

Researches of the American School in Palestine.

1. *The Tombs of the Judges, and a Neighboring Tomb hitherto unexplored.*
2. *Investigations near the Damascus Gate of Jerusalem.*
3. *The Inner Harbor of Joppa.*

PROFESSOR GEORGE A. BARTON.

BRYN MAWR, PA.

Director of the School for the Year 1902-1903.

I. THE TOMBS OF THE JUDGES.

DURING the first weeks in December, 1902, we had the opportunity of observing the clearing out of two tombs in the interesting old necropolis north of Jerusalem. One of these is that commonly called the Tombs of the Judges; the other has not before been explored and described, but is of similar structure, and probably dates from the same period. The tradition which connects the Tombs of the Judges, called by the Jews the Tombs of the Seventy, with the Sanhedrin is mentioned as early as 1537.¹

These tombs are on an estate which is a part of the property of an insolvent bank; and the receiver of the bank, Mr. Serapion J. Murad, determined to explore the tombs, and gave us the privilege of watching, and even at times of directing, the workmen.

Robinson gave a general description of the tomb and its different apartments. After stating that "at the N.E. and S.W. corners of the anteroom, a few steps lead down through the floor to a lower apartment in each corner, of like form and dimensions," he continues: "It is not improbable that similar apartments may exist under the other two corners of the anteroom, the entrances to which are now covered with stones and rubbish."²

¹ See Carmoly, *Itinéraires de la Terre Sainte*, pp. 430, 443, cf. 387.

² *Biblical Researches*, 1841, I. 527 sq.; 2 ed., I. 356.



1. ENTRANCE TO THE TOMBS OF THE JUDGES.

Tobler afterward gave the tomb a much more thorough examination.³ He took exact measurements of all that could be measured without excavation, but to him, as to Robinson, some of its problems appeared insoluble. He remarks: "Ob im Nordwest- und Südostwinkel, wie in den andern zwei Winkeln der Kammer A, schuttbedeckte und darum verborgene Löcher (Eingänge) in ähnliche tiefere Kammern sich noch vorfinden, kann nur frageweise angedeutet werden." Tobler's description has been regarded by more recent archaeologists as sufficient, and in later literature one finds only passing allusions to the Tombs of the Judges. In the English *Survey of Western Palestine* but a short paragraph is devoted to this interesting sepulchre,⁴ the explorers being apparently content to rest upon Tobler's results.

As all the débris in the tomb was to be removed, we had high hopes that Robinson's conjecture would prove to be correct, and that we should come upon some chambers hitherto unknown. In this, however, we were disappointed, for when the floor of room A was entirely cleared, the rock at the southeast and northwest corners appeared to be entirely solid. No entrances to undiscovered apartments had ever existed there.

In order to test Tobler's measurement, all the dimensions of the different apartments, niches, and recesses were taken anew, and are given below. Tobler's measurements are given in feet, while ours were taken in metres and centimetres.

The present porch is 4.15 m. wide and 2.75 m. deep. It is partly filled with earth, and its height is not known. Its appearance is shown in Pl. 1.

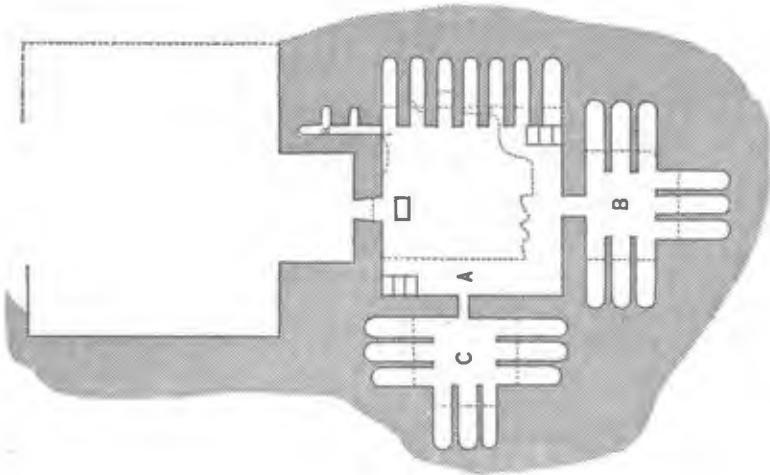
Room A. — West side, 5.66 m.; south, 6.07 m.; east, 5.69 m.; north, 5.95 m.; height from floor to roof, 2.52 m.; width of main entrance at the outside, 0.76 m.; on the inside, 1.01 m.; thickness of outer wall, 0.76 m.

On the north side of the room there are two tiers of niches (*kūkim*), arranged as shown in Pl. 3. The lower tier are cut directly into the solid rock, and are seven in number. Their length varies from 1.98 m. to 2.20 m., their height from 0.81 m. to 0.90 m., and their width from 0.47 m. to 0.62 m. Above these is a tier of three arched recesses, each containing two niches. The length of the recesses varies from 1.72 m. to 1.75 m.; their greatest height from 1.20 m. to 1.24 m.,

³ *Topographie von Jerusalem*, 1854, II. 326-340. Tobler cites most of the literature on the tombs which had been published before his time.

