

fortress—there is a fort every five or ten miles along the whole Montenegrin frontier—is on a broad ridge overlooking to the E. pasturages, which feed many cows and sheep, to the W. the waterless undulations of the Herzegovina—a region where rocky reefs rise in endless succession, and there is more stone than grass. Gatchko, the first Herzegovinian townlet, lies in one of the broad level basins, girt by grey hills, characteristic of the Karst. It is a strange, monotonous country, with an air of the desert and the East about it, and, like the desert, capable of brilliant atmospheric effects.

A long day's drive and descent lead to Trebinje, an old fortress on either bank of a sheet of green water, half river and half lake, lying in the centre of a little plain of vineyards and orchards, hemmed in on all sides by steep, bare, strange-shaped hills. The landscape is weird; it has a curious air of individuality; it falls into no class; it is neither European nor Asiatic, though the sharp line between barrenness and the fertility caused by irrigation suggests the East and the desert.

Yet more striking, if less original, is the last descent to the Adriatic. Here we are brought into touch with Venice and Southern Italy. Ragusa itself, an unspoilt mediæval seaport, still enclosed in its gigantic fortifications, is one of the most interesting cities of Southern Europe.

A CLIMB IN THE MAMISON GROUP (CAUCASUS).

By DR. VITTORIO RONCHETTI, C.A.I.

THE traveller who, after leaving the Kasarma Kalaki,* mounts the carriage road leading towards the Mamison Pass (2,825 mètres), on reaching the point where the direction of the road suddenly turns from west almost due north, is compelled, even if not endowed with the feelings of a climber, to linger in admiration before the imposing view suddenly offered to his gaze.

In the background towers the double summit of the Tuilsas Mta, robed in its mantle of eternal snow, whilst the foreground is occupied by an uninterrupted series of lofty peaks. The crest which can be seen rising in a series of very bold spires from the bottom of the Tschantschachi valley displays, beyond

* This is the Kasarma, between Kalaki and Lisri on the Ardon side, and is not to be confused with the high Kasarma Kalaki, which Merzbacher's map shows on the Rion side, between Shkara and Glola.

a gloomy group of black rocks almost entirely uncovered by snow, the cone-shaped summit of the Tschantschachi Khokh (4,420 mètres)* from this point of view supreme for its height, beautiful form, and boldness of outline. Following it, but separated by a high gap, comes the Mamison Khokh (4,048 mètres), which reminded me in its shape of the Weisshorn as seen from the Gornergrat. Behind the Tschantschachi Khokh can be seen a broad and massive peak situated to the right of a bold buttress which descends irregularly in broken slopes and pasturages towards the Mamison Pass, forming the watershed between the valley of the Tschantschachi stream and that of the Mamison. Further east the main ridge sinks somewhat and extends in rocky peaks and pinnacles or snow-covered saddles until it rises again and forms a summit—not mentioned on the maps—crowned by three main points. The highest of these, the central one, was ascended by the writer on July 18, 1907, in company with Dr. Ferdinando Colombo. On this point the aneroid, due allowance being made for corrections, registered a height of 3,965 mètres (12,910 ft.). The peak in question is to be identified with the beautiful mountain terminating in a double rocky point which dominates the landscape on the left side of the fine photograph by Déchy published in the May number for 1885 of the 'Alpine Journal,' and on p. 84, vol. i. of Déchy's own book. In this photograph the Ceja side of the mountain is shown, whilst the photographs illustrating the present article are taken from the Ardon side. Beyond this peak the chain again rises in the irregular but elegant line of the Saramag Tau (4,055 mètres), which closes the view.

The summits of our nameless triple peak and the Saramag Tau tower majestically and dominate the deep valley from which the Mamison stream flows towards the carriage road of the Mamison on the Ardon side. This valley contains two glaciers: one descends between the nameless peak and the Mamison Khokh and bears the name of the Mamison Glacier; the other, separated from the first by a long crest descending from the nameless peak, originates between the eastern foot of this peak and the western side of Saramag Tau. It is not named on the maps, but might be very appropriately known as the Western Saramag Glacier, reserving the name of Eastern Saramag Glacier for that descending between Saramag Tau and Kaltber.

