

rounded by these pinnacles on every side. It was one of the most wonderful places I have ever seen; even Gustave Doré, in his wildest dreams, could scarcely exaggerate their fantastic forms. The path winds constantly upwards among this strange scenery till the highest hermitage is at length reached. We left the animals, and climbed the last 50 feet on foot to the highest point of the group. From the top there is a fine precipice on the north side, and a stone dropped clear would fall plumb for about 1,000 feet; but the picturesqueness of the mass is lessened, as one stands above most of the obelisks. On the other hand, there is a glorious view of all the surrounding country; the sea and Barcelona were visible in the distance, and innumerable towns and villages scattered over the low hills and plains of Catalonia. Murray speaks of the view extending to the Pyrenees and the Balearic Islands, but that, I take it, must be early in the year, and not in the haze of a June morning; yet at all times of the year a visit to Montserrat must be full of interest, repaying one even for a night of the discomforts of the monastery. There are a number of stalactite grottoes in the mountain, but these we were unable to visit, as we had to hasten our return to Barcelona in order to catch the steamer for Palma, in the island of Majorca, where we saw the much more wonderful grottoes of Artá and Manacor.

NOTES ON OLD TRACKS. BY DOUGLAS W. FRESHFIELD.

V. The Gorges of the Roja and Spur of Turbia.

THE Col di Tenda is fully honoured among the great Alpine highways in Brockedon's classical 'Passes of the Alps.' That it is so little known to the present generation has been doubtless in part due to the nature of the only road between the pass and the sea. It crossed three dull and arid spurs in wearisome zigzags before reaching Nice. The diligences occupied twenty-three hours between that town and Cuneo.

Now, however, though the new road will not be completed for another twelve months, the route from Ventimiglia to La Giandola along the gorges of the Roja may be considered open, as the break is of only two miles, and a regular correspondence of public carriages has been established on both sides. The distance from Ventimiglia to Giandola is about seventeen miles. About five miles from the sea the valley of the Roja is contracted between steep rocks, and from this point to Tenda the basins of La Giandola and San Dalmazzo are the only openings in a continuous defile which by the grandeur and (what is rarer in ravines) the variety of its scenery well deserves a visit even from those who know all the gorges of the Central Alps.

The lower part of the valley shows in its vegetation the nearness of the Midland Sea. Oleanders grow in the torrent-bed, the hill-sides are swathed in olive groves. At long intervals a white Italian hamlet spreads itself out amidst verdure on some level spur or shelf above the defile. But the slopes are too often bare and arid, and it is only where great fountains burst out of the rocks and stream down to the Roja that bright green brakes and thickets refresh the eye. At some time,

however, the lower defiles have been better planted and irrigated. Whole hill-sides, on which not a stick now grows, have been artificially terraced from crest to base. It is not till the outer range of the Maritime Alps, that which is pierced by the river between San Dalmazzo and La Giandola, is passed that the climate becomes Alpine. At Ventimiglia the summer of 1882 had been rainless, at Tenda, as elsewhere in Western Europe, the reverse. Despite occasional sterility the general character of the lower gorge is extremely picturesque. The course of the stream is curiously sinuous, so much so that the road-makers occasionally cut off half a mile by a tunnel a hundred yards long through the projecting spurs of the mountains. As the frontier is approached the cliffs above the Roja become higher, and the village of Piena appears perched at an amazing height on the left. Here the road remains broken, owing to the nervous indecision of the French military engineers, for whom its dangers and advantages seem to have been as nearly balanced as those of a Channel Tunnel to ourselves. They have at length withdrawn their opposition, and if the work is not interfered with afresh by the retrenchment in all public works which has suddenly (not to the surprise of those who have watched the lavishness and little judgment with which they had been undertaken of late years) been found necessary in France, carriages ought to be able to pass before 1884 is over, if not sooner.

At the end of the lower defiles, completely commanding the approach from the north, stands the town of Breil, a singular specimen of a mediæval human hive. Its long street salutes the passer-by with the most offensive combination of pungent damp smells imaginable. A mile or so farther La Giandola is reached, and the old road from Nice rejoined. The upper gorge between this point and San Dalmazzo is grander and more Alpine than the lower; chestnuts, in early November a sheet of tawny gold, replace olives; the rocks are as abrupt as in any Swiss defile. Their special characteristic is their fantastic boldness of form, as they rise tier upon tier, crested with towers and pinnacles, towards the sky. The road keeps throughout close to the Roja. One of the most striking scenes (see Brockedon) is where the town of Saorgio appears stretching crescentwise on the top of cliffs which expand in front of it into an amphitheatre and leave room for slopes of olives.

