

The Third Wall of Jerusalem and Some Excavations on its Supposed Line

LEWIS BAYLES PATON

HARTFORD THEOLOGICAL SEMINARY

Director of the American School in Palestine, 1903-04

THE city of Jerusalem lies on a V-shaped plateau between the deep, rocky gorges of the Kidron and the Hinnom. By these gorges it is cut off from the surrounding ridges on the east, south, and west. Only toward the north is there open country, for here the plateau joins on to the broad table-land of central Judæa. Toward this quarter, accordingly, Jerusalem has expanded, and the successive enlargements have necessitated the building of new walls. These have served not merely to enclose the suburbs, but also to strengthen the city on its weakest side. On the sides toward the valleys a single rampart was sufficient to withstand the most powerful enemy. According to Josephus (*Ant.* xiv. 4¹; *B. J.* i. 7¹), Pompey made a reconnaissance and came to the conclusion that from these quarters assault was impossible. According to *B. J.* v. 6², Titus made a similar examination and came to the same conclusion. All the other besiegers of Jerusalem have held the same opinion, and the result has been that every attack known to history has been made from the north. Here the city has no natural defence, and here also it is possible to operate large bodies of troops. On this side, accordingly, it was necessary that Jerusalem should have several lines of fortification. As early, apparently, as the reign of Manasseh a second wall was erected on the north (2 Chr. 33¹⁴), and a third wall was begun by Agrippa about 40 A.D. (*B. J.* v. 4²) and was hastily finished by the Jews at the time of the revolt (*B. J.* ii. 11⁶,

v. 4²). Thus arose the condition of things described by Josephus in *B. J.* v. 4¹: "The city had been fortified with three walls, except in those parts where it was encompassed with impassable ravines, for there it had only one enclosing wall."

In describing the course of the first, or innermost, of these walls, Josephus starts with the tower called Hippicus and goes eastward toward the Temple. Then he returns to Hippicus and goes southward around the west hill, eastward toward Siloam, and northward to the east wall of the Temple (*B. J.* v. 4²). This shows that Hippicus must have stood at the northwest corner of the inner city. The same conclusion is necessitated by the description of the third wall, which is said to have also started at Hippicus and to have run thence around the northern suburbs to the northeast corner of the Temple, where it again joined the first wall. Hippicus is further described (*B. J.* v. 4³) as lying over against (*ἀντικρυσ*) the Tower of Psephinus, which stood at the northwest corner of the third wall, and as situated alongside of two other great towers called Phasaëlus and Mariamme. The three towers (in the order, Hippicus, Phasaëlus, Mariamme) stood, according to *B. J.* v. 4⁴, on high ground in the northern line of the first wall north of the palace of Herod. Hippicus, according to *B. J.* v. 4⁵, was twenty-five cubits square, and Mariamme twenty cubits square. All were built of blocks of white stone twenty cubits long, ten cubits broad, and five cubits high. At the time when Titus destroyed the walls, according to *B. J.* vii. 1¹, these three towers were left standing.

These passages lead us to look for Hippicus at a point near the Jaffa Gate in the west wall of the present city. Here two valleys, one running south, the other running east, met; and here, therefore, was the natural northwest corner of the ancient city. At this point stands the citadel of modern Jerusalem. In its northern wall is a massive tower, now popularly known as the Tower of David, whose lower courses contain immense blocks of stone, like those described by Josephus and with characteristic Jewish dressing. There

is no room for doubt that this is Phasaëlus, and that Hippicus stood near the modern tower a little farther west. Here we have a sure starting-point for determining the course of the first wall. From Hippicus, according to Josephus, it ran eastward past the Xystus and the Council-house to the west cloister of the Temple. It must, therefore, have followed the edge of the hill above the west arm of the Tyropæon until this joined the north arm, and then have crossed the valley straight to the Temple.

The second wall is described by Josephus (*B. J.* v. 4²) as beginning at the Gate Genath in the first wall, as encircling (*κυκλούμενον*) only the northern part of the city, and as ending at the Tower of Antonia at the northwest angle of the Temple. The third wall is described in the same passage as beginning at the Tower Hippicus, running thence to the Tower Psephinus, thence past the monument of Helena, Queen of Adiabene, through the Royal Caverns, past the Fuller's Monument, to the northeast angle of the Temple. From these accounts the course of these two walls cannot be determined, and we are forced to turn to archæology for help.

Along the line of the present north wall numerous ancient remains have been discovered. In laying foundations for the Grand New Hotel in 1885 a wall of huge Jewish stones was discovered running in a northwesterly direction from the so-called Tower of David. This wall serves now as a foundation for the east wall of the hotel, and unfortunately is no longer visible. Following the street east of the hotel, parallel to the present city wall, we reach in five minutes the School of the Latin Patriarchate in the northwest corner of the city. Here formerly lay the extensive ruins known as Qa'at Jalûd, or Goliath's Castle. Most of these have been removed to make room for the school, but in the cellar part of a wall of massive Jewish stones, similar to those in the Tower of David and under the Grand New Hotel, has been left in place. It is hard to believe that this is not a continuation of the piece of wall found under the Grand New Hotel. Along the entire course of the present north

wall as far as the Damascus Gate traces of the same old wall have been discovered. At the Damascus Gate ancient drafted stones still appear above ground, and the top of the ancient gate is still seen built into the foundations of the modern gate. There is good archæological evidence, accordingly, that an old Jewish wall followed substantially the course of the present city wall from the Jaffa Gate on the west to the Damascus Gate on the north. Which wall then was this? Was it the second described by Josephus, or the third? This is one of the fundamental problems of Jerusalem topography, and to it no satisfactory answer has yet been given.

