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The Wall of Derbend

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her hand from the task will be to give it over to others as distasteful to her, and her lot will be to die as surely as have died the nations who have before her educated the world, so soon as the desire for peace and quiet, ease and luxury, overruled all other desires, and led to weariness of the task. The degeneration, decay, and death of men and of empires result from the same cause, viz., from a failure to correspond with their environments; in other words, as regards empires, from a failure to actively sympathise with their neighbours. This great Christian nation is, after all, but a selfish people hoarding accumulated wealth, and refusing to spend it on either insurance or philanthropy. The millions of its Eastern neighbours that would benefit by its wealth, if it were but laid out remuneratively in communications necessary to its imperial existence, are not considered. Notwithstanding that every one pound so laid out would produce ten pounds, the nation acts as did the over-cautious servant, and it will receive the same reward. We have not yet learnt our duty to our imperial neighbours, or acknowledged those whose fortunes are bound up with ours by the links of imperial geographical position, and its enforced common interests, to be such. Such links none can un rivet, and they are designed to draw together nationalities, and require of each that self-sacrifice necessary to every bond of union. Hateful neighbours though some of them be, yet we must do the best we can with them, and to this end the unsatisfactory state of affairs in Armenia should receive our attention, for that there is deep-seated dissatisfaction amongst its Christian peoples, and that they are capable of a higher civilisation and destiny than they at present enjoy, or can look forward to, are undoubted truths.

They are Christians whom we can raise to the level of ourselves, and we can say with Shylock, "I will buy with you, sell with you, talk with you, walk with you, and so following"; but we cannot say with him, "I will not eat with you, drink with you, nor pray with you," and we might add, "marry with you": they are one of our Eastern Imperial environments with whom we can fortunately be in complete correspondence. One of the American missionaries to the Nestorians took a bride from the maidens of Tiari, and both Nestorian and Armenian pastors are their fellow-labourers in the same mission field.

THE WALL OF DERBEND.

(*With a Map.*)

BY THE HON. JOHN ABERCROMBY.

IN] August 1888 I had an opportunity of visiting the Derbend, or Caucasian Wall, as it is also called, which stretches for a distance of 24 or 25 miles inland from the western extremity of the town, and terminates on the summit of a commanding mountain ridge. Though it has never been reckoned among the seven wonders of the world, it is remarkable enough in its way. I believe, too, that little is known of it in this

country. It is so vaguely spoken of in the *Encyclopedia Britannica*,¹ under the article Derbend, that the reader is left uncertain whether there is a wall independent of the town walls, the northern wall of which is called The Great Derbend or Caucasian Wall, also known as Alexander's Wall. The blunder is also committed of placing the Narin Kala, or citadel, on the top of the Jalgan mountain. The statement, too, in Murray's *Handbook*,² to the effect "that travellers bound for Baku will have a full view of Derbend, with its renowned walls 20 feet to 40 feet high, stretching straight up the hills among the brushwood," leads one to believe that the walls—more exactly the wall—extend no further than the summit of the Jalgan mountain, at the base of which the town lies, and that they are visible up to that point, which is not the case.

M. Réclus³ states that to the west of the Narin Kala, or citadel, at the western extremity of the town, the wall, strengthened by large towers, follows the crest of the hills, descends ravines, terminates at a distant peak, and that vestiges of it can be traced for a distance of 30 kilomètres. But the small and inaccurate plan which accompanies the text does not bring the wall any further than Bilgádi, which lies about half-way between its two extremities.

Dr. E. Eichwald,⁴ who visited Derbend before the year 1834, visited part of the wall. He mentions (vol. i. p. 129) the villages of Mugatei (Mugátir), Kamach (Kemákh), Sidian (Zadián), and Balchadi (Bilgádi), a distance of 18 versts (12½ miles) from the sea. Beyond this he was unable to pursue his researches owing to the unsafety of travelling at such a comparatively recent period. He remarks that, about one hundred years before his time, in the reign of Peter the Great, Prince Demetrius Cantemir had only been able to follow the wall for 7 versts (5 miles), from the danger attending such an enterprise. At that period the wall was quite visible from the citadel to the top of the mountain, and it had the same height and thickness as the wall of the town. He further quotes Christopher Burrough who travelled between 1579 and 1580, and had remarked a wall extending westwards from the castle towards the interior of the country. He was told it reached to the Black Sea, and had been built by Alexander the Great.