The 'Pension' at San Dalmazzo was closed, so I went on to Tenda itself, a long two miles higher up the valley. There I learnt that in August last the bold project—so long interrupted—of Anne, Duchess of Savoy in the fifteenth century, and of Victor Amadeus in 1782, had been at last carried into execution, and that the diligences, in place of crossing the ridge of the Col di Tenda, now traverse a tunnel three kilomètres long under the mountain. It is lighted throughout with mineral oil lamps, and is said to be dry and convenient, if not beautiful. Pleasure travellers, however, must regret the apparent dangers and noble views of the old corkscrew zigzags.

My intention in my visit to this district last November was to visit the Laghi delle Meraviglie* and cross to the Vesubia valley. The first

* See *Alpine Journal*, vol. ix. p. 394.

stage in this walk was the 'Miniera,' a lead mine, worked since Roman times, in the same glen as the lakes. The path to it starts from S. Dalmazzo, and is at first the same as that to Mont Clapier. The valley through which it lies is wild and savage. The rock is granite, the vegetation consists of chestnuts and firs. Opposite the junction of the torrent coming from Mont Clapier a steep ascent to the left leads to the level of the glen, at the head of which lie the Laghi delle Meraviglie. The Miniera is soon seen close at hand ($2\frac{1}{2}$ hours from Tenda). Its height is 4,900 feet above the sea.

Here, to my astonishment, I was greeted in English by the first man I met. He proved to be the Superintendent in charge, a Devonshire man, living up here with his wife and children. They remain at the mine through the winter, often cut off for a fortnight from all communication with the outer world, as the path down to the valley is, after heavy snowfalls, very dangerous. In autumn the Superintendent amuses himself with chamois shooting, and his children in climbing Monte Bego (9,426 ft.), the summit of which, rising behind the mine and between the two sources of the Roja, commands a noble panorama. A mountaineer or sportsman might doubtless obtain quarters here for a few days. The last guest had been the officer engaged in preparing the new map of the Italian Alps. *The rapid progress of the publication of this survey deserves to be brought prominently before the notice of mountaineers. By calling at the Royal Geographical Society's Map-room, access to which is free to the public, they can ascertain what sheets are issued and inspect them, and can then obtain what they want direct from a bookseller at Turin, or through Messrs. Dulau or Stanford's. It is well, perhaps, to mention that to several inquirers last year (including myself) Messrs. Stanford's assistants persistently denied the existence of any such map, and I cannot feel sure that the trouble I took to convince them of their error has been effectual.*

The Engineer assured me that it was useless to go in search of the Meraviglie, as the inscribed stones being flat (I gathered from his description, *roches moutonnées*) would be covered with snow. He further warned me that all issue from the glen across the mountains was impossible, owing to the quantity and hardness of the snow, which was lying down to the mine, or as nearly as possible at 5,000 feet. As to this matter I preferred to make my own experiment, only modifying my route so as to cross a gap in the range separating this valley from the next tributary of the Roja on the south, whence the map showed a terrace path leading to the passes into the Vesubia valley and the high tracks which run towards Sospello along the spur that ends at Turbia, and was rightly recognised by the Romans up to the time of Augustus as the proper geographical frontier of Italy.

For a mile or two above the mine the glen is nearly level; then it is closed by a rocky barrier, above which lie the lakes: at this point a hollow surrounded by steep slopes opens on the left. For some time I got on very well over the hard snow, but the steepest part of these slopes was as much as I could manage. The risk of a slip was so considerable that I was only able to go on because the slope was unbroken by rocks, and to fall would therefore have been innocuous. If any one likes to