Let us first consider the theory which identifies these remains with the third wall of Josephus.

1. In support of this theory, appeal is made to the location of the Church of the Holy Sepulchre inside of this wall. According to Matt. 27³³, Mark 15²⁰, John 19^{17-20, 41}, Heb. 13¹³, Christ was crucified and buried outside of the city wall, that is, outside of the second wall, since Agrippa's wall had not yet been built. If the traditional site of the Sepulchre be correct, then the present wall cannot be the second wall, but must be the third wall that was erected after the crucifixion.

Unfortunately, the genuineness of the Sepulchre rests upon too slender historical evidence for its location to be a decisive argument in the case. There is, doubtless, an unbroken chain of tradition back to the time of Constantine's founding of the Church, but during the two preceding centuries evidence fails us. It is easy to assert that Macarius, Bishop of Jerusalem, must have had good reason for selecting this spot when the order came to search for the true cross, but it is impossible to prove this. It is claimed that the first Christians must have revered the Sepulchre as a sacred spot and must have transmitted a knowledge of its location to their successors, but of this there is no evidence in the New Testament or elsewhere. It is claimed also that the interval between the crucifixion and the reign of Constantine is so short that memory of the location of Golgotha could easily have been preserved, but when one remembers the vicissitudes that attended the flight of the Christians, the siege of

the city, its destruction by Titus, and all the changes that were effected by later emperors, one questions whether it is likely that knowledge of the spot survived. The false traditions in regard to Zion, City of David, Gihon, and most other localities of ancient Jerusalem show rather that the thread of authentic tradition was broken at the time of the fall of the city, and that all subsequent identifications were worthless guesses. Eusebius nowhere tells us that Macarius knew a tradition in regard to the location of Golgotha; in fact, he expressly informs us that the tomb of Christ was found "contrary to expectation"; and later historians assert that the discovery of the spot was miraculous. When one considers the ease with which holy places have been identified, and are still identified, by interested ecclesiastics, one is not sure that Macarius must have had the best of historical evidence before he gratified the emperor by informing him that the true cross and the Holy Sepulchre had been discovered. The location of the third wall cannot be determined, therefore, by an appeal to the position of Constantine's Church. This question must be decided on its own merits without regard to the bearing of the answer for or against the genuineness of the Holy Sepulchre.

2. It is claimed that traces of a second wall are found between the first wall and the present wall, and that, therefore, the present wall must correspond with the third wall. The ruins of the Mûristân south of the Sepulchre were formerly supposed to be partly remains of a city wall, but the clearing of this spot incidental to the building of the new German Church has disproved this hypothesis. Sepp thought that he had found a city gate east of the Sepulchre, but further excavation has shown that this is Byzantine work and is probably part of Constantine's erections. The most elaborate attempt to trace a second wall inside of the Sepulchre is that of Schick in the proceedings of the Russian Palestinian Society for 1884, and subsequently in the *Zeitschrift des deutschen Palästina-Vereins*, 1885, part 4. Schick notices a line of cisterns south and east of the Church of the Holy Sepulchre which leads him to conjecture that a city

moat once ran here. East of the Sepulchre he finds some ancient stones which he supposes belonged to a city wall. On the strength of these discoveries he lays down the following line for the second wall. It began with the ancient drafted blocks under the Grand New Hotel and ran a short distance northwest. Then it turned northeast and followed the street known as Hârat el-Mawâzine, which is the short cut from the Hotel to the Church of the Sepulchre. Thence it ran due east a thousand feet south of the Church of the Sepulchre, turned suddenly at a right angle, and ran first north and then east to the northwest corner of the Temple.

This view has found wide acceptance, and this course for the second wall has been put down as probable on most of the recent maps of Jerusalem, for instance, those of Benzinger in Baedeker's *Palestine*, Buhl in his *Geographie des alten Palästina*, Guthe in Hauck's *Realencyclopädie* and in the *Kurzes Bibelwörterbuch*, Meyer in the *Jewish Encyclopedia*, George Adam Smith in the *Encyclopædia Biblica*; nevertheless, it is doubtful whether any of the remains that Schick discovered are really parts of a city wall. The bit of masonry southwest of the Church of the Sepulchre has no resemblance to the great wall under the Grand New Hotel. Cisterns and cellars could not be dug within the sacred precincts of the Holy Sepulchre, but would be dug as near to them as possible. Thus they would come in course of time to form an almost unbroken chain around the Church and its adjacent chapels. Their presence, therefore, is no evidence of an original moat at this point. The remains east of the Church consist of massive drafted stones similar to those under the Grand New Hotel, but the portal which they enclose suggests that they belong to a public building rather than to a city wall. The scarps discovered east of the Church of the Sepulchre seem to be natural rock terraces. They bear no resemblance to the splendid artificial cuttings at the southwest corner of the city. An impartial investigation of these remains leads one to the conclusion reached by Sir Charles Wilson (*PEF, Quarterly Statement*, 1903, p. 247): "From an archæological point of view . . . there is no sufficient

proof that the masses of masonry which are supposed to have formed part of the [second] wall ever belonged to it." Sir Charles is favorable on the whole to the genuineness of the Holy Sepulchre, so that this cannot be regarded as the testimony of a prejudiced witness.

