

AREA D

LARRY G. HERR

Harvard University
Cambridge, Massachusetts

Area D was originally laid out to check the stratigraphy of Tell Hesbân on the south slope of the acropolis and to expose, if possible, the southern acropolis access route. Later, with the eastward expansion of Area B, Area D served to connect stratigraphically Area A on top of the acropolis with Area B on the southern shelf below.

During the 1974 season digging was continued in all Squares of Area D except D.6 which was completed the previous season. As in 1973, D.4 was excavated with Area B and its results are published with that Area. Excavation of E.1, now straddling the acropolis perimeter Wall D.1:4, was two related operations, one north of the perimeter wall, D.1 North, and one south, D.1 South. The Department of Antiquities allowed us to lift part of the Flagstone Pavement D.1:33/34 in D.1 North, which they had decided earlier to preserve for tourism. In 1971 D.1 North had been excavated to bedrock in the east, but the flagstone pavement precluded excavation up to the west balk—important because it was the main north-south balk connecting Areas A and B. In 1974 eight of the pavers were removed (and marked for reconstruction) creating a digging area shaped like a rough “T” with the crossbar stretched along the west balk. Thus we could use the subsidiary west balk left standing by the 1971 excavations as a stratigraphic guide and could peel the remaining strata until bedrock was reached.

In D.1 South excavation was limited to “Cave” D.1.63, just begun in 1973, near the southeast corner of the Square. What we had thought earlier to have been a cave was really a cistern

with half of its roof collapsed. Left unexcavated was the post-abandonment debris in D.1's south balk.

In 1973 work had focused on the western part of D.2 so that, if that was to have been the last season, the north-south axis (west balk) would have been exposed fully. But bedrock had not been reached, nor, in the east sector, had the bottom of the great pit containing sherds from the Ayyūbid/Mamlūk periods. We first worked to bring the Square into phase and then continued to bedrock.

At the beginning of the season it seemed to us that there would be little work remaining in D.3 since the western sector had been excavated to bedrock leaving us roughly a third of the Square to complete. North of the remains of Stairway D.3:39 near the north balk was a silo cut into bedrock while south of the stairs there remained a stub of debris, the contents of which were somewhat known since it was through the western portion that the 1973 excavations had dug. The third and major sector to be excavated was east of Wall D.3:16, a sector about 1.75 x 6.00 m. Our hopes for a quick completion were shelved when, near the close of the season, we came to the bedrock lip of a very large cave which went down and eastward for at least another 5 m.

In D.5 the Department of Antiquities allowed us to lift more of the flagstone pavement (D.5:11=D.1:33/34) to expose part of the west balk as it ran south from the south wall of the Area A church. As in D.1 North we were able to use the west subsidiary balk of the 1971 and 1973 seasons as a guide and approach the main west balk from the east. The sector excavated in D.5 was smaller than in D.1 North; we took up only six stones to create a working zone in the shape of a long "V". These limits, with the open mouth of the "V" at the west balk, were set by the church's south Wall D.5:12 on the north and the ceiling vault of Cistern D.5:5 on the south.

With this brief introduction to the Squares, the sectors excavated, and the progress made, we go to a detailed discussion of

the work, stratum by stratum. In doing this we are forced by the massive presence of Wall D.1:4 to be uncertain of some stratigraphic connections across that wall. Nevertheless, connections have been suggested which we hope the reader will regard critically. Where possible the discussion will relate the *H74* strata to Geraty's scheme published in the *H73* report.¹ Continued excavation has revealed additional strata in the earlier periods, and a new scheme is demanded. For clarification a table is provided connecting Geraty's scheme with the 1974 season's additions (Fig. 14A).

Stratum 3

Next to the west balk of D.5 the Stratum 6 flagstone pavement had been disturbed by soil and hewn stones (a foundation trench and wall?) containing Ayyūbid/Mamlūk sherds, but since it extended only 0.30 m. into the Square (it undoubtedly ran farther to the west) it was difficult to ascertain its function. It could have been related to the Stratum 3 acropolis structures.²

In Squares D.2 and D.3 a giant pit which consistently turned up pottery of the Ayyūbid/Mamlūk horizon was excavated in 1974 as well as in 1968 and 1973.³ It was shaped something like a large "S" and extended from within the north balk of D.2 southward into and halfway across D.3. Its east-west dimensions cannot be known since it began to the east of D.2, but we do know that it extended well into B.7. In 1974 only a small portion of the pit remained to be dug in the east half of D.2. The nature of the soil, a reddish-tan color with chunks of *nari*, and the strongly dominant Late Roman ceramics with only a few Ayyūbid/Mamlūk sherds suggested a Late Roman original deposit, since the debris directly below the pit was of the very same color, consistency, composition, and ceramic contents minus

¹ See L. T. Geraty, "Area D," *AUSS* 13 (1975): 183-211. Below we shall refer to the reports of the respective seasons as *H68* (*AUSS* 7 [no. 2]: 97-239), *H71* (*AUSS* 11 [no. 1]: 1-144), and *H73* (*AUSS* 13 [no. 2]: 101-217 and plates).

² *H68*, pp. 197-203; *H71*, pp. 99, 100.

³ *H68*, p. 211; *H73*, p. 187.