* Khamkhakhi of Freshfield's map.

The names and altitudes quoted in the present article, taken from the map ornamenting Gottfried Merzbacher's great work, 'Aus den Hochregionen des Kaukasus,' are not unanimously accepted by mountaineers. I think I have rightly applied the denomination of Mamison Khokh to the fine peak on the crest, to the east of the Tschantschachi Khokh; at least I believe I may assume this from the panorama published by Déchy on p. 169 of vol. i. of his book.*

From the summit gained by me on July 18, 1907, I could have taken some valuable observations had not the thick mist absolutely prevented me from distinguishing the surroundings. However on July 19, when retracing the Kasarma Kalaki road to the Mamison Pass in fairly good weather, I had an opportunity of observing the whole of the chain, seen clearly in profile against the blue sky, and it struck me then that the Mamison Khokh could not be much lower than the Tschantschachi Khokh, and that the peak climbed by me and Dr. F. Colombo the previous day would be about 300 mètres lower than the Tschantschachi Khokh, but not much below the Saramag Tau. Upon examining the works of previous travellers † I convinced myself that the knowledge of this interesting chain of bold peaks, which presents itself from the Mamison road slightly beyond the Kasarma Kalaki with such imposing grandeur, is neither very complete nor precise in its details. Under these circumstances I think that the observations made by others, with very modest means, may be serviceable. For this reason I shall attempt to convey to the reader an idea of the ascent made by Dr. F. Colombo and

* It surprises me to find on Merzbacher's map the height of the Mamison Khokh given as 4,048 mètres, whilst in reality that peak appeared to me on the spot not much lower than the Tschantschachi Khokh, to which Merzbacher assigns an altitude of 4,420 mètres. Déchy, however, whilst agreeing with Merzbacher in giving to the Mamison-Khokh a height of 4,048 mètres, insists that the Tschantschachi-Khokh only reaches a height of 4,286 mètres. And Mr. Freshfield tells me Merzbacher's height may be taken as a misprint, and refers me to the map in *Alpine Journal*, vol. xvi. p. 81, in which all the altitudes are given from the determinations of the last official Russian Survey. In Freshfield's book *The Exploration of the Caucasus*, p. 137, vol. i., Mamison Peak is given as an alternative name for Tschantschachi Khokh; but Mr. Freshfield agrees with me in applying it to the lower and separate peak.

† Besides Freshfield's, Merzbacher's, and Déchy's books the panoramas of Vittorio Sella, taken from the summits of the Tepli Tau and Schoda Tau, can be consulted (*Italian Alpine Club, Bollettino*, No. 63, p. 352, and No. 57, p. 273).

myself by extracting from my diary, illustrated by two of my photographs, notes made on the spot.

The alpine history of the Tschantschachi Khokh chain, Mamison Khokh, and Saramag Tau is soon written. I have only succeeded in tracing one crossing, that effected on July 19, 1889, by D. W. Freshfield, C. T. Dent, H. Woolley, and Captain Powell with the guides Jossi, Kaufmann, Maurer, and Fischer. The above party, leaving the Kasarma of Gurschevi, crossed the Mamison Pass, and descending the first zigzags on the Ardon side left the carriage road and entered the valley in which the Mamison stream originates. Having climbed the Mamison Glacier they crossed a pass about 12,000 ft. high, marked by a rock tower, which they called the Ceja Pass, and descended by the Ceja Glacier to Rekom and St. Nikolai on the same day. In the 'Topographical and Travellers' Notes' at the end of vol. ii. of Freshfield's work 'The Exploration of the Caucasus' mention is made of an ascent of the Tschantschachi Khokh, accomplished on July 25, 1884, by M. de Déchy, with the guides A. Burgener and P. T. Ruppen, from the Ceja Glacier side. But Freshfield himself with his usual prudence and preciseness mentions the matter in a dubious way: 'there is some uncertainty as to which peak was gained.' On the other hand M. de Déchy in his book published in 1905 insists that on July 25, 1884, he climbed not a secondary peak but the Adai-Khokh, the highest in the region, which he had at first identified with the Tschantschachi Khokh. Leaving the question as to which peak was climbed by Déchy on July 25, 1884, unprejudiced I for my part fully believe that the Tschantschachi Khokh is still waiting for a conqueror.