3. In support of the theory that the third wall is to be identified with the present wall it is urged that the ruins of Qal'at Jalûd near the northwest corner of the modern city correspond with the Tower of Psephinus, which, according to Josephus, *B. J.* v. 4^s, stood at the northwest corner of the third wall; and that the caverns known as Jeremiah's Grotto and the Cotton Grotto east of the Damascus Gate correspond with the Royal Caverns through which Josephus says the third wall passed before reaching the Temple. There is nothing, however, about the ruins of Qal'at Jalûd that identifies them specifically with the Tower of Psephinus. According to *B. J.* v. 4^s the second wall had forty towers, and these ruins may belong to one of these towers quite as well as to Psephinus. The name Royal Caverns is far too vague to allow any certain identification with the quarries known as Jeremiah's Grotto and the Cotton Grotto.

These are the main arguments that are adduced to prove that the present north wall corresponds with the third wall. None of them can be regarded as conclusive. Let us now look at some considerations that are opposed to this identification:

1. The second wall as traced by Schick follows an inconceivably bad course. A glance at the contour map shows that it is on low ground all the way, while it might have stood on high ground, if it had been moved a few hundred feet to the north.

2. The zigzag course pursued by this wall is also very unlikely. It makes three rectangular bends with no apparent reason except to keep inside of the Church of the Sepulchre, although by going outside of the Sepulchre it might have shortened the distance and have occupied higher ground. Josephus describes this wall as "circling about," *κυκλούμενον*. It is doubtful whether such a term could be applied to the wall as laid down by Schick.

3. If the second wall had had the singular bend inward at the Church of the Sepulchre which Schick assumes, Josephus would have mentioned this fact and have named Golgotha as the place where the deflection from the natural course occurred.

4. Josephus states (*B. J.* v. 7^s) that after the capture of the third or outer wall "Titus moved his camp so as to be within at the place called the Camp of the Assyrians, occupying all the intervening space as far as the Kidron, but keeping a sufficient distance away from the second wall so as to be out of range of missiles." This statement indicates that there was space enough between the third wall and the second for Titus's army to camp inside of the third and still be out of reach of the stones and darts that the Jews could hurl from their military engines on the second wall. No such space exists between the present wall and Schick's assumed second wall. The greatest distance between these two walls is not more than 1000 feet and at many points they are not more than 500 feet apart. This argument bears with equal force against all other theories which locate the second wall inside of the Church of the Sepulchre. They do not leave enough room between the second and the third wall to allow for the statements of Josephus.

5. In *B. J.* v. 4^s Josephus states that the circumference of the city was 33 stadia. If the present wall is the third wall, the city cannot have measured more than 27 stadia, even if all the bends and projections of the towers are counted in.

6. The immense population that, according to Josephus, found shelter in the city at the time of the Passover points to a larger area than that included by the present north wall. The calculation of Cestius from the number of paschal lambs (*B. J.* vi. 9^s) would give a population not far from 3,000,000 at the time of the feast. According to *B. J.* vi. 9^s, 1,100,000 perished at the time of Titus's siege.

7. *Ant.* xx. 4^s states that the outer wall was three stadia distant from the monument of Queen Helena. This monument is identified with a high degree of probability as the so-called Tombs of the Kings near the present residence of

the Anglican Bishop, but they are at least four stadia from the present city wall.

8. According to *B. J.* ii. 19⁴ and v. 2⁸ Titus pitched his camp on Scopus, seven stadia distant from the city. Scopus is doubtless the high plateau north of Wâdy-*ej-Jôz*, and it is considerably more than seven stadia from the present north wall. Those who identify the third wall with the present north wall are compelled to assert that in all these passages Josephus exaggerates the size of the city, but no reason for exaggeration appears, and the consistency of his statements with one another indicates rather that he has told the truth. These considerations seem to show that the third wall cannot be identified with the present wall.

This brings us to a consideration of the second possible theory, namely, that the present wall is the second wall, and that the third wall lay considerably further toward the north.

In 1888 Robinson found numerous traces of this wall still extant, and he was able to plot its course from the northwest corner of the city to the Nâblus road (*Biblical Researches in Palestine*¹, i. 465 ff.). He describes ancient stones similar to those in the Tower of David and rock-hewn foundations of towers. Old residents of Jerusalem assure me that they remember a time when great drafted stones of this wall were still to be seen in the open country north of the city, and their descriptions of the size and the dressing of these stones correspond with the account given by Robinson.¹ The growth of the modern city has, however, obliterated all traces of this wall. For a distance of a third of a mile from the present north wall the land has been thickly covered with houses, and ancient stones have been broken up and used as building material. The Russians have taken care that no vestiges remain of the wall that Robinson was able to trace on their extensive grounds northwest of the city. Others have been equally active in destroying evidence of it on the line running northeast from the Russian grounds. Things have now gone so far that people are able to assert that there never

¹ See also S. Merrill, "A Section of Agrippa's Wall," *PEF, Quarterly Statement*, 1903, p. 158 f.

were any traces of a wall outside of the present wall, and that Robinson was mistaken when he thought he saw them. I am willing to admit that Robinson could make mistakes, but I am sure that he knew a Jewish stone when he saw it, and that the dozen or more people who assure me that they have seen such stones cannot all be mistaken. It is easier to explain the disappearance of these stones with their unwelcome testimony against the genuineness of the Holy Sepulchre than it is to explain how so many people could have been victims of optical hallucination.

In spite of the systematic work of destruction, traces of this wall still occasionally turn up. When the foundations were dug for the house of Baron Ustinow at the corner of the cross-road leading from the Nâblus road to the Jaffa road, one or two ancient stones were found. In the land back of Mr. Hanauer's house others have been seen when cisterns were dug. Unfortunately, these have all been covered up again. One of the first duties of the Jerusalem archæologist, it seems to me, is to search for remains of this wall and to establish its existence or non-existence before it is too late to gather evidence.