At the close of the last century Jacob Reineggs⁵ visited Derbend, and descants on the dangers attending a tour in Tabasaran. There was a great risk of being first captured and then sold as a slave. It was only possible to travel safely when accompanied by a well-known and influential native of the country. His description of the wall is, therefore, somewhat scanty. He states that from the Narin Kala another not less strong single wall runs about a verst to the west over the high and unapproachable mountain. But some of the towers were fallen in, and in places the wall was much injured. There were traces of its being continued further westward.

¹ 9th edition, 1877.

² *Handbook for Russia*, 1875.

³ *Nouvelle Géographie Universelle*, 1881.

⁴ *Periplus des Caspiischen Meeres*, 1834.

⁵ *Beschreibung des Kaukasus*, edited by Schröder; 1796.

In the year 1637 Adam Olearius¹ visited Derbend on his way to Persia. He saw on the mountain above the town the ruins of a wall 3 feet thick, which extended for more than 50 leagues. In some places it had a height of 6 feet or 7 feet, in others it was not more than 2 feet high, while elsewhere it was entirely levelled. He could see on other hills the remains of several old castles and other buildings which showed they had been built square. Two were entire, with very high walls, and each was occupied by a garrison.

Jakut al Rumi,² who began writing his geography at Merv in the year 1218, under the article Bab el Abwab, has collected extracts from various Arab authors relating to Derbend. From one of them we learn that above the town a stone wall stretched over the mountain in the direction of its length. It was impossible to penetrate that way into the Musulman country by reason of the difficult roads and narrow paths which led thither. The wall was constructed by Anushirvan, after an arrangement to that effect with the Kaqān of the Khazars, and terminated at a place where further passage became impossible. It was built of squared stones, the smallest of which was not less than 50 feet high. These were fastened together with iron clasps, soldered with lead, and the wall had a length of 7 parasangs, or nearly 25 miles. It was traversed by seven roads, each commanded by a town in which was placed a Persian garrison.

B. Dorn³ quotes Ahmed ibn Wadhih el Isbahany to the effect that the wall of Derbend was built by Anushirvan. It had a length of 7 parasangs, and terminated on a steep inaccessible mountain. It was built of quadrangular hewn stones, one of which fifty men could scarcely lift. There were seven passages or exits in the wall, each guarded by a gate. The wall was so wide that twenty riders could ride on it without jostling.

From the *Derbend Nameh*,⁴ also a compilation from various Arabic and Persian sources, though written in Turkish, we gather that the wall was built by Anushirvan the Just, better known as Khosroes I., who reigned between A.D. 531 and 579. The work was executed, however, by order of his father, Kobad, who flourished A.D. 491 to 531. For a long time perpetual wars were waged between Kaqān of the Khazars (who had his seat of government on the sea-shore on the banks of the Volga) and Kobad. At last the latter proposed a boundary wall should be built between them. The Kaqān assented to the idea, and suggested that the wall built by Alexander, Lord of the Two Horns, should be taken as the boundary, and that the Persians should build a town there. The Persian nobles deputed to superintend the building of the city found that Alexander's Wall jutted a whole parasang into the Caspian, and extended westwards to the Black Sea. They built the town in seven months, and called it Bab ul Abwab Derbend. But further on we are

¹ *Voyages faits en Moscovie, Tartarie, et Perse*; Amsterdam, 1727.

² *Yakūt al Rumi, Diction. de la Perse*; Barbier de Meynard, 1861.

³ *Mélanges asiatique*; Bull. de l'Acad. Imp. des Sciences de St. Pétersbourg, tome vi., 1871.

⁴ Transl. with Notes, by Mirza A. Kazem Beg; St. Petersburg, 1851.

told that Anushirvan, by order of his father, built in the neighbourhood of Derbend sixty-three (var. 360) towns and fortresses. He also erected a wall at a distance of 3 parasangs from Derbend, which extended to a distance of 92 parasangs. Another author states that Anushirvan renewed the wall of Alexander, and erected 360 buildings or fortifications at the various passages. In another version of the *Derbend Nameh*, translated by Klaproth, it mentions that Kobad first built a wall on the foundations of that of Alexander, the position of which was pointed out to him by the Angel Gabriel, and then another to the south of it. These must be the north and south walls of the town, the northern one being still attributed to Alexander the Great. Then he began another wall from the sea to the extreme limit of Tabasaran, a distance from Derbend of 90 agach, or about 315 miles. He placed iron gates where necessary, and completed the wall in seven years.