⁴ *Jerusalem*, p. 407.

and their width from 0.73 m. to 0.79 m. The niches opening from these are approximately of the same dimensions as those of the lower tier. At the northwest corner there is a single niche running east and west, which is of a very curious character. It is about 1.75 m. from the floor of room A, and is reached by a step cut into the solid rock, into the front of which a notch has been cut to receive a slab which closed the entrance to this niche. The odd thing about this niche is that two recesses (see *a*, Fig. 2) are cut from the solid rock on its north side, as though for receiving water jars.



2. PLAN OF THE TOMBS OF THE JUDGES: UPPER LEVEL.

Room B.— On the east of room A is room B, entered from it through a door 1.45 m. high and 0.48 m. wide. This room measures on the west side, 2.30 m.; on the north, 2.35 m.; on the east, 2.25 m.; and on the south, 2.25 m. The height in the middle is 1.82 m. Around the north, east, and west sides of the room runs a bench cut from the solid rock, varying in width from 0.81 m. to 0.84 m. There are in this room twenty-one niches arranged in two tiers. The lower tier consists of three on the north, east, and south sides respectively, and the upper tier, of four on each of these sides. These niches are of about the same dimensions as those in room A.

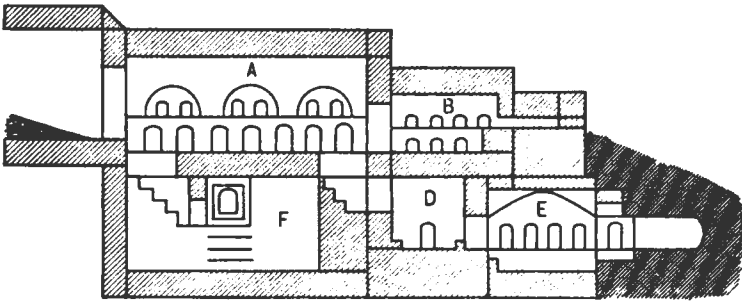
Room C.— From room A we pass by an entrance 1.40 m. high and 0.49 m. wide, to room C. The north side of this room measures 2.45 m.; the west, 2.48 m.; the south, 2.44 m.; the east, 2.53 m.;



3. NICHES AND ARCHED RECESSES IN ROOM A.

its height in the middle is 1.79 m. This room contains nine niches of the same dimensions as those in the other rooms. They are on a level with the floor, and are arranged three on the west, three on the south, and three on the east sides. Above each three, on these sides, is an arched recess. The length of these varies from 2.25 m. to 2.28 m., the width from 0.82 m. to 0.86 m., and the height at the centre of the arch from 0.77 m. to 0.83 m.

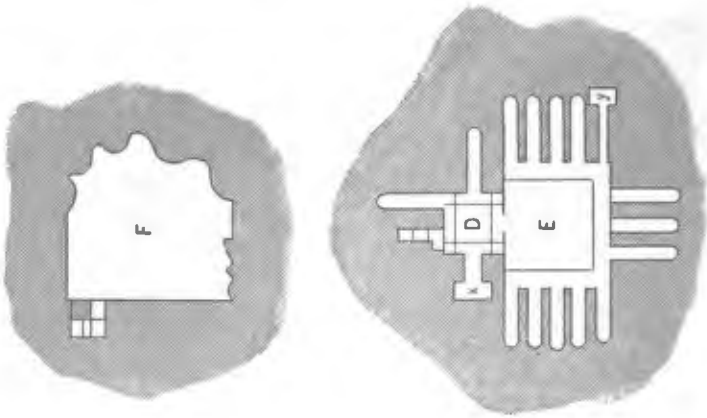
Room D.— From the northeast corner of room A we descend a little stair, 1.58 m. long and 0.65 m. wide, cut into the rock, and pass by an opening 0.71 m. high and 0.42 m. wide, through a wall 0.78 m. thick, and step down 0.60 m. from the threshold into room D. This room is in reality an antechamber to room E, and is so treated by Tobler. The removal of the accumulated earth from the



4. SECTION OF THE TOMBS OF THE JUDGES.

floor of this room revealed a sill cut out of the solid rock running entirely around the room. This sill is approximately 0.30 m. high and 0.30 m. wide, though like everything else about the tombs the measurements vary, being slightly different on the different sides. At the northeast and southeast corners posts of the same dimensions as this sill rise to the roof. The dimensions of this room are as follows: length, 1.84 m.; width, 1.58 m.; height, 1.52 m. Two niches open from it, the one at the north end, and the other on the west side near the northwest corner. They are of about the same size as the others. From the south end a small opening, about the size of the openings of the niches, leads into a chamber of roughly cubic form, measuring in length 0.96 m., in width 0.76 m., in height 0.92 m., which was evidently used for depositing bones from the ossuaries after the bodies had decayed and the ossuaries were needed for the bones of those who had died later. (See plan of Room D, Pl. 5.)