During my nine months' residence in Jerusalem I explored many times along the line laid down by Robinson. I found several places where the surface suggested that stones might be buried, but I could get no permission to dig in these spots. The only place where remains were visible that might have belonged to the third wall was at a point north of St. Stephen's Church and east of the Nâblus road. Here, in a field back of some houses occupied by Sephardim Jews, is an old cistern, thirty feet long, twenty feet broad, and fifteen feet deep. The east, west, and south sides of this are built of small broken stones, but on the north side four huge stones fill the entire length of the top of the cistern. These average seven feet in length by five feet in height. They have a broad marginal draft, and resemble closely the great stones at the Wailing Place. It cannot be doubted that they are of Jewish workmanship. They are in the same east and west line with the remains that Robinson discovered west of the Nâblus road.



FIG. 1



FIG. 2

DRESSED ROCK-FACE ON NORTH SIDE OF CISTERN

The conjecture is plausible that they are vestiges of the lost third wall. These stones were not seen by Robinson, but they were investigated by Wilson, and are described by him in the *Ordnance Survey of Jerusalem*, 1865, p. 72. Wilson dug a pit in front of one of the stones in the corner of the cistern to see how far down it extended, and he also cut a trench west of the stones to see if he could discover another portion of the wall; but his examination was too superficial to establish anything in regard to the real character of the stones. As he himself remarks, "After ascertaining its [the pool's] character it was not considered advisable to incur further expense by continuing the shaft to the bottom."

About 1875 Schick made another examination which apparently he did not report at the time, but in the *Quarterly Statement* for 1895, p. 80, he alludes to this investigation. At the time of this report he was convinced that the second wall ran inside of the Church of the Holy Sepulchre, so that he was not disposed to regard favorably any evidences for a third wall outside of the present city wall. He remarks as follows: "Immediately westward [of the stones] I found the rock, and in it rock-hewn tombs; also in searching the north side of the wall I soon came to the rock, and ascertained that the thickness of the wall is fourteen feet. I intended to dig also on the east, but then the proprietor of the ground hindered me. It seems that there is no continuation eastward." How did he know this, if he did not dig? "Thinking the matter over and over again, I came to the conclusion that it was not a wall in the general meaning, but simply a tomb monument, and that this 'pool,' if we may call it so, is simply the court sunk into the ground, like that at the 'Tombs of the Kings,' only much smaller. In the immediate neighborhood there are other similar tanks, as may be seen on the plan. Once a stair went down into them, and in one of the side walls was the small entrance into the tombs. Afterward, in the Mohammedan time, these sunken courts were converted into pools for water, the sides being covered with masonry of small stones and then cemented. . . . I think further, that if the pool in which trees are

now standing, which proves that there is a good layer of earth, were cleared out, and the cement masonry taken away, the entrance to rock-cut tombs would appear under this wall and north of it, as there I found the rock near the surface of the ground. Jews are now residing in this neighborhood, and cast their rubbish into this pool, so that in a few years it will be filled up and disappear. I mention this in the hope that excavations may be made. The proprietors would probably give permission."

Some time after this Schick was commissioned by the Exploration Fund to clear out this cistern. He did so, throwing all the rubbish on top of the large stones, thus greatly interfering with the investigation of their true character. He discovered no tomb-entrances such as he predicted would appear. I understand that he wrote to the officers of the Fund that nothing of interest was to be found here. No public report that I have been able to find ever appeared, and the unsubstantiated tomb-theory remained Schick's last word on the subject.

I could not help feeling that these ancient stones deserved a more careful investigation than they had yet received and, accordingly, I made inquiries in regard to the ownership of the land in which they stood. I found that there was a large number of part owners, but that these were represented by two wakils or "trustees," one of whom was a British resident, the other an educated Moslem. These two granted permission to dig, on condition that I should leave everything as I had found it and make good any damage done to the grain that was standing on the land. I secured four men from Silwân who had worked under Dr. Frederick Bliss in excavating the south wall of the city, and we began digging. Dr. Spoer, the Fellow of the American School, and I took turns in superintending, for we found that even Dr. Bliss's training was not enough to make the men work when they were not watched. It seemed desirable to ascertain first how thick the wall was and what lay on its north side. Wilson says that he found nothing but oil-cisterns north of it. Schick says that he found the north face at a

distance of fourteen feet from the exposed south face. We started at the northeast corner and ran a trench northward through the immense heap of earth that Schick had taken out of the cistern. We found an uneven rock surface rising toward the north and divided up by cemented partitions into sections three or four feet square rising one above another and opening into one another. These were evidently designed to catch mud in the water flowing off the surface and prevent its coming into the cistern. I could see no traces of the oil-tanks that Wilson thought he recognized, unless he regarded this filtering system as a series of oil receptacles. In spite of Schick's assertion that the "thickness of the wall is fourteen feet," I found no trace of a north face opposite to the one exposed in the tank. A tunnel pushed northward as far as we dared to go showed no end to the rock surface. It thus became evident that we were not dealing with hewn stones but merely with a face of native rock that had been dressed to simulate stones. In order to make sure whether this were the case, I ran another trench westward along the top of the wall to the point where the first stone ended, and there found that the separation between the stones extended only four inches from the south face, and that beyond that depth the two stones formed one continuous mass of rock. This fact was not discovered either by Wilson or Schick, and I confess that it was a great surprise to me. The stones have all the appearance of the great stones in the enclosing wall of the Harâm. In most places the space between them is so small that a knife's blade cannot be inserted, in other places the blade may be thrust in up to the handle. Who would have supposed that the drafting and the lines between the stones were all a fraud? I had the workmen pull out the grass from the joints and examine them carefully, and it then appeared that the joints were drilled with some narrow instrument to a depth of about four inches. On these stones Conder remarks in the article "Jerusalem" in Hastings's *Dictionary of the Bible*, vol. ii. p. 596, "There are some fine stones in the side of a tank farther north, which may have belonged to the third wall, but they are not apparently in

situ.” In the light of the investigation just described this view is impossible. These supposed stones are native rock, and are therefore very much *in situ*.