Several villages either on or quite close to the wall are mentioned in the history of Derbend, as recorded in the *Derbend Nameh*. In A.H. 41 (A.D. 663) the shallow valley in which Darvag lies was the scene of a sanguinary engagement, lasting for five days, between the Khazars and the Arabs. In A.H. 103 (A.D. 725) the Arabs plundered Yersi (Ersi), Duvek (Dübek), Zeil (Zil), Darvag, Humeidi (Geméidi) and Kemakh. In A.H. 136 (A.D. 758) Yezid was sent by the Khalif to Derbend. He rebuilt Suwār (Zavar (?)), Meta'a (Metági), Kimikh (Kemákh), Darvag, Yersi, and Humaidy (Geméidi), and settled men of Hams (Emesa) in Humeidi, and men of Damascus in Darvag. Further, he repaired Meqater (Mugátir) and Ma'raqa. Two other fortified places on or near the wall, which have not been identified, are Simnan (var. Sifnān, var. Signan), which the Turkish writer knew in his day as Tchirki, and Dughrini.

It is evident there is a good deal of error in some of these brief notices. As Alexander the Great was never near Derbend, the wall he is supposed to have built from the Caspian to the Black Sea can only be regarded as fabulous. And the ruins of the actual wall must be attributed to Anushirvan, also known as Khosroes I. with the object of checking the incursions into Persian territory of the Khazars from the north. The date of its construction may accordingly be placed with certainty in the early part of the sixth century. Perhaps the most accurate fact concerning the wall is the length of 7 parasangs given it by El Isbahany, which is very exact.

I have not attempted to exhaust all previous notices of the wall of Derbend, but have merely desired to show who built it, and how meagre are the accounts given us by some of those who have visited Derbend within the last three hundred years. The most recent author who has published an account of it is General v. Erckert,¹ to whose work I shall occasionally refer in the course of my description. Indeed, it was from a hasty glance at his book which I found in the house of the Russian governor of Botlikh, in the Avar country, that I first learnt of the existence of the wall, and immediately made up my mind to explore it myself. Though I knew before that the walls of Derbend were famous,

¹ *Der Kaukasus u. seine Völker*; Leipzig, 1888.

and that inscriptions had been found on them, I always believed that the walls of the town were alone intended.

The town of Derbend is situated partly on the level shore, partly on the slope of the Jalgan mountain. It is, or rather was, enclosed by walls, and had the form of an elongated parallelogram. The north and south walls, strengthened by small square towers at intervals, were about a mile and a half long and nearly parallel. At the west, or more correctly south-west, end of the town lies the Narin Kala or citadel, of irregular outline, also strengthened by flanking towers. At their eastern or lower end the interval between the north and south wall is about 400 yards. Below the citadel the north wall forms an obtuse salient angle, where the width between it and the south wall is greatest. At present the whole of the short east wall has been demolished, and considerable portions of the south wall.

The Jalgan mountain, for the most part covered with dense ever-green scrub, is about six miles long, and runs nearly parallel to the sea-shore. Its highest point is 2357 ft. above the sea-level, and its crest forms an indented ridge falling precipitously to the west, but with a more gradual slope towards the east. From the sea to the highest point as the crow flies is rather more than three miles and a half, and the average slope of the eastern face is about one in seven or one in eight.

The walls of the town are about 13 ft. thick. The front and rear face of each wall consists of a casing of thick rectangular slabs of yellow calcareous stone, measuring about $4\frac{1}{2}$ ft. by 5 ft., with an internal stuffing of rubble, the whole firmly cemented together with excellent lime. The slabs are laid alternately lengthways and end-on, like the headers and stretchers of a brick wall. It must be evident that such a construction gives unusual strength to the casing, as the long faces of alternate slabs are imbedded four or five feet deep in rubble. The walls were once crowned with a battlement with step-shaped finials of Persian type, but only a small portion now remains. The masonry of the town walls, apart of course from later repairs, corresponds with that of two score and upwards of rectangular forts along the wall west of the citadel, which shows they belong to one epoch.

