

THE

ITALIAN VALLEYS

OF

THE PENNINE ALPS:

A TOUR THROUGH ALL THE ROMANTIC AND LESS-FREQUENTED
"VALS" OF NORTHERN PIEDMONT, FROM THE
TARENDAISE TO THE GRIES.

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WITH ILLUSTRATIONS FROM THE AUTHOR'S SKETCHES, MAPS, &c.

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seamed with glacier streams, and dotted with patches of snow. The Glacier of Tschelletta is beautifully seen in its full extent of dazzling purity, from its snowy cradle down to the foot, with only one medial moraine, which brings down but little *débris*, hardly showing until it discharges itself over the edge. Mounting a steep ascent towards a few châteaux, from which is a magnificent view back of mountains, glaciers, lake, and moraine, at the top is a long wild valley, the bottom a flat stony level, and probably once a lake also. Passing under the remarkable "Pyramides Calcaires," one of the most prominent features of the pass, we found the head of the valley closed in by the connecting ridge, between the ranges of mountains on each side of the valley, uniting the Pennine with the Graian chain. The rifts with which its shaly surface is deeply scarred are of a remarkable blue tint, staining the snow which veins them, of the same colour.

At 2 o'clock we got up to the snow, and, crossing a little stream, the source of the Doire, reached the summit leisurely in half an hour. Since noon "brouillard" had partially settled on the mountains, but it cleared enough to show us the splendid view backward, perhaps enhanced in grandeur by the great masses of cloud which overcanopied without concealing the highest peaks, and cast a gloomy shade on the valley, deepest in the far recesses of the distant Val Ferret. The Lac de Combal below us was of an unearthly greenish blue, while the mass of moraine seemed to lose nothing of its enormous size in the distance. The Col divides Piedmont from Savoy, and the snow on which we stood was slowly melting away, its waters streaming down as chance inequalities in the ground directed—either to the western side, where the tributaries of the Isère carry them down to the Rhone, ending at last in the stormy Gulf of Lyons—or on the other to the Doire, and thence by the Po and the still Lagune, to wash the sea-girt palaces of Venice.

We stayed on the Col as long it was endurable, the air

being now bitterly cold, and then began the descent of the other side towards Chapiu. Traversing a dreary moorland tract, the path lay far below us at the bottom of the savage and desolate Val de Bellaval, without a vestige of a tree, the gloomy mountain-sides deeply furrowed with watercourses; and the blue colouring of the shaly rocks very remarkably combined with the fields of snow and patches of scanty verdure. Over the distant and lower slopes of green pasture opposite they were assembling the cows to the "Ranz des Vaches," a series of five rows of little hollows in the turf, where the cows to the number of 120, as I counted them with my telescope, were picketed for milking. It was early in the day, but the milking hours at the châteaux of the high Alps are 7 A.M. and 2 P.M.; in the winter 8 A.M. and 6 P.M. The breed of cows in this valley was unusually distinct, some of them extremely pretty animals, small, and resembling the Guernsey in many of their points.

The Glacier of Mottet, descending from the fine Aiguille du Glacier, the extreme outlying peak of the Mont Blanc chain, rests on a slope of high red rocks, on the north of the valley, its bright-blue crevassed ice pure to the very edge. While we were admiring its beauty, a magnificent lammergeier rose slowly from the crags above, and soared for a long time over the valley in wide graceful curves, looking of immense size even in such grand scenery. Not a marmot's whistle was to be heard while their enemy was in sight. The precipitous descent was by rubbishy hills of decomposing black shale, barely covered with a little moss, and extremely steep for a mule. As I raced down them full speed I was unexpectedly joined by a flock of goats, who clattered down after me, sending stones and rubbish flying about my ears, and I had some trouble in getting rid of them, so anxious were they for the expected salt with which the shepherds coax them, licking my hands as soon as I let them approach.

A deep gully or fissure just above Mottet shows an excel-

oxide, and a considerable stream which runs from it tasted strongly of iron.