The next question to be investigated was whether this rock cutting extended farther east and west than the portion exposed on the side of the cistern. Both Wilson and Schick had dug westward and had found no continuation. I contented myself, therefore, with merely exposing the northwest corner of the cistern. Here I found that the wall descended in two steps to level rock, and that there was no evidence of its having continued farther westward. I also dug at the northeast corner of the cistern and found the wall descending again in two steps to level rock. We ran a trench some distance and cut two cross trenches in hope of picking up the wall again, but without results. Just at this time I fell victim to a serious eye malady, and the physician forbade my working longer in the bright sunlight, so that I was obliged to conclude my investigations more hastily than I wished. I should like to see a more thorough investigation of the ground east of the wall. It is open field where digging can easily be done, and it seems to me very likely that other cuttings similar to that seen in the face of the cistern would be found.

And now, in conclusion, what is one to think of the character of these remains? Schick's theory that they formed part of a sunken rock-cut tomb is disproved by closer examination. The cistern is not cut out of solid rock, like the antechamber of a tomb, but is rock-cut only on the north side, and on the other sides is built up with Arab masonry of small stones. There are no tomb-chambers opening off any of the sides. Schick made diligent search for them all around the cistern in order to prove his hypothesis, but failed to find any. Conder's theory, that these stones have been moved from some other locality to use them in building one of the walls of the cistern, is disproved by the fact that they are native rock. The only remaining theory is, that they served as foundations for some sort of building. In laying a wall a rocky ledge was encountered on the

selected line, and instead of cutting this away, its face was dressed to imitate the masonry of the wall and its ends were cut into steps so as to allow for stones to be laid upon it. Much work of this sort is to be seen around Jerusalem. Both rock scarps and ancient stones have had their faces redressed to conform to later masonry. When the wall was destroyed, the portable stones were carried off to use as building material, but the rock ledge that formed its base was not transportable, and therefore has remained in place unto this day.

What sort of a building then was it for which these cuttings served as a foundation? Their style of dressing points to some great edifice of the Jewish period. A public building is hardly to be thought of so far away from the centre of the city; and moreover, the condition of the rock surface shows that this wall cannot have enclosed any building. By far the most natural theory is, that we see here part of the foundations of Agrippa's wall. These remains are in the same line as the remains that Robinson noted west of the Nâblus road. They are in the same line with the bit of ancient wall that Wilson examined in 1864. The huge size of the stones corresponds with Josephus's statements about the stones in Agrippa's wall. The only objection to this theory is that the face of this rock cutting is turned toward the city and not away from it, as we should expect if this were a city wall. It is true that scarps usually face outward and are an important part of the defence of a city, but this consideration hardly applies to so small a cutting. If the wall were planned to follow a particular course, and it happened to run over the brow of a ledge that faced inward toward the city, it is not likely that its course would be changed on this account. All that would be done would be to cut the ledge to correspond with the masonry of the wall and use it as a foundation. On the whole, therefore, the most likely theory seems to me to be that in these stones we have the only remains now visible of the third wall of Jerusalem.

The River Arnon

NATHANIEL SCHMIDT

CORNELL UNIVERSITY

Director of the American School in Palestine, 1904-1908

DURING the year 1905 I twice visited Wâdî el Môjib (وادي الموجب). On the 22d and 23d of February I had an opportunity of exploring the mouth of the river and its lower course for about one third of a mile, as far as to the second waterfall. On the 14th of July I reached the river at the Muhâtet el Hâjj (محطات الحج), coming up from the Lisân (اللسان) and Wâdî Suweil (وادي سويل) by way of Wâdî Jerrah (وادي جرّه) and Jebel Šihân (جبل شيحان).

The streams that unite to form the Môjib have been well described by Brünnow,¹ who also gives extracts from the literature on the subject. My only serious doubts concern the names of the two main tributaries immediately above the junction. Brünnow calls them Šfoyy and Enhêli. These are evidently the Szefye and Enkheyle of Burckhardt.² Tristram,³ Hamilton,⁴ and Bliss⁵ seem to have been told that these rivers just above the junction were called Wâdî el Sa'ideh (وادي السعيدة) and Wâdî Muḥarras (وادي مطرس); and this is in harmony with the information I obtained. It is not quite clear whether Brünnow bases his statement upon that of Burckhardt, or received independent confirmation.

¹ A. E. Brünnow and A. v. Domaszewski, *Die Provincia Arabia*, 1904, pp. 6 ff.

² *Travels in Syria and the Holy Land*, 1822, p. 373.

³ *The Land of Moab*, 1874, p. 131.

⁴ *Oriental Zigzag*, 1875, p. 77.

⁵ *Palestine Exploration Fund, Quarterly Statement*, 1895, p. 215.