July 17.—After passing the night at Satat, and discharging the porters who had accompanied us from Kobi through the Trsi Pass and the valley of the river Sakki to this point, we ascended along the Mamison Road as far as Tibzina. Having reached this point (carriage roads always appear to have the extraordinary faculty of making the loads seem heavier and the distances greater!) we hired a 'telega' to carry us to the Kasarma Kalaki. Our progress was not without serious causes for apprehension. The Mamison Road in its higher portion is badly kept. Cut obliquely in the side of the mountain, it preserves for its entire length a constant and nasty inclination towards the depths of the valley, where the impetuous whirlpools of the Ardon succeed one another. The track is covered with large stones fallen

from the mountain, which nobody thinks of removing, and is frequently carried away on the outer edge by water and landslips, while in the dangerous portions protection of any sort, such as is found on our alpine roads, is absolutely unknown. The 'telega' is such a complicated vehicle, with its many joints, and so loose in its movements, that it adapts itself remarkably well to the irregularities of the road, and the difference in the ground and where the wheels are of more than half a metre on the one side as compared with the other side does not by any means compromise its balance. The sure-footedness of the Caucasian horses is almost incredible. Wide torrents (bridges on the Mamison Road are only built at those points where, without them, the water would reach to one's neck), on the edge of which there is danger of the horses becoming restless and throwing us into the ford, are crossed at a gallop by the natives. Yet the vehicles are seldom damaged, whilst the horses never fall while stumbling over the stones at full gallop. But how is it possible to believe beforehand in a safe journey with such a vehicle, minus shafts, with harness patched together, such miserable skinny horses, and such a driver? Oh, that driver! The long loose hair flowing down his back, his face adorned by a shaggy beard, his head covered by a felt rag, and his body concealed by a clever combination of dirty pieces of cloth. Shambling in his movements, he shouted rather than spoke (and who could understand him?), continually giving orders to his wife, the most miserable female incarnation possible to imagine. And yet what resignation in the obedient servility of the woman before the arrogant brutality of that savage. Truly he resembled in his aspect those Tschetscheni and Lesghiani who on every page of Dumas's 'Impressions de Voyage' draw their 'Chingals' to give vent to their bloodthirsty aspirations.

As Providence and the savage willed, we made a start, and then commenced, favoured by the slope, a mad gallop over that dangerous road. Our driver apparently had no thought for his horses, which he continuously and unmercifully whipped, and the steeper the road became the faster seemed the pace. It was well for us that in the 'telega' you sit on the side, and we prudently kept on the right-hand, nearest the mountain, ready at every suspicious jolt to jump out and leave the vehicle and its driver to their fate.

We arrived at last at the Kalaki Kasarma. On this elevated mountain road, over which a number of carriers travel several days' journey to transport a few sacks of wheat,

the provident Russian Government has erected at intervals convenient shelters, in the care of a Cossack. He lives with his wife and children a life of tranquil peace and occupies himself in surveying the maintenance of the road. He willingly helps travellers, to whom he supplies board and lodging at a really moderate charge. Peter Rievazowich Dobajen was in addition a jolly good fellow. A dignified and severe face under his Astrakan cap, a lithe body under his Circassian costume, courteous and affable notwithstanding the terrifying aspect which the many arms adorning his person gave him, he received us most amicably, supplied us with the best he had, and was in addition a most welcome companion during our stay.