The mountain formation along the pass of the Little St. Bernard, from Scez to St. Didier, is of a varying schist, more or less micaceous, quartzose, or calcareous, becoming in places a kind of rough marble or "cipolino." Beds of gypsum occur throughout, lying between or upon the schistose strata, especially on the right side of the pass from Scez, and are a very remarkable feature of the geology of these ranges. Sometimes they are of great thickness, even forming lofty masses of almost pure white gypsum, as at the Rocher Blanche, and may be traced continuously from thence to La Thuile; and I afterwards observed the same beds cropping out to a great extent at the base of the Cramont at Courmayeur, between that and Mont Chétif; and again in the heart of Mont Carmet as seen from the summit of the Montagne de la Saxe. It was interesting to me, accustomed to associate gypsum with the fossiliferous sedimentary beds of the Eocene and other periods, to find it here imbedded amongst the mica schists and gneiss of the metamorphic rocks, its almost indestructible nature having resisted the igneous influences which acted so powerfully on them.*

The scenery on the Aostan side was dreary and uninteresting, and I suffered so much from my sprained knee in the descent that I was glad to get down to La Thuile, only stopping to look down into the deep dark chasm in the calcareous rocks, which is crossed by the Pont Serrant, 150 feet below which gushes the torrent of La Thuile.

Before entering the village of La Thuile we turned aside down a lane to a newly established auberge, the "Croix Blanche," recommended by Otto. It was only half furnished, and dreary enough, but bore the marks of better

* Gypsum also occurs in the same formations, on the range between the Val Fenis and the Val de Cogne; and at Bellinzona and Airolo.

days, family portraits still hanging on the walls, and a once gilt console-table and frescoed ceiling, with cupboards, presses, and old oak lumber, all about the rambling passages. As we were told, it had been the old family mansion of the once wealthy Jacquemots, but the servants left in charge by the owner, who had gone to Aosta to buy furniture, could tell no more. After a very long delay, during which a **marmot** was brought for sale, we got some supper, which was a series of little "plats" burnt or watered, and perfectly useless as food; but at length came the omelette originally requested, our never-failing resource in all out-of-the-way quarters where eggs were procurable, and as usual it was a good one. Next morning each "plat" was charged separately as culinary masterpieces, and for a bottle of bad "vin ordinaire" 8 francs. I wrote out my own bill, reducing it one half, which was at once taken, with some good advice on behalf of future travellers and for their own interest.

We rose at four, a glorious morning promising a clear day for our intended ascent of the Cramont, and we started as the rising sun gilded the snow-peaks above the calm cold grey glaciers of the Rutor, of which we now had a most exciting view. To explore these magnificent glaciers La Thuile would make good head-quarters, and I much regretted leaving them unvisited. The Baltea torrent springs from this vast ice region, and joining the Doire at St. Didier they flow together through the Val d'Aosta under the joint name of the Dora Baltea, or Doire Baltique, thus distinguished from the Dora Riparia running from Mont Genève to Turin, both rivers ultimately debouching into the Po. It is worthy of remark that in the name Doire we have probably one of the few remains of the old Celtic language now traceable in this country. The word is the same as "dour," and our own Gaelic dùr, meaning water, and is to be found in the names of numerous

CHAPTER IV.

VAL D'ENTRÈVES.

Courmayeur — Arrangement of plants — Bouquetin — Mineral springs — Visitors — Game — Trout — Fruit and vegetables — Gressins — Ascents of Mont Blanc — Montagne de la Saxe — Ascent of, and view — Cheese châteaux — Attractions of Courmayeur.

THE remainder of our time at Courmayeur was fully occupied in exploring its immediate neighbourhood, and assorting and packing dried plants, and other accumulated specimens; a work of some time, as it was necessary to put them into the smallest and most convenient compass for transport. The plan we adopted for plants, with great success, was, placing them in folio sheets of drying paper, between two extra stout milled boards of the same size: these, when bandaged tightly together, were slipped into the water-proof oilcloth saddle-case, with the wraps on the top of it, so that when travelling it rested flatly on the mule's back, behind the saddle, secured by rings and cord; and the heat of the animal materially helped to dry the plants. When we halted for the night our fresh collections of the day were arranged, the paper dried by the portable flat iron, and the whole piled with large stones. In this way every one of some hundreds of specimens reached home in good condition.

