patch of snow, after which success seemed assured; short of this the only great landmark was a huge red pilaster crowned also with snow. Some way E. below this point we halted from 10·45 to 11·5, and exchanged stentorian counsels with Dibona, who had climbed up on a shoulder by the Forcella Rossa, to watch if it was worth while to carry up the boots and axes or not. Five hundred yards distance in an oblique direction rather disqualifies an adviser. Toni, quite unusually anxious, eventually picked his own line, and after a highly critical passage, consisting of an exposed shaly traverse of about 25 yds. and a disintegrated face, about 11·30 the rock improved a little. The

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red snow-headed pilaster was passed westwards; more of the same kind of work, diversified by a very stiff 8 ft. of chimney and a final exciting traverse, and at 12 o'clock we stood on the desired snow patch. From here onward the rock was better broken, and the traverse ledges less sensational. Pushing on briskly, we reached the crest at 12·50, emerging between the two most easterly of the three little blocks which break the horizontal line. A driving rain saluted us, and we sheltered under a rock till 2·13. Twenty minutes more along the ridge to the peak, where we had laughed with Giorgio Bernard seven years before at the idea of the North Wall being practicable. So do mountains degenerate. Still rain, though, and still no Dibona and no boots. So at 2·45 we took the first snowfield at a sitting glissade in kletter-shoes. Meeting our accoutrements at the bottom, we all hopped down cheerfully over the scree ledges to the once terrible Lange Band, and then, by a stony glissade over unduly hard snow, to the Rifugio Venezia at 4·25. Hence in an hour and thirty-five minutes S. Vito was reached in a deluge. This expedition is described with even greater rhetorical amplitude in the *Rivista Mensile* of the Italian A.C. for March.

The dangers from the condition of the rock make it impossible to recommend the climb as a regular way up the Pelmo, though parts of it are very interesting for their difficulty. The problem remains of finding a way not 'simplified for families and very young persons,' nor unduly risky. Such a way might very possibly be found up the E. ridge, starting from the Forcella Rossa. Meanwhile that North Wall is no longer an insult and a challenge to the mountaineering world.

Lofoten, 1898.

By HOWARD PRIESTMAN.

WHEN the mail steamers leave Bodö, on the mainland of Norway, the first point at which they touch in the Lofoten Islands is the little fishing town of Svolvaer and it was there that Messrs. Woolley and Hastings and I landed near the end of July last year. We had travelled as fast as possible from England and had occupied exactly six days on the journey. During that time we had only spent one night ashore, at Trondhjem, and a few hours in Bergen.

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