A steep and deep ravine on the western and northern sides of the Narin Kala greatly augments its natural strength, and in ancient times it must have been well-nigh impregnable. I was unable to see any trace of the wall from any corner of the citadel up the face of the mountain to Premeshki Kala, and the guide knew of none. But it undoubtedly exists, for General v. Erckert observed it, and has marked it on his plan. The ground is rough and much broken besides, being covered with thick bushes, so that traces of the foundations might easily escape the notice of any one who did not know where to look. The direct distance from Narin Kala to Premeshki Kala on the crest of the ridge is 3 versts, but the narrow track leading to it is fully 3 miles long. Near the summit the underwood becomes impenetrable except along the paths cut through it.

Premeshki Kala, which is perhaps a corruption of Pir Dimishek,

"the Saint of Damascus,"¹ lies in a cup-shaped depression on the crest of the Jalgan mountain, almost in a line with the prolongation of the long town walls, and is commonly known as Burj or The Tower. It is rather difficult to take stock of from the density of the surrounding scrub. In plan it is oblong, about 38 paces by 30, with an entrance in the rear or eastern face and a semi-circular tower at each angle. The upper part of the structure is in ruins. The ground in front falls very abruptly and from the top of the walls a good view of the country can be obtained.

Chorógli Kala,² "the castle of the blind man's son," lies a verst to the south, on the highest point of the Jalgan mountain. It is in a very dilapidated condition, but there is enough to show it does not differ in plan from the last fort. As I did not follow the ground between the two forts, I do not know if traces of a connecting wall exist, though it would hardly be necessary from the precipitous nature of the western face of the mountain. A good bird's-eye view of the wall as far as Kejlili, up to which point it is fairly well preserved, presents itself from this spot.

Three or four hundred feet below Chorógli Kala, between the heads of two valleys, runs a neck of land in a south-westerly direction, along which the wall is continued. Without a plan on a large scale it is impossible to show all the ins and outs of the wall as far as Kejlili, a distance of about $2\frac{1}{2}$ miles, or to state the exact distance between the forts. Not having expected to do any surveying when I left home, I was entirely without instruments of any kind except a small pocket compass. In the plan which accompanies this paper the position of the forts is therefore very approximate, except where fixed points could be obtained from the five-verst map. I heard on the spot that General Komaroff, who is known to be interested in archæology, had surveyed and made a plan of the wall in its entire length, but I am not aware that it has been published.

Following the traces of the wall, which is a good deal broken down here for about a verst, we reached the ruined fort of Sular, "Waters," and a little further on that of Isti Sular, "Hot waters," or Bari Meshashi, "the Castle-wall of the Forest," which is entirely surrounded and overgrown inside with thick bushes. Here the line-wall is connected with the rear face of the fort. Beyond is another fort also called Ishti Sular by the guide, and further on we came to Shur-su, "Brackish water." He was not sure of the names of these four keeps, but said the district they were in bore the designations I have given. Here the connecting wall on both sides of the fort meets it at the inner shoulders of the two front semi-circular towers, but is not bonded into its masonry. From this it is evident the forts were built first, and the wall between them afterwards. About 300 yards further on, in a south-westerly direction, there is a well-preserved oblong, though apparently nameless, fort, with semi-circular towers at the angles, and with a solid buttress of oblong plan projecting from the rear face. The connecting wall on either side

¹ He is mentioned in the *Derbend Nameh*.

² Korogli Kaleh, according to von Erckert.

meets it at the centre of its two shorter sides, and is not bonded into it. Kejlí lies, roughly,¹ S. 45 W., and Premeshki K., N. 50 E. The wall continues in a direction a little south of west for some distance to a semi-circular tower engaged in it. About 100 yards ahead, in a southerly direction, are the ruins of a fort only known as Burj, where the wall turns at right angles nearly due west, and very shortly afterwards bends at right angles to the left, and follows a course nearly north and south for about 300 yards. The centre of this wall is flanked by a small round tower with a chamber below it. Here the connecting wall is about 20 feet high, and though I could not measure its thickness it seemed to be less than that of the town walls. All the way from Sular to this point the wall is much better preserved than elsewhere, and rises to a height varying from about 8 feet to 20 feet. Following on a little further, and also ascending, we reached the damaged fort of Kejlí, of which portions of the four walls remain.