Bertolini brought me some chamois and **marmot** skins, and among them I was extremely glad to get hold of a skin of the bouquetin or ibex, the steinbock of Switzerland, though unfortunately without the horns. He had been asked 60 fr. for the carcase of the animal by the chasseur who brought it, and 50 fr. more for the horns, which latter he had refused, and they must have been but small, as it was only a young

of knapsacks, apparently containing the whole wardrobe; marmot-skins, and rows of carved spoons curiously arranged. The herdsman himself was graced with a singular appendage, in the way of a tail, which had a droll effect. His milking-stool, consisting of a stout wooden peg fastened in a curved piece of wood accurately fitted as a seat, was firmly tied on behind, wagging like a stiff wooden tail as he walked about. This caudal appendage, apparently a fixture, explained the absence of seats, while the hay-shed supplied ready beds without the trouble of making. When out with the cattle on the distant pasturages, they build little kennels half sunk in the ground, and covered rudely with flat stones, into which they crawl, and lie coiled up during bad weather. One would be inclined to imagine it a most monotonous dreary life; but, on the contrary, they are all very fond of it, and pine for the free life of the "Alps" when down in the valley.

I had wished to descend on the other side of the mountain from that on which we had ascended, and allow time to examine the singular tunnels or mines called the "Trous des Romains," extending a great way under ground, and anciently worked for a lead-ore containing silver, but now exhausted. Our cowardly muleteer, however, was so terribly afraid of the steepness on that side, and the alleged difficulties and dangers of the descent, that I did not insist on his doing so, which I afterwards regretted, having no other opportunity of visiting these mines. We had, however, the advantage of the grand view of the range of Alps, which is lost on the other side.

The ascent may be easily made from Courmayeur in 2½ hours, and even in much less; and it is surprising how little it is known and visited by travellers, being of such comparatively easy access, and commanding so magnificent a view.

It was starlight when we again reached Courmayeur. Jupiter shone brilliantly over the Val d'Aosta—our route on the morrow. The evening air was deliciously cool and

by smugglers. But it was more probable that his body had been found and rifled by persons who would not mention having seen it, for fear of detection.

The day was most magnificent, a continuation of the unexampled fine weather we had enjoyed; but the heat was intense, and we were not sorry when Barailler unexpectedly appeared in the afternoon, bringing with him a flask of wine sent by the curé of Biona, and which he had thoughtfully stopped to ice in the gelid glacier torrent. Towards evening a heavy thunderstorm swept over Mont Gelé, and cooled the air, just catching us for a few moments, almost the only rain we had for an unrivalled duration of the most splendid weather ever known in these Alps. We took refuge in the châteaux of Prerayen, which we found much more civilized than those of By, and with a very comfortable hayloft for sleeping in. In a large milk caldron was a fine tame **marmot**, the shepherd's pet. The cheese-room, a cool spacious vault, partly underground and nearly dark, was well stored with cheeses in rows—and on one shelf were a number of great globes of butter from goats' milk, raised on stumpy stalks also of butter, and resembling Brobdignag button mushrooms. I noticed that the coarse grey salt for the cheese was ground in a primitive quern, of genuine Celtic pattern.

Seventy cows and a flock of sixty goats are pastured here. We remarked the rarity of sheep on these Alps generally. In the Val Pellina but one flock of about a score was seen by us; black and white, and oddly mottled, and of a coarse breed. They are awkward animals to manage in the high Alps, where only they thrive best, and are chiefly valuable for their flesh and wool, being rarely milked anywhere—except in the case of the Bergamesque sheep, immense flocks of which are pastured in the Alps of the Grisons. The goat is a much more intelligent and tractable animal, attaching itself to man with great fearlessness and audacity, a handful of salt being sufficient to cement a permanent and not very

man. His companion was of a different stamp, thickset and sinister looking, and kept dogged silence. Their dress—coarse brown home-spun and woven woollen, with stockings and shorts of the same, and leathern skull-cap—assimilated so well in colour with the rocks, that it was not easy to distinguish them at a distance. Each carried a double-grooved rifle slung across his shoulders, of the rudest and plainest make, and very short in the barrel, but the thick blood-stains which smeared their dress told of the good service they had done, and of many a chamois and **marmot** killed and brought down on their backs from the mountain heights.

After depositing the chamois at the châteaux, they returned once more to the mountains, and, as our way lay together for some distance, I had a long chat with Sismondi, whom I found as simple and modest as he was intelligent. His whole life was spent in the chase, and there was not one of the craggy fastnesses around us which he had not scaled again and again in quest of chamois and **marmot**. I have rarely seen mountain rocks piled one on another in more fantastic contortions and wild confusion than the splintered peaks of Mont Faroma—the central point of the range—and I could not discover ledges enough for footing for a goat. Yet Sismondi pointed out many places on the pathless cliffs where he had met with perilous adventures in climbing down, with chamois on his back, and which seemed almost incredible, though they were told in the simple and convincing words of truth.