Room E. — From room D we pass by an opening 0.70 m. high and 0.42 m. wide, and descend two steps into room E. The sides of this room measure respectively 3 m., 2.95 m., 2.955 m., and 2.96 m.; and its height 1.85 m. On the north, east, and south sides are three arched recesses, 2.35 m. long, 0.75 m. wide, and 1.07 m. high. The only niches in the room are in these recesses. Those on the north and south sides contain four each, while that on the east contains three that are let into the rock, and a fourth which is let into the rock from the south end of the arched recess at right angles to these. At the other end of this eastern recess a narrow passage, about the height of the opening of the niches, leads to a chamber 1.15 m.



5. PLAN OF THE TOMBS OF THE JUDGES: LOWER LEVEL.

long, 0.85 m. wide, and 1.39 m. high. This chamber, like that which led from room D, was used as a receptacle for old bones after they had been emptied from the ossuaries.

Room F. — In the floor of room A, at the southwest corner, a stairway, 1.35 m. long and 0.55 m. wide, descends to a small opening. This opening admits one to a little cell on the left of which another small opening brings one to some steps which conduct one to the floor of room F, a chamber directly under room A. This chamber is irregular in form (see plan, Pl. 5), and was never finished. As Tobler remarked, one can see here the method on which these tombs were constructed. Its greatest length, east and west, is 4.75 m., and north and south, 4.14 m. An opening has been cut from this through the floor into room A, as marked in the diagram

(Pl. 2). There is evidence that at some period this room was used as a cistern.

It will be noticed that none of the apartments are quite square. The workmen who constructed these chambers were guided largely by the eye, and did not work by exact rule.

There are two chambers of different form from the niches, the purpose of which seems not to have been apparent to Tobler. One is connected with room D (x, Pl. 5), the other with room E (y, Pl. 5). These chambers are not long enough to receive a sarcophagus and are considerably higher than the niches. As Mr. R. A. Stuart Macalister, of the Palestine Exploration Fund, who has made a considerable study of tombs, suggests, these chambers were used as receptacles for bones, after the bodies had decayed. First the bodies seem to have been placed in sarcophagi until the flesh had decayed and the bones separated; then the bones were placed in ossuaries that the sarcophagi might be used for other bodies. As other members of the families or kindred who used the tombs passed away, the sarcophagi and ossuaries were needed for them, and thus it happened that after a few generations, the bones were thrown into these chambers in an indiscriminate heap.

In our examination we noted a hitherto unobserved feature in the original structure of the tomb. The former literature of the subject, so far as it is known to me, nowhere makes mention of the fact that a court, or outer porch, nearly ten metres in length and nine in width, once existed in front of the tomb. The walls of this court were formed on two sides, the east and south, by a scarp of the solid rock, a little of which projected also on the west side (see Pl. 2). The front was apparently approached through two or three arches, the masonry of which was attached to the rock scarp at the southwest corner of the court, where a bit of it still remains. In consequence of this evidence that an arched front existed to this court, I conjecture that a wall once ran along its north side (see dotted line, Pl. 2).

In the doorpost of the main entrance to room A is a notch cut to receive a latch. This groove is so arranged that a door could swing inward, and seems to indicate that the tomb was once used for a dwelling. The fact that room F appears to have been used for a cistern points in the same direction. It was probably at this period that the opening in the floor of room A, just in front of the main entrance and leading to room F, was cut. It was apparently made for convenience in drawing water.

Since this tomb had been open so long, and had been used for

such varied purposes, we could not hope to discover in it many antiquities. Fragments of sarcophagi and of ossuaries were found in nearly all the niches. Some of these were ornamented. In one or two of the niches a few bones were found, but they were too disconnected to have any significance. One or two Arabic coins, inscribed in Cufic characters, and a fragment of an Arabic lamp, were also found.

By far the most interesting objects discovered were five rough bits of stone on which modern Jews had written prayers to the ancient worthies whose bodies were buried here, and had then cast them into the various niches, evidently in the hope that the rabbi or judge addressed would intercede for them with God. Mr. Murray, a missionary at Hebron, tells me that into certain holes in the wall of the Haram there, Jews often cast letters addressed to Abraham, containing similar prayers.

Of these five stones, two were inscribed in the modern Jewish script, one in the Judæo-Spanish script, one in square Hebrew characters, and one in Syriac characters. On all of them but one, moisture had rendered some of the letters illegible. This one reads as follows: ⁵—

חייא חיאל בר יוסף גדל לחיים
 טובים ולשלום בנים זכרים קיימא

Yakhiye-Yakhiel, son of Yoseph — may he grow up to a prosperous life and to peace, with male issue continually.

The Second Tomb.

A little to the south of the Tombs of the Judges, and slightly nearer to the path which leads from Jerusalem to Nebi Samwil, is another interesting tomb which has never before been described. Our attention was first called to it by Mr. R. A. Stuart Macalister, who discovered it. This tomb had a wide entrance, which must have been very imposing before the earth, brought down the slightly sloping ground by the rains, had hidden it from view. When we approached it, the tops of the pillars of this fine entrance were just visible. The two corner posts and the two pillars of this entrance (see Pl. 6), with their ornamentation, and the porch behind them, were cut out of the solid rock. The earth, which had silted into the entrance and filled the porch, was much less deep at the back or eastern

⁵ Mr. Feinstejn, the second Dragoman of the American consulate in Jerusalem, transliterated this for me from the modern Hebrew script.