At two o'clock in the afternoon we left the Kalaki Kasarma, directing our footsteps towards the Mamison Pass. Although we had with us a tent, rope, and the necessary rations we had no prefixed object in view. The continuous bad weather of the preceding days had completely upset our plans, and as we had now arrived at the end of the time at our disposal for remaining in the Caucasus we were compelled to think about our return journey. But up there, round about the Mamison, the maps show some fine peaks! And the weather to-day is not so bad; it has been satisfied with presenting us in the forenoon with an hour's rain and the usual accompaniment of thunder and lightning, but later the clouds were dispersed in all directions by the variable winds and patches of blue sky appeared. Who knows, we may be lucky after all!

The road mounts slightly and the mountains round about are covered with flower-bedecked meadows. The grasses are tall and with their uniform mantle waving in the breeze cover the hill-sides on our right, hiding the summits, whilst before us towers the elegant pyramidal peak of the Sau Khokh (3,713 mètres), and on our left the majestic and massive snow-covered Chalaza mountain (3,937 mètres) dominates the valley. After rounding several projecting cliffs the road suddenly turns to the north and opens to view the Mamison Pass (2,825 mètres). But more than to the Pass your attention is attracted to the chain, crowned by bold peaks, which shuts in the valley towards the north.

Dense clouds cling to the sides of those splendid mountains, partially hiding them, but at the same time increasing their grandeur. The panorama of the vast valley, all pasturage, without a single tree, closed in at the end by a superb chain, is, if a trifle melancholy, of great grandeur.

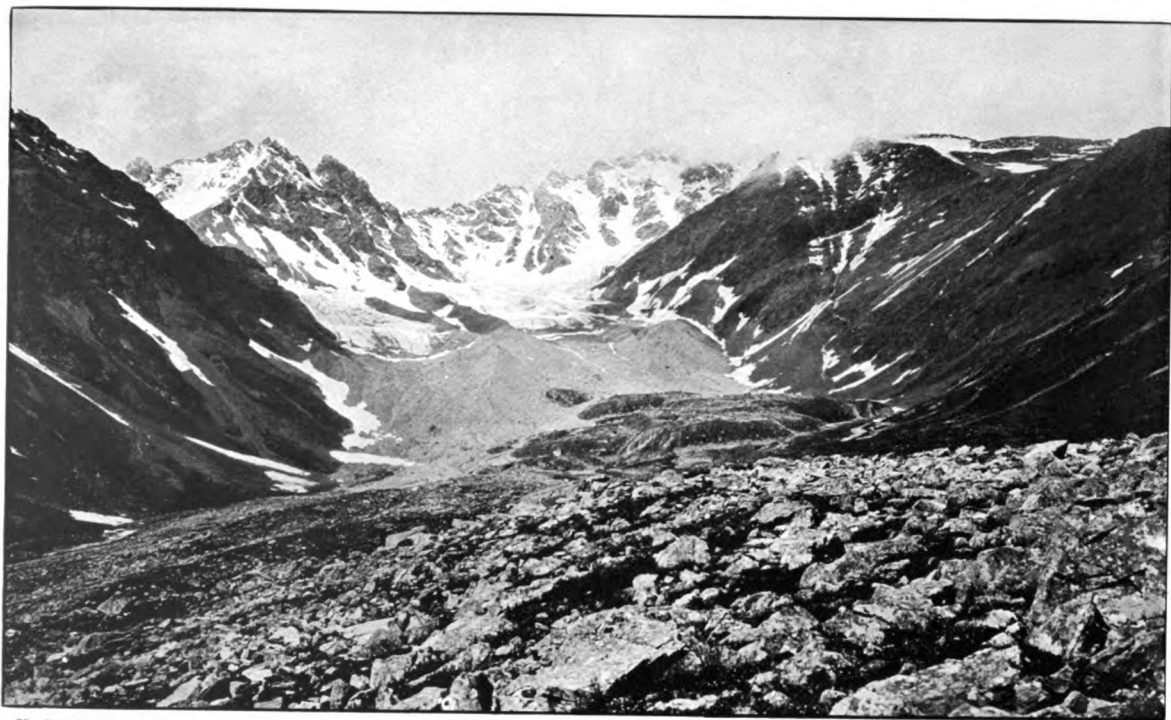
We proceed on our journey as far as a valley, which, occupied by large glaciers, and dominated by two grand mountains, descends and joins the road shortly before this, by a series of zigzags, ascends towards the Mamison Pass. The river winding its way out of this valley—the Mamison—is one of the sources of the Ardon.