Except just at the neck of land below Choróglí K., the whole of the ridge along which the wall runs is very densely beset with nearly impenetrable evergreen bushes which obscure the wall, and render it very difficult of access. I was also unfortunately prevented by circumstances from visiting any part of the wall both going and coming, and therefore only saw portions of either the front or rear, but never of both faces.

The two long faces of Kejlí (or *Kejálí*) K. have a direction N. 30 W. Premeshki lies, roughly, N. 50 E., and Metáglí N. 73 W. The distance to the Tāt village of Metáglí along the crest of a ridge is about a mile and a half, and traces of the wall can be seen among the brushwood. There is no fort at Metáglí, but vestiges of the wall continue visible along the ridge in a north-westerly direction to the village of Kemákh, a distance of about $2\frac{1}{2}$ miles. The fort of Kemákh is oblong, and differs from the others in having angular towers at its four corners, though they do not project more than a couple of feet. It occupies a very commanding position, and forms a prominent landmark far and wide. The villagers said there was no fort between them and Metáglí, and that only slight traces of the wall existed in the direction of the village of Zadián.

From Kemákh the wall must have swept gradually round to the left along the crest of the ridge—I did not follow it exactly—to Zavar K., now a complete ruin, though enough remains to show it had round towers at the angles. Metáglí bears S. 50 E. Duzlan K. was formerly in the village of Zadián, but is now quite demolished. From its site Kemákh K. bears S. 70 E. Both here and at Zavar K. the forts seem to have been almost within the connecting wall, and were not therefore used as flanking towers. A gate is said to have stood here formerly, and my guide spoke of a Vidi K., now quite destroyed, as having formerly stood somewhere near the village. Vestiges of the wall can be traced on the west side of Duzlan K. in a direction N. 35 W., but after about 100 yards it turns nearly at right angles to the left, and swings round in that direction towards Bilgádi. At this place the wall crossed a narrow

¹ The compass-bearings are magnetic and uncorrected.

ravine. On the left side of this are the remains of a doorway which was closed within the memory of my informant by an iron door. In fact, in his opinion, Bilgádi is a corruption of the Arabic Bab il Hadid, "The Iron Gate," and he stated moreover that a town formerly stood here. To the right front of the doorway rises an isolated rock on which buildings formerly stood. It is known as Sar Kala, "Head Castle." The distance from the citadel of Derbend is about 11 miles.

A ride in a general south-westerly direction over a rough wooded country, during which I lost all trace of the wall, brought us to Tel Hammadán K.,¹ from which the walls of Shalkene K. could be seen bearing S. 12 W. The surrounding wood made it impossible to obtain a good view in any direction, but a short ride led us to Mehmet Kárim K., also known as Shalkene K. It is in fairly good preservation, has an interior length of 32 paces, and a breadth of 22 paces, with semi-circular towers at the angles. The ground in front falls very abruptly, and also rises behind it as the fort is not situated exactly on the crest of the hill. I could find no trace of the wall either on the right or left flank, and no mark of it against the masonry of the fort itself. A little further on, in a southerly direction, stands another Shalkene K., with round towers engaged in the four angles, having a length of 35 paces and a breadth of 41 paces. In the direction of its length it lies due north and south (magnetic).

Some distance beyond lies the hamlet of Geméidi, where there are the sites of two forts now razed to the ground. They stand close together on the edge of a ridge, and, as a path runs up the small hollow between them, it is possible a gateway once stood here. The front of these forts was turned to the north, and the low ground in that direction is open, though the higher ground in rear and the steep slopes to the right, on which lie the Shalkene forts, are densely timbered. Shalkene K. bears N. 20 E., and Kemákh N. 60 E.

Between the villages of Geméidi and Darvag a distance of about $2\frac{1}{4}$ miles, there are seven forts, the general direction of the first five being N. 70 W.