6. ENTRANCE TO THE SECOND TOMB.

side of the porch, than at the front, or western side. At the back of this porch the top of a doorway into an inner chamber was visible. By removing a little of this earth it was possible to enter this chamber (see room A, Pl. 7). Into this room comparatively little earth had silted and that only about the doorway. From it three others opened, as shown on the accompanying plan (Pl. 7). The interior of this tomb appeared to be quite clean. Two of its rooms were never finished, and the others, if ever used, had been so thoroughly cleaned out as to leave no trace of the fact.

We did not wholly clear out this tomb. A shaft was sunk between the northwest doorpost and the pillar next to it, with the purpose of ascertaining whether a sill or threshold had been cut out of the rock at their base. No such sill or threshold was found. The pillars rest upon the level rock-floor of the porch.

Both the corner posts and the pillars were ornamented at the top with a simple ornamentation which is shown in Pl. 6. The southern one of the two pillars is now broken away at the top, and its stump is worn down to a level with the accumulated earth.

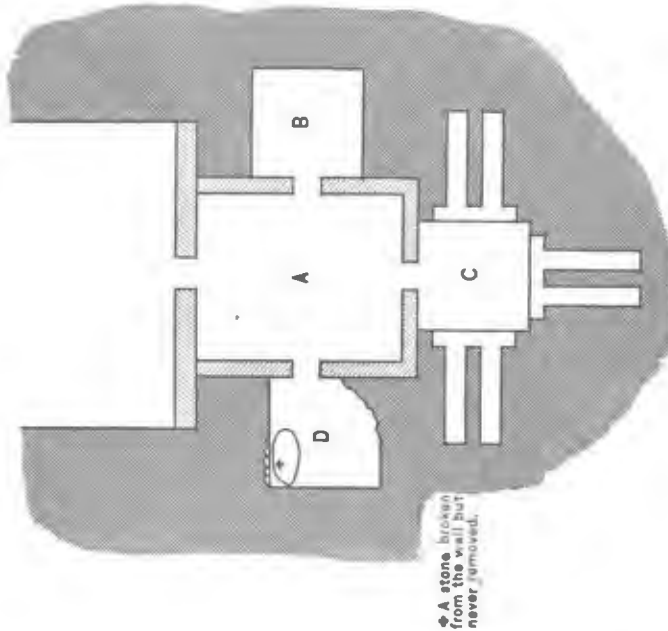
Shafts were also sunk at the two ends of the porch, to ascertain whether there were rock chambers on the north or south, opening out of this porch; but no such chambers were found.

In the course of the digging one or two Arabic coins and two lamps were found. One of these was of the simple type, supposed to be the most primitive form of lamp in Palestine;⁶ the other was an early Christian lamp bearing an inscription.

The dimensions of this tomb are as follows: length of the west (front) side of the porch, 6.93 m.; of east side, 7.23 m.; width (*i.e.* depth) at north end, 3.42 m.; at south end, 3.44 m.; height of roof, 2.70 m. The pillars were 1 m. and 1.02 m. respectively from the corner posts. The circumference of the pillar which is still intact is 1.21 m. From the porch, we pass through the east wall by an opening 0.45 m. wide and 0.80 m. high into room A. The floor of room A is about a metre below the floor of the porch. Its exact measurement could not be ascertained without removing the earth which had silted in through the entrance. The height of the roof of this room from its floor varies from 2.29 m. to 3.03 m. Its west side measures 4.33 m.; south side, 4.22 m.; east side, 4.13 m.; and north side, 4.27 m. This room contains neither niches nor arched recesses.

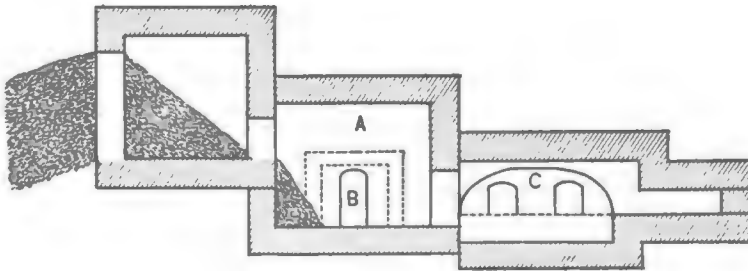
⁶ See Bliss, *Mound of Many Cities*, p. 87; and *Excavations in Palestine, 1898-1900*, by F. G. Bliss, R. A. S. Macalister, and R. Wünsch, London, 1902, Pl. 20. Lamps of this form are still used by the peasants in Palestine.

Through the north wall of room A we pass by a doorway 0.54 m. wide and 1.87 m. high and descend two steps to room B. This room



7. SECOND TOMB: GROUND PLAN.

measures, on the south side, 2.31 m. ; on the west, 2.30 m. ; on the north, 2.70 m. ; on the east, 2.37 m. ; and its height is 1.93 m. It is only roughly finished, and no niches were cut in its walls.