go up the Mur de la Côte when it is in good condition, with an umbrella in place of an ice-axe, he will realise the interesting, if unprofessional, nature of my situation. I had to tread very delicately, to avoid all attempts at spurts, and now and then to use my elbows as anchors, or to dig in my umbrella with more than Gampish energy. Some chamois-tracks assisted me near the top. These animals, I find, habitually, unless when alarmed, take the easiest line, a fact rather contrary to popular belief. On the further side of the pass (the height of which is about 7,500 feet) my chamois had followed the regular path, now snow-covered, and rendered me considerable service by indicating its direction. Leaving on my left a tarn (Lago Giugale) which might well give a name to the pass, I traversed for a long and fatiguing two hours the white slopes towards the main spur separating the basins of the Roja and the Vesubia. These slopes are that part of the chain seen to the east from the neighbourhood of Cannes, and identified on the Panorama * as the Col di Tenda, which, in fact, they screen from the south. In summer they are frequented pastures; now they were a silent white desert, and it was difficult to admire the sea view and at the same time keep footing where the groove of the path had been smoothed over by the recent fall. A descent brought me to a point where a track on the right leads to the Col de Raus and a branch of the Val Gordolasca, another on the left to a lower pass (Baisse de St. Véran, 6,020 ft.) communicating with the Vallon de Planchette, a glen opening into the Vesubia close to the village of Bollena, $\frac{1}{2}$ hour above Lantosca. I chose the second pass, and found a steep path down into the valley by its northern slopes. Had I taken the almost pathless hill-side on the south I should have done better, as I had to climb up a few hundred feet to gain the main track. This, a good narrow timber road, apparently of recent construction, runs at a great height above the left bank of the torrent, which flows in a deep and savage gorge, in parts still finely timbered. I reached Lantosca by this route in about $3\frac{1}{2}$ hours from the pass, $9\frac{1}{2}$ hours (actual walking) from Tenda. Had the days been longer and the snow less tiresome I should have preferred to keep along the crest of the spur until a path led me down to Sospello. The terrace paths among these hills necessarily command glorious views. One of their heights (L'Aution?) appears to be crowned by a hill-fort or fire-beacon station similar to that on the Monte Bignone, above San Remo.

I strongly recommend any one who can spare time and energy for a day or two's walk from the coast at times when the higher peaks are dangerous, to investigate the gorges of the Roja and the hills which form what, from its seaward height, I may call the spur of Turbia; and it is in the hope of attracting one or two lovers of mountain scenery to these solitudes that I have penned the foregoing dry summary of my walks.

Both at Tenda and Lantosca I found fair food and good lodging.

* *Alpine Journal*, vol. ix. p. 385. The gap of the Baisse de St. Véran is conspicuous in this view.

At San Martino Lantosca there are now two good hotels, guides, and, during the summer months, an English chaplain and congregation.

It may be as well to add, in chronicling a solitary walk, that I have no idea of setting up a new form of adventure—'mountaineering without companions.' I have made, it is true, several minor ascents alone of late years, but on such occasions I never 'mountaineer.' In fact, I am ready to go round a mile in order to avoid the smallest real difficulty.

REVIEWS AND NOTICES.

Zeitschrift des Deutschen und Oesterreichischen Alpenvereins (Vienna).

Parts I. and II. of the series for 1882 contain various articles indirectly connected with Alpine matters. The most interesting, perhaps, is the one by Dr. Koch, in which he discusses the limit at which the internal heat of the earth will render the construction of tunnels impossible.

In matters more strictly Alpine, Dr. Ilwof contributes a short notice of the Archduke John of Austria, uncle of the present Emperor. He was born in 1782 and died in 1859. Throughout the whole of his life he was an ardent lover of his native mountains, and nearly every year traversed some portion of them. Though not much of a mountaineer, measured by the present standard, for his time he was remarkable. He advised, and in a measure brought about, the first ascent of the Ortler, by Pichler, in 1804. He himself ascended the Hoch Goll in 1819, the Hoch Schwab in 1820, and made an attempt, which nearly succeeded, on the Gross Venediger in 1828. When upwards of seventy years old he was still active on foot, and in the year 1858 shot upwards of twenty chamois. Dr. Minnigerode made an ascent of the Federer Kogel and Kessel Kogel in one day from Tiers. In opposition to Mr. Tucker and others he maintains that the latter is the higher.

Herr Euringer gives an account of ascents of the Elferkofel (10,089 ft.) and Zwölferkofel (10,122 ft.), near Sexten. This group seems to have been little visited by English mountaineers since Mr. Holzmann's time. He ascended the northern and lowest slope of the three peaks of the Elferkofel. The second and third can only be reached from the gap between them. From this the western peak is easy, but the eastern requires a difficult climb. It was first climbed by Michel Innerkofler, of Sexten, in 1879, and seems only to have been climbed twice since by tourists. The brothers Zsigmondy attempted it from the gap between the Elferkofel and Rothwand, but were turned back by bad weather. The Zwölferkofel was first ascended by the brothers Innerkofler in 1874. Only five ascents are said to have been made since. The difficulty varies much with the state of the 'Eisrinne' (couloir), which affords the only means of access. It is from 8 to 10 metres broad, with perpendicular walls, and rising at an angle not far from 60°. Here Mr. Utterson Kelso, in an attempt on the mountain some years ago, met with a severe fall.