Pataiyúng K., like all the other forts, is more or less ruined, has semi-circular towers at the angles, and is surrounded by trees and bushes. The guides averred there was no trace of a wall between it and Geméidi, though I noticed vestiges of it running east and west from the north side of the fort. A little further on, near the bottom of a ravine, lies Noruz 'Ali K., the front face of which lies N. 75 W. The eastern face is entirely demolished, and the ground falls steeply to the front. In another ravine beyond lies Hassan Bey K., with the usual semi-circular towers at the angles. About 100 yards further on the other side of the ravine is situated Babanu K. It is entered by a doorway between two projecting buttresses of masonry on the south-west or rear face of the fort. On some of the stones near the ground there are Kufic inscriptions. Inside and high up in the left-hand corner of the front wall there is a deeply cut representation of a wild goat or some such animal, with long

¹ I think forts 14, 15, 16 on the plan should all be shifted about a verst to the north.

curved horns.¹ On the outside of the rear wall there is a line of inscription in a character which I could not recognise. About 250 yards to the west, on the top of a hill so densely wooded that we had to dismount, stands Palangi K., "Leopard's Castle," also known as Sezür Kala. There was no perceptible ingress save through the broken-down north-east angle of the building. From this point the wall must have changed direction to the south, though the country is so wooded that I could see nothing in any direction till we arrived at the much ruined fort of Mughara K. It lies on the edge of a ridge overlooking the village and valley of Darvag. On a small eminence in the centre of the village, towards which we had to descend, stands Beglar K., "The Castle of the Princes," now very much damaged. General v. Erckert mentions that at Darvag the wall is double for a certain distance, and encloses a wide area, but this fact escaped my notice.

Between the villages of Darvag and Zil, a distance of about 3 miles, there are eight forts. Dervish Kala lies about a couple of versts to the south-west of the former, enveloped in brushwood and trees. It is in tolerably good preservation, and has the usual round towers at the corners. Its front face lies N. 60 E. Not far off lies Kōbi Kala, so closely beset by trees that nothing can be seen in any direction. The doorway is in the south wall. There are two loopholes in the east wall and two or more in the other faces of the fort.

The front face of Ishekhli-su Kala, "Clear-water Castle," bears N. 30 W. The walls are loopholed, and on the outside lay a portion of a battlement. This was a single slab with three steps cut on each side and a horseshoe terminal at the top, on the outside face of which a rosette ornament was introduced within a horseshoe frame. At the south-west corner a portion of the connecting wall is visible having a direction S. 40 W., but its masonry is not bonded into that of the fort.

Makhragakh Kala is greatly ruined. About 250 yards S. 60 W., on the other side of a ravine trending north-west, lies Akhái Kala, also much destroyed, and situated in such dense cover that no bearings could be taken; but Zil was indicated by the guide's forefinger as lying to the south-west. According to him a wall ran from the end of the face fronting Zil to connect this fort with those to the west. In proceeding through the woods to Oghri Kala, "Thief's Castle," we crossed a narrow piece of wall trending S. 60 W., which the guide said formerly connected Akhái Kala with Bashim Dishim Kala, and could be traced as far as Ürnürg Kala, beyond Zil.

Oghri Kala lies in a dense wood, and is in fair preservation. Zil lies N. 70 W., Darvag N. 40 E., and Chukhná Kala, where the wall terminates, S. 76 W. On lower ground, and not far off, lies Bashim Dishim Kala, "My head and my tooth castle." The four walls are still standing, with a few loopholes at irregular intervals, and the usual semi-circular towers at the angles. From the density of the surrounding foliage no bearings were possible. About 100 yards or so to the west stands Chip-sokhón Kala, now in a very ruined condition, and considerably below the

¹ Figured in *A Trip through the Eastern Caucasus*, 1889, by the author of this paper.

crest of the ridge on which the village of Zil is situated about half a mile further on.

Between Zil and Chukhná Kala, a distance of over $5\frac{1}{2}$ miles, there are twelve forts.

About a verst from Zil in a north-westerly direction stands the much damaged Urnürg Kala. A short distance beyond, on more elevated ground, are the ruins of Abdullah Beg Kala. It takes its name from a celebrated local brigand, who stood a siege there; hence its dilapidated condition. The front face lies S. 30 E. Not far off is Ramazan Kala, of which only one wall is left standing. Kemákh lies N. 70 E.