FIG. 1. — MOUTH OF THE ARNON FROM THE WEST



FIG. 2. — SOUTHERN WALL BELOW THE BEND OF THE ARNON



FIG. 8. — FIRST BEND OF THE ARNON TO THE SOUTH



FIG. 4. — MOUTH OF THE ARNON FROM THE EAST



FIG. 5.—THE FIRST WATERFALL FROM THE WEST

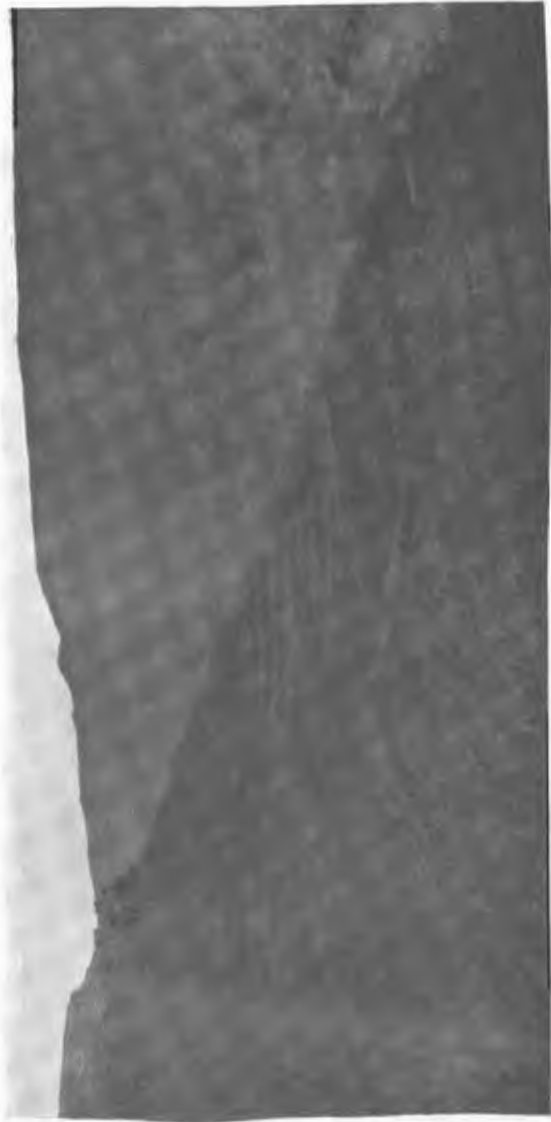


FIG. 6. — SCENE ON THE ARNON BETWEEN THE MOUTH AND THE PLACE OF CROSSING



FIG. 7.—THE ANNON NEAR THE PLACE OF CROSSING



FIG. 8. — MILESTONE ON THE SOUTHERN SIDE OF THE CROSSING



FIG. 9. — MILESTONES ON THE NORTHERN SIDE OF THE CROSSING



FIG. 10. — THE ARNON FROM THE MOUNTAIN NORTH OF THE CROSSING

According to one of his own notes,⁶ Enhéli is the name of a part of the main stream above the part named Wâdi el Sa'ideh.

The interests of Brünnow and Domaszewski centered upon the Roman road that led over the highlands. Their otherwise so invaluable maps, therefore, throw no new light upon the regions adjoining the 'Arabah and the Dead Sea. A systematic examination of the Môjib has never been undertaken. But each explorer has added something to our knowledge, whether he has approached the river from the sea or from the mountains.

U. J. Seetzen⁷ arrived at the mouth of the Môjib January 27, 1807, in time to see the sun set and to be impressed with the beauty of the delta. He had descended from the table-land to the shore of the sea a short distance south of the river. He learned that the peninsula was called El Hôshgera', and that there was a ruin on the cliff on one side of the entrance to the chasm which was called El Riadschy.⁸ On the same evening he waded across the river in the delta near the gorge, and found that it was about sixty feet across, the stream being forty feet wide and nowhere deeper than to his knee. He found a grotto at the foot of the northern wall, and left by a path that led to the high plateau the following morning.

Lieutenant W. F. Lynch⁹ and his party landed on the shore of the delta in front of Wâdi el Môjib May 3, 1848, at 5.25 P.M., having sailed from the Lisân in three and one half hours without stopping to examine any part of the coast. Just before sunset they went up the gorge. Lynch states

⁶ *Die Provincia Arabia*, p. 6.

⁷ *Reisen*, 1854, ii. p. 364.

⁸ Burckhardt learned on July 14, 1812, in crossing the Wâleh that Dâr el Riâseh (دار الرياشه) is near the entrance of the Seil Heidân in the Môjib, two hours E. of the Dead Sea (*Travels in Syria*, 1822, p. 371). Otto Kersten, on the 24th of April, 1874, looked down into the Wâdi el Riyaši, a short distance above its entrance into the Môjib (*Zeitschrift des Deutschen Palästina Vereins*, 1879, p. 226).

⁹ *Narrative of the United States Expedition to the River Jordan and the Dead Sea*, 1849, pp. 367 ff.

that the chasm was ninety-seven feet wide and the stream eighty-two feet wide, and that the depth was four feet at the entrance to the chasm and ten feet at the beginning of the delta. In spite of its appearance of accuracy, the width seems to have been only estimated. There probably was fifteen feet of a beach on the southern side, and the stream, which was not crossed in boat or waded, appears to have been supposed to be a little more than five times as wide. The distance to the first bend was estimated at one hundred and fifty yards. Lynch declares that the chasm "turns with a slow and graceful curve to the southeast," and that they "walked and waded up some distance, and found the passage of the same uniform width, turning every one hundred and fifty or two hundred yards gradually to the southeast."¹⁰

On the ground of this statement, Rev. Putnam Cady has ventured to affirm that Lieutenant Lynch "never went up the river one hundred and fifty yards." "As I have shown," he remarks, "at that point it makes a sharp turn to the south and immediately narrows to fourteen feet. Within fifteen yards beyond this turn it narrows to four feet, and gradually turns again to the east. Twenty yards more and progress is stopped."¹¹

Our photograph of the bend will show that it is, indeed, very sharp and not slow, though quite graceful. The "turning every one hundred and fifty or two hundred yards" seems to me a loose and unwarranted generalization. But Lynch evidently did not mean that the passage after the turn was uniform in width with the chasm below. He seems to have used his boat, as we did, until he was beyond the deep water, and walked and waded farther up, gaining the impression that the chasm did not vary materially in width and that it turned to the southeast some distance away. I can see no reason to doubt that Lieutenant Lynch went beyond the first sharp turn.