7 b. CROSS SECTION.

Through the east wall of room A we pass by a doorway 0.47 m. wide and 1.87 m. high and descend two steps to room C. This room

measures, on its west side, 2.29 m.; on its north, 2.41 m.; on its east, 2.44 m.; and on its south, 2.50 m. Its height is 2.04 m. This room contains, on the north, south, and east sides respectively, three arched recesses, two of which, those on the south and east sides, are approximately 2 m. long, 0.55 m. wide, and 0.95 m. high at the centre of the arch. That on the north side is 2.03 m. long, 0.25 m. wide, and 0.60 m. high at the centre of the arch. Each of these is about 1 m. from the floor. From each of these recesses there open two niches, the width of which varies between 0.45 m. and 0.50 m.; the height between 0.75 m. and 0.78 m., and the length of which is approximately 2 m. each.

Through the south wall of room A we pass by a door 1.47 m. high and 0.50 m. wide into room D. This room is in as unfinished a state as room F of the Tombs of the Judges. A large block of stone, which had been broken from the wall of solid rock, lies on the floor. Smaller fragments of stone are all about it, but this had not been broken up to be carried out. The methods of these ancient tomb-builders can easily be followed here. We tried to secure a photograph of this rock and the wall from which it was broken, but the small size of the room rendered our efforts unsuccessful. The room is so unfinished that it is quite irregular in shape. Its dimensions are as follows: east side, 1.85 m.; south, 2.60 m.; west, 2.70 m.; north, 1.83 m.; the height varies, but averages about 1.60 m.

This tomb was finely conceived, but was never finished. The little ornamentation which may still be seen at the tops of the pillars contains no work as fine as the delicate carving over the porch of the Tombs of the Judges. It seems probable, however, that the two tombs were constructed in the same general period of history. In the immediate vicinity there are many other rock-cut tombs, but if we except one described three years ago by Mr. Macalister,⁷ none are nearly as fine as the two described above.

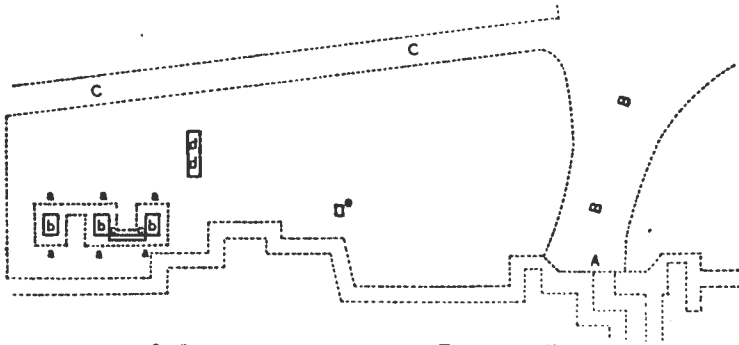
2. INVESTIGATIONS NEAR THE DAMASCUS GATE.

During the last weeks of the school year (1903), the owner of a piece of land near the Damascus Gate was digging on his own ground, with the object, as I think he said, of finding, if possible, an old cistern. By his courtesy we were permitted to observe and report upon the work. This piece of land is situated outside the wall, immediately to the west of the Damascus Gate. It is bounded on the

⁷ See *Quarterly Statement of the Palestine Exploration Fund*, 1900, pp. 54 sq.

north by the road which runs from the Damascus Gate (Bāb el-'Amūd) to the New Gate (Bāb 'Abdul-Hamid), parallel to the city wall; on the east, the Damascus road bounds it; on the south, the city walls; while on the west it is bounded by the tract of land on which the discoveries reported by Dr. Selah Merrill in the *Quarterly Statement* of the Palestine Exploration Fund, April, 1903, pp. 155 sq., were made last year.

The length of the tract is about 140 yards. Its width varies with the windings of the wall. The digging was begun here on April 22, and was continued with a small force till May 14. Most of the excavation was made near the northwest corner of the tract.



8. INVESTIGATIONS NEAR THE DAMASCUS GATE.

A, Damascus Gate; *B*, road to the north; *C*, road to the New Gate; *a a a*, trenches; *b b b*, remains of stone piers; *c c*, wall of a peasant's dwelling; *d d*, northern terrace; *e*, eastern trench.

Some months previous to the beginning of the work described here, a shaft had been sunk about four metres from the wall which separates this lot from the property adjoining on the west, and a piece of masonry had been discovered. The owner of the land now determined to continue the work, in order to discover, if possible, the purpose of this masonry. The original shaft was, therefore, gradually extended into the trenches marked *a a a a a*, in Pl. 8. The piece of masonry first seen proved to be a pier, or the base of an arch, which once formed a part of the crypt of a church or monastery. In the course of the work two others were found east of the first. These piers are marked *b b b*, in Pl. 8. They were once connected by arches, of which they formed the bases. Portions of the arches may still be seen (see Pl. 9). Between the eastern and middle piers the trench was carried down to the native rock which underlies Jeru-

saalem, and it appeared that these foundations were laid on this native rock. There was no older structure intervening between them and it.