Here we halt ; scan through our glasses the summits, and in a short time a decision is taken ; we will ascend this valley, camp on the moraine, and attempt to-morrow the ascent of the triple-peaked mountain which apparently dominates the valley.

The sky, which has become almost cloudless, animates us, and we rapidly climb, first over the pastures which the floods have strewn with stones, and then by the edge of the moraine, until, at 6 P.M., on a bit of level ground between the moraine and the glacier, we pitch our camp. All about us is calm and silent, the only sign of life being the footprints of several 'tur' on the moraines in our vicinity, and down below on the road, which is in sight, a long string of small 'arba' (native carts) hastening towards the Kalaki Kasarma. But the silent solitude of the mountain is full of delicious voices for those who understand them.

July 18.—At 3 A.M. the alarum goes off and awakens us. I see Colombo stretch himself full length and put his head out of the tent, and to my ears is borne the echo of an expression anything but orthodox. He regains his place and prepares to go off to sleep again. I get up, lift a wing of the tent, and am compelled to give vent to very similar imprecations. The evening before, on retiring, we had seen a perfectly clear sky, and the serrated crests of the Mamison Khokh and Saramag Tau, illuminated by the gentle starlight, had appeared to us adorned by a new charm ; now a thick grey, impenetrable fog envelops everything. Once more bad luck threatens to prevent the execution of our greatly cherished plan. However, who knows ? perhaps as the sun rises the fog may be dispersed. I prepare the tea, make up the bags, shake my companion in misfortune, and give him no peace until he prepares to follow me.

We start at 4 A.M. Having reached the top of the moraine we follow it until it is lost in the glacier, and afterwards climb this, taking advantage of a number of rocks on its surface, until we come to the base of a wide and steep gully (5 A.M.). The previous day, on scrutinising the mountain through our Zeiss, we had decided to continue beyond this point and climb higher up where the rocks appeared to be less steep



V. Ronchetti, photo.

THE MAMISON GLEN.

Sean Electric Engraving Co., Ltd.

and more broken, but now, judging, from what little we could see of the gully, that we could climb up and along it, we go on without hesitation, in the hope of saving time. In fact, we find it not at all bad, and taking courage also from the fact that the fog, driven and broken up by the wind currents, appeared to be disappearing, make sufficiently rapid progress. We emerge at 6 A.M. and find ourselves on a snowy slope, not very steep, and strewn here and there with rocks. At this point, however, the fog becomes thicker than ever, and nothing is to be seen even at a few paces' distance. With the rope drawn taut I can just distinguish my companion moving about in space like a transparent shadow. What is to be done? We crouch behind a rock out of the wind, and, for want of something better to do, peel some hard-boiled eggs. Is it prudent to continue? On the other hand can we be satisfied to return without having reached even one of those Caucasian summits which for years we had admired in books and photographs? But wait; the fog is breaking; before us towers a formidable dark, rocky bastion, furrowed by an almost vertical gully, the bottom of which here and there contains ice. The sides, however, are notched, and apparently in several places offer the possibility of getting a foothold. A ray of blue, which for a moment appears on high, removes all doubts; and without further discussion we start up the gully. The fog again thickens, but, hemmed in as we are in the bottom of the crack, we are not afraid of losing ourselves; only an inaccessible precipice barring the way or a fall of stones from above will put an end to our wanderings! We come across the first obstacle in the shape of a slab of ice filling the bottom of the cleft, with sides of so slippery a nature as to make us despair. I succeed in getting my arm between the ice and the rock, and by dint of numerous kicks get a foothold on it; I raise myself somewhat, catch hold of the top edge of the ice, feel that it holds; a supreme effort and it is mastered. I help Colombo, who has also to bring up the ice axes, and on we go. The gully widens and is terribly steep, but fortunately there is no longer ice, but snow, and this is not hard enough to compel us to use our axes; one's foot can readily crunch into it and it carries our weight well. Higher up we meet with rocks which offer easy, more frequent, and safer foothold. Notwithstanding the very moderate temperature and impetuous wind the morning passes without the melancholy noise of falling stones reaching our ears. The gully becomes shallower and is gradually lost in a wall made up of masses of gneiss irregularly placed one