¹⁰ *Narrative*, p. 368.

¹¹ "Exploration of the Wâdy Môjib from the Dead Sea," in *Palestine Exploration Fund, Quarterly Statement*, 1901, p. 47.

He did not go so far as to see the first waterfall. Arriving as late in the day as he did, he evidently could not have examined the chasm very carefully. He left early the following morning.

On March 30, 1864, the Duc de Luynes¹² arrived early in the morning at the mouth of the Môjib, having passed Point Costigan during the night. He crossed the river below the entrance to the chasm and apparently spent the whole day resting in the grotto on the northern side and examining the luxuriant vegetation of the delta. Lartet went up the chasm some distance, but has left no description. He found the antlers of a chamois (*beden*, بدن), which he supposed had been shed by this animal. The Duc de Luynes estimated the height of the rocks on both sides of the entrance at thirty to fifty meters. This accords with our own estimate. On the 5th of April at 5 P.M. he arrived again at the Môjib, coming from the north, but left at 5 the following morning, without having explored the chasm.

At noon, April 28, 1874, H. Rothe¹³ came to the mouth of the Môjib. He evidently waded across the river, as he climbed the rocks on the other side the next morning. Whether he counted his steps is uncertain. He declares that "the Arnon fills a slit in the rock forty steps wide, and is at the mouth about twice as wide, before it divides itself into several arms, of which the largest is ten to fifteen steps wide and one and one-half feet deep." The exact statement of the depth of the water in the largest arm may indicate that the crossing took place at that point. The width at the entrance of the gorge may then have been estimated. It is the lowest of all estimates. Apparently, the entire river-bed between the cliffs was filled with water, as on our visit, and the river, for some distance below the chasm, was considerably wider, as on the occasion when the accompanying photograph was taken.

¹² *Voyage d'exploration à la Mer Morte, à Petra, et sur la rive gauche du Jourdain*, 1874, pp. 114 ff., 128.

¹³ Otto Kersten, "Umwanderung des Todten Meeres," in *Zeitschrift des Deutschen Palästina Vereins*, 1879, p. 222.

On February 28, 1897, Sir Gray Hill¹⁴ landed at the mouth of the river at noon, having left the Jordan in a boat the preceding day. He was in search of an inscription and was led to a grotto some distance to the south without finding it. Returning, he crossed the river in the delta, the water reaching up to the armpits. The entrance to the gorge seemed to him "as narrow as the s'ik at Petra." He evidently did not go close to it. Yet he thought he could hear the sound of the waterfall.

Rev. Putnam Cady¹⁵ arrived at the Mójib in a boat on February 10, 1898, at noon. He accepted Lieutenant Lynch's estimate of the width of the chasm (about one hundred feet) and of the distance to the first bend (four hundred and fifty feet). The stream appeared to him to be forty feet wide and one foot deep. As it went close to the northern wall, sixty feet of dry ground extended on the southern side. It would be interesting to know whether this land was actually measured from the mountain wall to the stream. Just above the mouth of the chasm there was a "swift rapid, with the water tumbling over the rocks." This shows that the water must have been very low at the time. Another indication of this is the appearance of a pool around the bend. The width of the passage was found to be fourteen feet. About fifteen yards beyond the turn the walls seemed to come within four feet of each other, and about twenty yards farther up all progress was stopped. The waterfall of which Mr. Cady just caught a glimpse cannot have been the one shown in the photograph accompanying this article, as that is much higher up. Possibly water tumbling over rocks farther down may have seemed more impressive when the stream was less swollen. The reconnoissance seems to have occupied the entire afternoon.

In the course of our circumnavigation of the Dead Sea, of which a preliminary account has been given in my Director's

¹⁴ "The Dead Sea," in *Palestine Exploration Fund, Quarterly Statement*, 1900, pp. 273 ff.

¹⁵ *Palestine Exploration Fund, Quarterly Statement*, 1901, pp. 44 ff.

Report,¹⁶ I and my three students, A. T. Olmstead, B. B. Charles, and J. E. Wrench, arrived at the mouth of the Mójib on the 22d of February at 4.20 P.M. We found the river bed filled with water from cliff to cliff. Hence the rocks mentioned by Mr. Cady were not seen. As the middle of the stream was about two boat lengths from the southern wall, and our boat was sixteen feet long, we judged that the width of the chasm at the entrance was not less than sixty nor more than seventy-five feet. We rowed up the river, but attempted in vain to get our boat so far as to the sharp turn, and returned to our camp in the delta. The next morning at 6 we began to examine the delta, and at 7.25 started up the stream with two cameras. After about two hundred feet we landed on a sandy beach on the southern side of the river. On the opposite side there was a similar cove with a beach in front. We rowed across and having climbed up the little ravine secured the accompanying photograph of the southern cove and beach. One hundred and fifty feet farther east we landed on the rocks. Mr. Charles and Mr. Wrench climbed along the cliffs and saw the narrow and deep gorge beyond the bend. After their return to the boat, we rowed one hundred and fifty feet farther and then fastened the boat to the rocks. Mr. Olmstead, Mr. Charles, and I climbed up to the high plateau, whence the accompanying photograph of the mouth of the river from the east was taken. The prow of the boat is visible. Another photograph of the river between the first bend to the south and the next turn to the east did not come out so well. We saw no signs of ruins on the mountains south of the entrance to the chasm.