These piers were constructed of two kinds of cut stone. In parts of the structure which (when the building was intact) were not exposed to view there were used stones with the drafted edges characteristic of Jewish work of the Herodian period or earlier; while the face consisted entirely of stones smoothly hewn, the diagonal cutting of which is characteristic of the work of the crusading period. (See Pls. 11 and 12 for the two kinds of stone.) The front of this building was toward the south.



9. WESTERN PIER, FROM THE NORTHEAST.

It is probable from the character of the stones used in these arches that the building to which they belonged was a part of a Christian church or monastery, in erecting which stones from some older structure had been used. Can we go farther and determine what this church or monastery was? Mujir-ed-Din (1496), in his list of the gates of Jerusalem,⁸ mentions, between the Bāb el-'Amūd (Damascus Gate) and the Bāb ar-Rahbeh (St. Lazarus Postern), another gate, which he calls Bāb Deir es-Serb, or Gate of the Servian Convent. The St. Lazarus Postern was a small gate which received its name from its proximity to an important hospital. Le Strange places it to the east of the present Franciscan Monastery. If this be the correct position of the St. Lazarus Postern, and the Bāb Deir es-Serb intervened between it and the Damascus Gate, it is clear that the Bāb Deir es-Serb was very near the building the remains of which we have discovered. This conclusion is also confirmed in another way. Mujir

⁸ See the quotations and discussion in Le Strange, *Palestine under the Moslems*, pp. 212-217.

ed-Din, as quoted by Le Strange,⁹ says, in speaking of a certain quarter of the city: "It has in it Saladin's Bimaristan (or hospital), and



10. WESTERN PIER, FROM THE SOUTHWEST.

the Church of the Kumāmah (of the Resurrection). On its west side is the Quarter of the Christians, which extends from south to north, from the Bâb al Khalîl [Jaffa Gate] to the Bâb as-Sarb, and includes the Hârah ar Rahbah, the Quarter of the Square."

Now the Church of the Resurrection is the Arabic name for the Church of the Holy Sepulchre, and a glance at any plan of the city



11. WESTERN PIER: WEST FACE.

⁹ *Ibid.*, p. 215.

will make it clear that, if a certain quarter of the city extended from the Jaffa Gate to the Bāb Deir es-Serb and included the Church of the Holy Sepulchre, the Bāb Deir es-Serb must have been very near the structure the foundations of which we have discovered. The evidence does not warrant a positive conclusion; but I am strongly inclined to suspect that the building which these shattered arches supported was none other than the monastery of the Servians which gave its name to the Bāb Deir es-Serb. If this hypothesis represents the

truth, these foundations are, in all probability, considerably older than the crusading period.

The time during which the Servians — a branch of the Greek Church — would be likely to construct a large monastery in Jerusalem was in the period before the Mohammedan conquest of the city, the general period during which the church which now forms the Mosque el-'Aḳṣā was built. The fact that in this structure we find



12. MIDDLE PIER: WEST SIDE.

stones of the type commonly classed as "crusading stones," is, I think, no real reason for regarding this foundation as a work of the crusading period; for evidence is altogether wanting, so far as I know, to prove that this style of stone-cutting first came into vogue in the time of the crusades. It may well have been employed for three or four centuries before.

Be this as it may, there were in this region many important buildings during the crusading time. There was a palace of Odo near the Damascus Gate (then called St. Stephen's Gate), on the inside;¹⁰ another palace stood outside the walls on the east side of the

¹⁰ See Röhricht, *Regesta Regni Hierosolymitani*, p. 140.

Damascus Gate,¹¹ while not far from this was the Asnerie, discovered some years ago by Col. Conder.¹²

One who explores the foundations of the present buildings within the walls and just west of the Damascus Gate will find much work of the crusading times or of the period anterior. The Rev. J. E. Hanauer called my attention to one doorway which apparently comes from the crusading age.

How extensive the foundations of this old monastery were we did not succeed in discovering. Trial trenches were sunk at two different points (marked *dd* and *e* in Pl. 8), but no traces of similar foundations were discovered there. In the trench *dd* only small objects were found; in the trench *e* was found a stone, carved as though intended to ornament the top of a gate or building (see Pl. 13). It was 80 cm. high and 30 cm. square at the base. It is to be hoped that other attempts will be made to find traces of these interesting foundations in other parts



13. STONE POST.

of this lot of land, before it is all utilized for building purposes, as it will be in a few years.

It was my hope, when the opportunity came to make the observations which are here recorded, that something might be found which would bear upon the vexed question of the position of the "second wall" of Josephus. While it might seem at first that the discoveries here related have no such bearing, a little further reflection is sufficient to modify this conclusion. We noted above that the foundations which we discovered contained two styles of stones,

¹¹ Röhricht, *l.c.*, p. 85.