above the other, upon which climbing is easy and pleasant. At 8 A.M. we cannot climb any further; we are on a culminating point; to the rear is the wall up which we have scrambled, to the right and in front a precipice lost in the fog, to our left a peak with declining slope. Can it be the summit? We do not think so; it would be too soon. In fact the fog opens out and we see the summit towards our left lifting up its rocky point and then again falling a little, to elevate itself anew in a big tower of grim aspect. The fog, exaggerating the mountain forms, adds to their imposing and bold outlines. Will it be possible to reach the top? No time is wasted in discussing the matter and on we go.

The second tooth is easily reached. Further on caution is needed, as the way up the knife-like, snowy crest, here and there strewn with rocks, is not easy. Having negotiated this crest of snow, at the base of the last tower we run up against an enormous smooth mass: we creep along its bottom edge towards the right until we find some broken rocks, up which we can climb. Further on another smooth mass, several mètres high, again bars the way, but there is a crack running across it, to which we succeed in hanging on by our hands. In this fashion we bear to the right until the broken rocks allow us to dispense with such emotional gymnastics. Higher up we meet with several slabs lying obliquely on the crest, their surfaces covered by a slight fall of snow. The snow threatens to glide from beneath our feet, and for our hands the rocks offer no hold whatsoever. We wind the rope round a projection and move one at a time with great precaution, and in a short time this difficulty is also mastered. We climb on over the stacked blocks of gneiss. At last we arrive at the final crest, beyond which the mountain becomes precipitous—a cone-shaped mass about four mètres high at one end and at the other a collection of trapezoidal blocks. I catch hold of the smooth edge of this conical mass and with the aid of arms and knees raise myself on to it. This is the highest point, the supreme summit. Through the fog in a S.W. direction I see, a short distance away, a secondary peak only a few mètres lower, and another peak, also a few mètres lower, in a northerly direction. I give vent to my joy in mighty hurrahs, which, strengthened by the mountain echoes, reach the ears of Colombo, who is waiting lower down; on hearing my hurrahs he is encouraged and climbs the blocks forming the other top of the principal summit of the mountain and then joins me. We embrace with emotion.



V. Kuchetti, photo.

THE TRIPLE PEAK.

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The panorama stretching out before us ought to be sublimely beautiful—in front, towards the W. and in the near neighbourhood, the high peaks of the Adai Khokh and Songuta Khokh ; to the S.W. Mamison Khokh, Tschantschachi Khokh, as bold as the Matterhorn, the Bubis Khokh, and Burdschola ; to the E. the broken line of Saramag Tau, and further away lofty Kaltber ; beyond the Zmiakom Khokh group, Tepli Tau, Archon Tau, and Kolota Tau ; on the S. Chalaza, of massive and friendly aspect : and, who knows ? with a clear atmosphere it might be possible to see the giants of the Frosty Caucasus, Shkara, Koshtan Tau, Dych Tau, and the famous Ushba, the far-away Elbruz, and on the opposite side Kasbek, on the slopes of which a few days previously we had experienced so many delusions. But we are not allowed to get a sight of anything ; on every side we are enveloped by a thick curtain of fog, and the cliffs of the mountain, lost beneath us in an indeterminable abyss, give us the impression of being on the deck of an aeroplane.