Kadákh Kala occupies a commanding position on elevated ground, from which Chukhná Kala can be seen to the south-west, and Kemákh Kala to the north-east by east. Beyond this in a westerly direction lies Mothi Kala, of which very little remains. Mirza Kala is also much ruined. The ground to the north and north-west falls away abruptly, and the fort seems to occupy the north-west angle of the range of hills on which Zil stands.¹

Akhmé Kala lies a short distance to the south-west, is much destroyed, and so surrounded by trees that nothing could be seen from it. Still further in the same direction lies the much-ruined Nevruz Kala, or Nevruz Kala, "Castle of the new day or vernal equinox." It is wholly environed by wood, shutting out the view in every quarter, but the guide pointed south when I inquired where Tatil lay. Of Emizgyá Kala little is left but the foundations, and its position is so buried in foliage that I could take no bearings. It seems to lie on a narrow ridge, as a few yards to the south I could see the valley of the Rubas Chai. The guide pointed east to give the direction of the last fort.

Hardly anything remains of Kharar'il Kala, and it is so entirely surrounded by large trees that the view is everywhere obstructed, but the ground falls away steeply to the north-east. I could only very roughly ascertain the position of the next fort of Zeidakh Tular Kala by taking a bearing in the direction of the guide's extended arm, which gave S. 60 W. This fort lies at the end of a high projecting point of ground covered with trees, where the ground falls in three directions. The walls are much damaged. Chukhná Kala lies S. 53 W., and is separated by a wide open depression which flattens out to the right (north-west), and falls abruptly to the left, where it helps to form the western side of the Rubas Chai valley. The village of Dúbek bears N. 14 W. About 300 yards lower down lies Himlarik Kala, of which very little now remains, surrounded by trees and brushwood. Zeidar Tular Kala bears N. 60 E. The guide had never heard of a wall connecting these forts, and I could see no trace of one. In the direction of Chukhná Kala he maintained there were no more forts. Though I visited that place, I made the ascent from the south-east through the village of Yakhdikh, and so could not control his statement.

¹ If this is really so, fort 39 on the plan should be placed where fort 40 is put. I also think that forts 44, 45 might be set about half a verst nearer 46, as 45 would then agree with the position of a fort laid down on the five-verst map, which I thought at one time I had not visited.

Chukhná Kala lies on the summit of the Kara Sirt, "black ridge or peak," an elevated ridge trending north-west and south-east, which is cut through by the Rubas River about a mile and three-quarters, as the crow flies, to the south-east of the fort. From the river to the top is a continuous and very steep ascent, for the Kara Sirt dominates all the country east of it, though the five-verst map does not give its elevation in feet. It was unfortunately nearly dark, the sky was overcast, and the rain falling in torrents when I made my visit, so that I could not take a satisfactory survey of the place. The fort is a good deal ruined, and overgrown with brushwood. It is entered by a horse-shoe archway facing N. 60 E., which gives a line on Kemákh. The walls have flanking towers, and are likewise loopholed. The ground seemed to fall very abruptly to the south-west. In full daylight there must be an extensive view, embracing the whole line of wall from the Jalgan mountain on the right to an equal distance on the left. General v. Erckert calls this fort Chukhun Kaleh, and explains it by "Jews' Castle," which I think is very doubtful. He says it fronts the west, measures 80 paces by 40, that the walls are over 2 mètres thick and 14 mètres high.

In conclusion, I will only add that, though the description I have given of the Wall of Derbend is necessarily very imperfect, I hope I have smoothed the way for future tourists. For I did not visit the forts in the order I have just given, but piecemeal, and often in reverse order, just as I happened to hear of them. There may still be others to catalogue. I am also not sure that I have always given the names correctly, as I am ignorant of the Persian, Turkish, and Arabic languages, which have all helped to furnish designations for the various forts.

THE STATE OF THE ACTIVE SICILIAN VOLCANOES IN SEPTEMBER 1889.

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As director of the recent excursion of English geologists to the South Italian volcanoes, I had the opportunity of again visiting those of the Lipari Islands and Etna. As I consider it the duty of every scientific observer to record his observations on such interesting, varying, and somewhat neglected igneous vents, the following notes are offered for publication:— We visited Stromboli on Thursday, September 19th, favoured by splendid weather. As is generally known, the active vent of this volcano is situated more than a hundred mètres below and to the north-west of the highest central point of the island, but which latter is not quite the summit of the mountain. The top of the volcano is occupied by the remnants of a crater, probably formed when the present active vent burst out, constituting, as it were, a lateral disruption and permanent parasitic cone on the less resistant side of the mountain. The north-west is the weaker mountain flank, because the sea is deepest at this foot, and lava could never collect in the shallows as it has done