¹² *PEF. Quarterly Statement*, 1875, p. 190, and 1877, p. 143.

one Jewish, the other post-Jewish. An element of uncertainty is introduced by the fact that we do not know how long after the Jewish period these drafted stones continued to be used. An examination of the present city wall, which was built in 1542, in the immediate vicinity of these foundations, reveals in it the same two kinds of stone, the Jewish element being quite large. It is altogether probable that this Deir es-Serb, which had fallen into ruin, was demolished by the Turks, and the stones which it furnished incorporated in the present wall. Moreover, as one follows the present wall westward toward the present Franciscan Monastery, he finds a very large number of these stones with the Jewish drafting built into the present wall. Whence did they all come? It does not seem possible to account for their presence, except by the hypothesis that a wall such as the "second wall" described by Josephus ran near the line of the present city wall, and that its stones, incorporated into successive city walls, or into such structures as the Deir es-Serb, found their way at last into the wall of Suleiman, which still stands. Owing to our ignorance of the date when the fashion of stone-cutting changed, this conclusion can be only tentatively held.

One interesting fact in the history of these ruined arches remains to be recorded. At some time before the arch which connected the eastern and the middle piers had fallen in, and after about a foot of débris had accumulated on the floor, a fellāh made himself a home there by building a wall of rough stones across the front and plastering the inside of the room which the arch, completed by this wall, made. The entrance to this rude dwelling was from the north. In the rude wall constructed on the south two receptacles for food and stores, such as are now found in Palestinian houses, were built. In this dwelling a stone trough was found, length 30 cm., width 20 cm., height 17 cm. Not only caves, but ruins of all kinds, are still utilized by the peasants as dwellings. One of the arches of a ruined khan on the Nābulus road, opposite Er-Rām, is to-day similarly used as a dwelling.

In the course of the excavations there were found a number of fragments of glass, pottery, and other objects, none of which were whole, and nearly all of which were from the Arab occupation of Jerusalem. After the monastery fell into decay, the place appears to have been used as a dumping ground.

3. EXAMINATION OF THE SUPPOSED INNER HARBOR OF JOPPA.

In the spring of 1903 we were able to make an examination of a site near Jaffa, which is believed by some students of Palestinian topography to be the site of the ancient harbor. This piece of land is situated to the eastward of the city of Jaffa, and is a basin of low land, the soil of which consists of a fertile water deposit. On all sides this tract is surrounded by higher land which slopes gradually toward it, except to the northwest, where there was evidently once an outlet toward the sea. The higher ridges of land by which this basin is surrounded consist mainly of sand, but in this basin the owners tell me they have penetrated twelve metres without getting below this black water deposit to the sand. This tract of land belongs to the estate of Mr. Murad, who is endeavoring, by means of drainage and by planting eucalyptus trees, to render it suitable for an orange garden.¹³

The Rev. J. E. Hanauer of Jerusalem, who resided for some years in Jaffa, kindly furnished me with the chief points of an article which he was preparing on this subject for the *Quarterly Statement* of the Palestine Exploration Fund.¹⁴ The grounds upon which the theory of an inland harbor in the depression or valley east of Jaffa may be justified are, in Mr. Hanauer's judgment, of two kinds. *First*, the configuration of the ground: "We have a low-lying tract only about eight or nine feet above sea-level, toward which it slopes steadily, and bounded on either side by two ridges of higher ground. The result of excavations shows that the soil of this tract is a fertile water deposit of remarkable depth, reaching considerably lower than the level of the present sea bed close to the shore. The most marked features remind us of what we find at other places along the Syrian coast, namely, a prolonged ridge running up to the shore, and alongside of or behind it a fertile plain sometimes drained by a river. Such ridges are sometimes continued into the sea by a line of rocks or an island. The ridge is sometimes, but not always, very strongly

¹³ The situation of this depression may be seen in Sandel's map of the neighborhood of Jaffa (*Zeitschrift des Deutschen Palästina-Vereins*, Vol. III., Part 1, Pl. iii.; cf. pp. 44 ff.), where it is named El-Başşat es-Şaghireh (No. 37); on the reduced map in Baedeker's *Palestine* it is represented as a swamp east of the "Garden of the German Consul." Mr. Hanauer has printed a sketch map of the vicinity in the *Quarterly Statement* of the Palestine Exploration Fund, July, 1903, p. 258.

¹⁴ It has since been published in the July number, 1903, pp. 258 *sqq.*

marked, as in the Carmel range. As examples of the occurrence of these features may be cited Tripolis, Beirut, Tyre, and Sidon."