When the chamois and **marmot** season is over—which lasts from July to the end of November—they followed smaller game, such as hares, blackgame, foxes, &c., until the green herbage left by the melting snow afforded fresh food to bring the chamois into condition, after feeding all winter on the long-bearded lichens of the pine forests. He confessed, indeed, that, though chamois found a ready sale at Aosta,

sown in the beginning of August, and, being covered all winter by the snow after it has attained sufficient strength, does not reappear until the next spring, and is rarely reaped before September or October, thus occupying the ground some fourteen months. A few steps higher the limit of grain-crops was passed, and mounting a grassy ascent the larch also soon disappeared. That beautiful little fern the *Botrychium lunaria-minor* was plentiful on both sides of the pass, and some of the pairs of fronds, in perfect fructification, were not two inches in length. **Marmot**-holes were abundant, and numbers of them are caught and shot in the season, the end of autumn, before their hybernation, when they are covered with fat, which is much esteemed. The flesh is excellent.

The Val d'Ayas below us was perfectly clear to its head, round which, half-way up the mountain-side, was a continuous horizontal line, the course of a water-channel supplying St. Vincent with the clear stream which had refreshed us the day before on the Col de Jon. Wild greyish-blue heights closed in the valley, with glimpses of glaciers, while, down below, the slopes of Ayas were bright with the ripe crops of grain.

Still the mist hung heavily on the higher mountains, and after our pleasant young companion Baptiste had turned back, Berthon got frequently astray; but through the clouds we caught sight of the Col for a moment, and at last made tolerably straight for it. Occasional glimpses showed themselves of the glaciers and lower western range of Monte Rosa, above a vast wall-like ridge of rocks running up to the summit of the Col. Behind this is a difficult pass, called the Passo di Bettolina, best approached from the glacier of Verra, described to us as only a chasseur's path, but the view from it very fine.

Above us, on the right, we ought to have seen the Bett Horn, which faces the Lyskam peak of Monte Rosa, but whirling mists enveloped it, all but the stern sides over which

Certainly nothing gratified the people more than taking up our quarters with them until we had thoroughly explored each district, and it made us many friends.

Amongst the numerous excursions and objects of unusual interest about Gressoney, the ascent of the Grauhaupt, a wildly grand mountain on the west side of the upper valley, had the greatest attractions for us, as, though a difficult and arduous enterprise, it was still within E.'s powers of accomplishment, and from its position necessarily commands a most magnificent view of Monte Rosa. Beside this was the glacier of the Lys, under the Lyskam, and a view, said to be very fine, from the Combetta, a mountain above the Col de Ranzola. By the Col d'Ollen or the Col de Val Dobbia we intended crossing into the Val Sesia. Our first walk was to Noversch, to visit Herr Zumstein, the well-known ascender of Monte Rosa, and one of the first who gained any of the summits of that mountain.

A dull threatening afternoon followed the clear morning, as we retraced our steps through the village of Gressoney, and up the valley to Noversch, where we found the *savant* at home in his snug little chalet, and just returned from **marmot** shooting on the mountains. He welcomed us heartily, and we were hardly seated when the rain poured down heavily, and kept us there great part of the afternoon, which we spent most pleasantly, hearing the narratives of his ascents of Monte Rosa, looking over a number of interesting drawings and MS. observations, and in planning excursions during our stay in the valley. Among his papers was a table by Plana, the astronomer of Turin, for the calculation of altitudes from the temperature of boiling water, adapted to Réaumur and Centigrade; and as I had been unable to find a Fahrenheit at Turin to replace my own thermometer, having only obtained a small Centigrade, Zumstein very kindly presented me with the original in the professor's handwriting. On a book-shelf—which with guns, geological

plants and ferns, and getting our now somewhat bulky collections into a portable shape, with many other matters which filled up every spare minute. A day was spent very agreeably in again examining the Baron's collection in detail, when he presented me with the horns of a young bouquetin, and of a female. The thick velvet-like white flower of our favourite everlasting, the *Leontopodium alpinum*,—of which his daughter Palmira gave E. a beautiful bouquet gathered on the Weiss Horn,—was, we learnt, called “Edelweiss” in the native German, a name worthy of the flower.