We pile together a few stones on the two culminating points, and, besides our cards, leave some coins. The wind will probably demolish the pile and carry away our cards ; but who knows if the effigy of our King on those coins may not remain to bear witness to our ascent ? Lower down we built a stone-man, somewhat less rudimentary, and, we hope, more solid.

We wait on the top for an hour, in the hope of the weather clearing up. The wind is becoming more boisterous and gathers together fresh clouds ; the threatening storm induces us to descend. It is midday when we leave the summit.

As far as the second obstacle met with on our way up we retrace our footsteps : now it is Colombo who, following second, finds himself fighting against the difficulties, and I from below stay and watch the calm with which he overcomes them. Having reached the obstacle, judging the descent too dangerous by the gully, and also in view of probable falls of stones, we bear to the right on a crest of rocks and snow. We do not meet with any difficulties by this route, and towards 4 p.m. regain the glacier at the base of the bastion. In the meanwhile the fog has opened out ; wide patches of blue appear in the sky, and, carried by the wind, large clouds are rolling in the bottom of the valley and over the summits. We see for a moment a long stretch of the crest on the south-west of the mountain climbed by us, and believe we can recognise the Ceja Pass, crossed by Fresh-

field's party on May 19, 1889, a high rock-tower distinguishing it.*

We walk without haste, pleased with ourselves and our conquest. The glacier, united in a gentle slope, stretches out before us. Down below on the side of the moraine is a little green patch; it is our tent, which, during an adventurous bivouac at Kasbek, we had learned to love and appreciate. Suddenly a report like a cannon shot booms above our heads; instinctively we throw ourselves on the glacier, protecting our heads with our crossed arms, and from the corners of our eyes we see fly above us the large splinters of an enormous block which, having become detached from the top of the mountain, had dashed itself to pieces on the lowest rocks of the bastion, scattering in all directions a shower of fearful projectiles. It was an attempt at revenge, fortunately frustrated, on the part of the conquered mountain; we do not wait for a second one, but hasten down the remaining stretch of glacier that separates us from the tent, which we reach at 5 p.m. Here at last we are truly safe.

July 19.—To-day we have had splendid weather; only a few clouds, which the wind blows up from the Mamison Pass, cling to the sides of Tschantschachi Khokh and of Mamison Khokh. The Cossack at the Kalaki Kasarma undertakes to hire a carriage to convey us to-morrow to Alagir, and we in the meantime again climb to the pass, our object being to take some photographs and collect coleoptera. On our return we pass the evening peacefully in the Kasarma. The Cossack shows us the books used by his son in studying the first elements of natural history, and his wife, a robust woman with pronounced features and high cheek-bones, of the Mongolian type, lets us assist in the preparation of the Ossete loaves—a mixture of wheat flour and buttermilk, which, placed for a few minutes on the cast-iron stove, is soon baked.

On July 20 an elegant 'telega,' driven by a splendid type of Caucasian, conveys us to Alagir. During the whole of the long journey (twelve hours) a fine and persistent rain accompanies us, and the low clouds deprive us of the view of the summits. We can, however, admire the open valley above Saramag, the horrid Kasara gorge as far as St. Nikolai, the strange appearance of the limestone belt below, and at the commencement of the plains, the forests of gnarled oaks and the pastures where nomad tribes of Kalmucks have pitched their tents and tend their droves of horses; last of all, the boundless uniformity and melancholy grandeur of the Steppe.

* [The cairn built on the Ceja Pass in 1889 is visible in one of Dr. Ronchetti's photographs.—D. W. F.]