Second, Historical allusions: "We possess," says Mr. Hanauer, "as far as I am aware, no single record mentioning the existence of such a harbor at the spot indicated, or of an inland lake or lagoon; but we have historic allusions to show that some changes have taken place in the level of the shore line at Jaffa. Thus Josephus (*BJ.* iii. 9, 3) tells us that it was the 'black north wind' that was dangerous and much dreaded as destructive to shipping at Jaffa. This is not the case at present. It is now the west, or more particularly the southwest, wind that is feared. The north wind is, indeed, disliked, but not on account of the shipping. It is popularly considered a poisonous wind, bringing down the malaria from the marshes on the north. Then again several of the Crusading Chronicles, amongst which I may mention William of Tyre (*History*, viii. 9), Vinisaufr (in Bohn's *Chronicles of the Crusades*, pp. 312 sq.), Behā ed-Dīn (*Life of Saladin*, "Palestine Pilgrim Texts," pp. 365-370), and Joinville, (*Memoirs*, Bohn's translation, p. 486), make a clear distinction between 'the town' and 'the citadel' of Jaffa, the former, according to Joinville, being a large village on the seashore, while the latter 'resembled a well-defended town, and was situated *on an island* near the seashore.' This island, which to judge from the quotation must have been of noteworthy size, now no longer exists. We may conjecture that volcanic agencies may have caused the changes to which I have referred. We know that earthquakes are not uncommon here, and we have the statement of Arab historians (see Besant and Palmer, *History of Jerusalem*), that about A.D. 1068, *i.e.* shortly before the first crusade, the sea receded for a considerable distance, and the land left dry was occupied and reclaimed by people of the district, but that the sea suddenly returned and caused a great loss of life."¹⁵ In addition to this argument of Mr. Hanauer, I learned

¹⁵ [The inference from Josephus is erroneous. The "black norther" (*μελαμβόριον*) is not the clear north wind "which brings most fair weather" on this coast (Josephus, *Antt.* xv. 9, 6), but a violent northwest wind; at the other end of the Mediterranean the famous mistral was called by the same name (Strabo, p. 182). Joinville does not say that the castle of Jaffa was *on an island*, but that it was on the shore. The passage is as follows: "Nous nous lojames entour le chastel, aus chans, et environnemes le chastel, qui siet sur la mer, dès l'une mer jusques à l'autre. Maintenant se prist li roys à fermer un neuf bourc tout entour le vieil chastiau, dès l'une mer jusques à l'autre. Le roy meismes y vis-je mainte foiz porter la hote aus fossés, pour avoir le pardon" (ed. de Wailly, 1874, § 517). The "island" in Bohn's translation owes its existence solely to unconscionable

from Mr. Murad that some twenty years ago, in making some incidental excavations, some rocks were found, which contained holes and rope-marks, as though they had been used for the anchorage of ships.

When, therefore, Mr. Murad determined to investigate the matter a little further, and to give the American School the opportunity of watching and describing the work, the privilege was eagerly accepted. Accordingly, between April 20 and May 12, three trenches were dug at two points near the western boundary of this piece of land. During the progress of the work I made three excursions from Jerusalem to Jaffa to make observations upon it. Mr. Irwin Hoch De Long and Dr. Hans H. Spoer each spent at different times three or four days in Jaffa for the same purpose.

At first we were highly gratified at the results of the work. On the second day of the digging we came upon a wall, which we hoped might prove to be the wall of the old harbor. It was built of rough stones, and the part first found was seven metres long and one metre wide. To the south this wall was interrupted by a well. It is probable that when this well was dug stones from the wall were used in its construction. Later some stones which probably formed a part of the same wall were found on the other side of the well. Still other stones, in line with this same wall, and probably once a part of it, were also found considerably to the north.

All thought that this wall had any connection with an ancient harbor had, however, soon to be given up. As the trenches were carried down, the wall found appeared to be nowhere more than half a metre in depth, and it rested everywhere upon the same black water deposit of earth which forms the soil of this whole basin. What the purpose of this wall was can only be conjectured; but it seems reasonable to suppose that it was built at a comparatively recent period, possibly as a barrier against the floods, such as that of 1893, to which this land was subject, or possibly as a division wall between two estates. Be that as it may, the wall as we found it was everywhere buried half a metre or more below the present surface. A short distance to the west of our trenches one comes upon sand at a very slight depth, but the part of the trench which ran parallel to

blundering, and it is unnecessary to have recourse to an earthquake to get rid of it. The account in Behā ed-Dīn (ed. Paris, 1884, pp. 323 *sqq.*) of the relief of Jaffa by Richard I. (A.D. 1192) agrees entirely with Joinville's description. It is perhaps not superfluous to add that the translation of Behā ed-Dīn in the "Palestine Pilgrim Texts" is not to be trusted. — EDITOR.]

the wall was carried down four metres without coming to sand. The black water deposit extends here to a greater depth than that.¹⁶

While the level of the different parts of the estate in relation to one another had been previously determined, the height of the whole above the sea-level had never been accurately ascertained. A surveyor was accordingly employed, who determined the top of the wall found in our first trench to be 4.50 m. above the present sea-level. The conformation of the land at this point is such that there may have been a harbor here in early times, but our investigation revealed no evidence that there was.

An examination of the historical references to Jaffa, so far as I can at present see, affords no evidence that the depression which we investigated was ever used as a harbor.¹⁷

¹⁶ In the course of the excavation three pieces of a broken shell from a cannon were found ; also an iron object shaped something like an axe head, but without an eye for the helve (the iron was about one-half inch thick), and three coins. Two of the latter were too much corroded for identification. The third was an Egyptian coin dated 1223 A.H.

¹⁷ At the time when my report to the Managing Committee was written (*American Journal of Archaeology*, Vol. VII., Supplement, pp. 35 sqq.), the authors cited by Mr. Hanauer (above, p. 184) were not within my reach, and I was led to express a different opinion, which examination of the sources shows to be unfounded.