Returning to the boat, we worked our way up along the cliffs by rowing on one side and holding on to the wall on the other side. After strenuous efforts we succeeded in getting around the curve to the south, but did not reach shallow water until we had gone about five hundred feet from the last stopping place. We pulled the boat up twenty-

¹⁶ *Fifth Annual Report of the Director of the American School for Oriental Study and Research in Palestine, 1905.*

five feet farther, and then, having fastened it to a rock, waded for four hundred feet through water, varying from a few inches to three feet. Here we came upon the small waterfall represented in the photograph. It was six feet high in one part, three feet in another. The roar of the falling water had given an impression of something far greater. The water was very swift, and it was with great difficulty we could pass through the fall on the southern side. By wading and jumping from rock to rock we reached a point three hundred feet up stream from the first fall. Here a somewhat larger fall made progress difficult. Anxiety about our boat and the supplies led us to return. We were under the impression that it would not be impossible to ascend the river. In all this distance we did not find any place where the passage narrowed down to anything like four feet, but in some places the cliffs at the top seemed to come very close together. We returned to the delta at 1.05 P.M.

On my trip from Kerak to Ghor el Mezra'ah (غور المزرة) and Wâdî Suweil, I was accompanied by Mr. Wrench, Mr. John Whiting, and two soldiers. Partly on the way back from Abu'l Felus to Wâdî Beni Hammîdeh, and partly at Jebel Šihân, where we spent the night of the 13th of July, I gathered some information concerning the tributaries to the Môjib below the Muhâtet el Hajj. There are three streams emptying into the Môjib from the south below Wâdî Jedeirah (وادي جديرة). Brünnow¹⁷ is not right in his suspicion that this Wâdî Jedeirah is identical with Burckhardt's Seil Jerrah. Wâdî Jerrah is, indeed, incorrectly located on the maps just south of the Môjib. In reality the only Wâdî Jerrah known to the Arabs of the region is the river bed bearing that name which runs parallel with Wâdî Beni Hammîdeh, a short distance to the north of it. While Wâdî Beni Hammîdeh is a perennial stream sending a considerable amount of water constantly into the Dead Sea, Wâdî Jerrah is dry at least in the summer, but has some springs in it.

¹⁷ *Die Provincia Arabia*, p. 6.

Wâdi Jedeirah is no doubt the same as Seetzen's El Schdër.¹⁸ The tributary nearest to the sea entering the Môjib from the south is called Wâdi Bediyeh (وادي بديه).¹⁹ Above this flows the Wâdi Defaleh (وادي دفاله), and, between this and Wâdi Jedeirah, a stream called Wâdi Deraifeh (وادي دريفه). From the north there is a tributary near the sea called Wâdi Bertah (وادي برته); above it another named Wâdi El Rammim (وادي الرميم), and still higher up Wâdi El Birfataš (وادي البير فتش). The greatest tributary is, of course, Seil Heidân (سيل حيدان).

It seems to me probable that the real name of the wâdi figuring on our maps as Wâdi Jerrah is Wâdi Šeķeik (وادي شقيب), and that this is, in some way, connected with the 'Ain Sgek which Seetzen²⁰ visited south of the Môjib. This is probably the wâdi whose delta is the most striking feature of the coast between the Môjib and the Lisân, bordered on the south by a long line of hills so even in height as to present the picture of the ramparts of a fortress. It is possible that between Wâdi Šeķeik and Wâdi Suweil, there is a Wâdi Mirrah (وادي مره), also called Seil Sebaieh (سيل سبيه), but this is uncertain.

The Môjib is undoubtedly identical with the Arnon of the Old Testament (אֲרְנוֹן) and of the Meša' inscription (𐤀𐤓𐤏𐤍). The name is probably derived from the root 𐤀𐤓𐤏 and characterizes the river as a "roaring" stream. Jerome still knew this name in its Aramaized form אַרְנוֹן, Arnonas. El Môjib seems to be a translation. It probably comes from the root وجب which means to "fall with a great noise." The difference in vocalization seems to go back to a difference in actual pronunciation. Seetzen heard it pronounced Maujêb (مَوْجِب), Burckhardt, Môjêb (مَوْجِب), others have heard it Mûjâb (مَوْجِب) and Mûjîb (مَوْجِب). The unnatural

¹⁸ *Reisen*, ii. p. 347.

¹⁹ Seetzen's Ain Bediyeh (*Reisen*, p. 347).

²⁰ *Reisen*, ii. pp. 349, 362. Šeķeik is, of course, pronounced Sgeig.

lengthening of the second vowel and the vacillation in the case of the first may be due to attempts to avoid such a pronunciation of the name as would suggest El Mújib (الموجب) = "the first cause," "God." It is perhaps permissible to infer that the new name goes back to a period when the philosophical term was not yet in use, so that there could be no suggestion of a blasphemy, and to a people familiar with the lower course of the river, where alone the water falls with a wild crash. In earliest times Arnon may have been the name of the river god.