Our evenings by the blazing wood fire at Delapierre's were generally enlivened by the pleasant company of some of our friends. On one occasion, it having become known that it was my birthday, a little party assembled at a dinner planned and executed by our host in his best style. The Baron went to the mountains for chamois, which, however, he did not meet with ; but excellent **marmot** and ptarmigan well supplied its place. Fresh trout came from the Val Sesia, and Delapierre's chefs-d'œuvre in the way of entrées were followed by a sumptuous dessert of fruit from the Val d'Aosta ; while his care had provided the unexpected luxury in the little commune of Gressoney of a bottle of champagne, in which the healths were drunk in the old German fashion. Zumstein was radiant with happiness, having that day received an account from Zermatt certifying that his iron cross on the Zumstein Spitze had, after so many years, been again seen by an English party on the 19th of August, from the Höchste Spitze. Among the many *agrémens* of that evening, not the least gratifying was the cordial feeling evinced in an animated political discussion, with regard to the alliance between Sardinia and England, and the warm hopes expressed that it might long continue. There appeared among all classes in Piedmont, excepting the priests, a strong feeling of sympathy with England, and an evident friendliness which added no little to the pleasure of our intercourse with them.

but the chamois have diminished of late years. Marmots abound, and we had them at table daily while at Borca, by request; as they make an excellent stew, though, as they are often served up, scalded and scraped, they look much too like a plump cat. The flavour is a little strong at first, but one soon gets used to it.

The marmot (*Arctomys marmotta*) is a charming little animal, and associated in one's memory with many a wild and lonely Alpine scene, where its shrill whistle is the only sound that breaks the dread silence. It is difficult to get a sight of them, as they are timid and ever watchful, retreating to their burrows on the least alarm. According to Tschudi,* they feed on various Alpine plants, and are in full condition in autumn, when they are very fat. In the summer they cut, with their rabbit-like teeth, a vast quantity of short hay; which, as soon as it is dry, is stored up in their capacious winter burrows. On the first approach of winter, they retire here, and wall themselves in with stones, earth, and hay. Behind this, a passage in the earth, of several yards in length, gradually ascends, till it terminates in a large cavern, oval in shape, resembling an oven. Here they all coil themselves up closely together, in the dry hay, often to the number of fifteen, and pass the winter in a completely torpid state, not awaking again until the following April; their accumulated fat supplying sufficient carbon for their very feeble respiration. Professor Mangili has made the singular calculation, that it breathes only 71,000 times throughout its six months' torpor; whilst, when awake, it breathes 72,000 times in two days. The name marmot is derived, according to Tschudi, from the Tessin appellation, "mure montana," or mountain mouse; contracted to "murmotta" or "*marmotta*."

Although our hosts spoke Italian to us, yet, when talking with Delapierre, they evidently preferred German; and re-

* Nature in the Alps, p. 232.

minded us we were now in the last of the German Vals, which had hitherto interested us so much. Not much German is spoken below Borca, but it is the language of all the inhabitants in the upper valley.

When the sun rose next morning, Monte Rosa unveiled, and presented a truly magnificent and startling spectacle, as we left the little inn for the Macugnaga Glacier, and advanced up the valley. The panorama, in its colossal magnitude, was superb, when we got an unobstructed view from the open basin in which lie the scattered hamlets of Macugnaga. This view of Monte Rosa can only be compared in grandeur to that of its rival, Mont Blanc, from the Val d'Entrèves; though in our estimation it is much the more imposing of the two. After the late storm it was sheeted from its highest pinnacle to the lower glacier with sparkling snow; hardly a projecting crag was uncovered until the sun began to exercise its power; while the enormous face of the mountain was a perfectly inaccessible precipice, some 10,000 feet in height, and of awful steepness. The view of the summits from here commenced with the Signal Kuppe; the other peaks seen from the Pile Alpe being hidden behind its retreating angle. Next, were the Zumstein Spitze; the Höchste Spitze, with its double points; and now, at a considerable interval, the Nord End, which from the Combetta had seemed but a protuberance of the Höchste Spitze. To the left of Monte Rosa, the smooth snowy cone of the Pizzo Bianco appeared above a forest-covered crest; an exquisite object in itself, and also associated with Saussure's ascent of it, to compare the heights of the peaks of Monte Rosa. All this, however, was but a portion of the stupendous curtain of snow-clad mountains which stretched right across the outspreading head of the valley. From the Nord End, a long and lower, but only less magnificent crest, extended in serried wildness up to the advanced guards of the Monte Moro. In the centre of them was the Weiss Thor, over which is a perilous