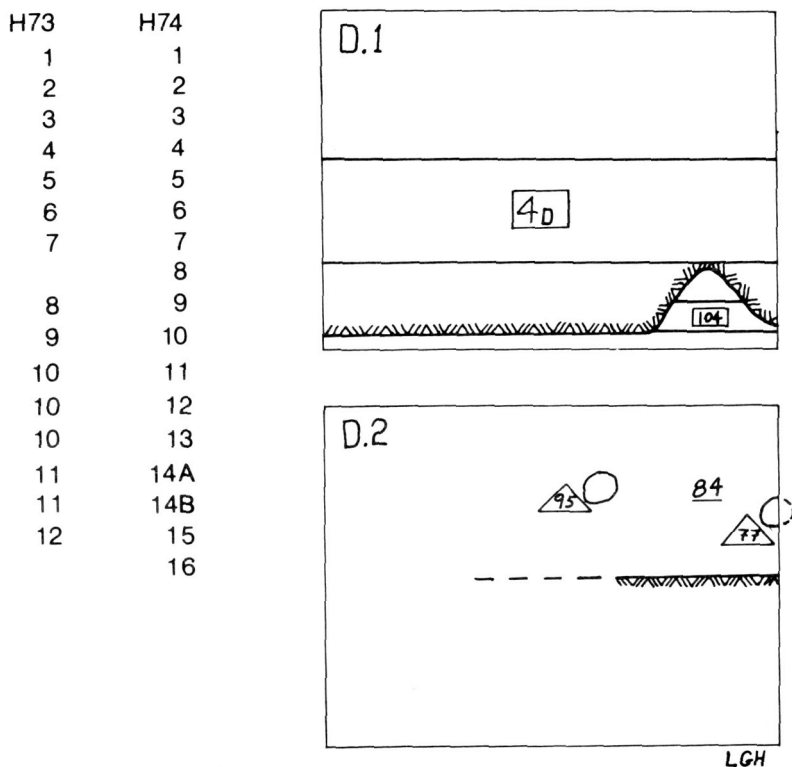


Fig. 14A. Area D strata designations as reported for *H73* correlated with those for *H74*.

Fig. 14B. Schematic plan of Area D's Stratum 14B (scale, 1:100). Levels: Wall D.1:4, ca. 892.25 (founding, ca. 889.25); Bedrock lip just west of Wall D.1:104, 889.00; Surface D.1:84, 881.11; Wall D.1:104, 888.94 (founding, ca. 888.00).

the Ayyūbid/Mamlūk sherds. These observations, indicating that the pit had been dug and quickly refilled with the same soil, along with evidence that the pit edges on the north and southeast followed former wall lines (the bottom courses of Walls D.2:26 on the north and D.2:64 and D.2:55 on the southeast remained) suggested that it was a robber pit probably to provide material for the building activity of Stratum 3 in the 14th century A.D.

Stratum 6⁴

The 1971 excavations in both D.1 North and D.5 stopped at the monumental Pavement D.1:33/34=D.5:11. Since the pavement itself has already been described,⁵ it is sufficient to say that on the underside of one of the stones (a re-used architectural fragment) was a nicely inscribed Byzantine cross, one of the first iconographic indications that Christianity was practiced at Ḥesbân (Pl. VII:A). Beneath the flagstones was a series of two or three makeup layers of well-packed, distinctively-colored clay. Stability was further ensured for the heavily used flagstone just outside the threshold in the south wall of the church by constructing a layer of flat stone chinks within the makeup layers.

Directly beneath the flagstones was a series of drains, none of which could be excavated completely since they were partially in balks. The first drain seems to have originated at the church wall, run south about a meter (in our west balk), made a 90° turn to the east, travelled along our south balk, and emerged as Drain D.5:20 excavated last season.⁶ It passed Cistern D.5:5, into the vault of which was a very irregular opening, made after the vault was constructed, for the vault existed prior to the construction of the drain. It seems likely that water flowed through this hole from both the east and west, both flows having utilized the present drain which was apparently sloped so as to drain into the cistern. A second drain was found in the west balk of D.1 North which probably was the continuation of H73

⁴ See Fig. 7 in H73.

⁵ H71, pp. 91-92, and Pl. IX:A.

⁶ H73, pp. 193-194 for a description of the drain.

Drain D.1:58 south of Wall D.1:4. Though first built in Stratum 7 it seems to have been re-used in Stratum 6. A series of cover stones which crossed the tops of the drain walls was used to raise the drain to the higher new flagstone pavement of Stratum 6.

The dating of the flagstone pavement has been somewhat problematic with uncertainty vacillating between Umayyad and Byzantine dates. The earlier suggestion⁷ that the pavement was built in Byzantine times and perhaps reworked or simply continued in use into Umayyad times was largely borne out by the work in 1974. In both D.1 North and D.5 only one certain Umayyad sherd was found and that came from the mortar between the stones. Otherwise ceramic evidence was solidly Byzantine. Moreover, well sealed in the makeup for the flagstone pavement (or perhaps in the foundation trench for the cover stones of Drain D.1:78) a coin from the time of Tiberius II, A.D. 578-82, was found which suggested that the flagstones may have represented rebuilding following the destruction caused by the Persian invasion of 614.

Stratum 7

In D.1 North this stratum included the "slightly argillaceous poorly indurated dolomitic limestone" tile floor,⁸ though it was much more worn in the western sector and even resurfaced with plaster near the gate in the acropolis perimeter wall. North of Wall D.5:27, which ran east-west in D.1's north balk, were the remains of another flagstone pavement, D.5:42, which, like the Stratum 6 pavement, ran up to the south wall of the church and seems to have used the same threshold. This latter pavement was preserved only in patches but its well-worn surface indicated significant use. About 1 m. from the west balk the flagstones gave way to a very hard plaster surface which continued eastward

⁷ H71, pp. 110-111, where the pavement was given an Ummayyad date by the editors. By 1973, however, theories had changed and the Byzantine date of the excavator was being favored. See H73, p. 188.

⁸ H71, pp. 110-111.

to connect with the Stratum 7 surfaces excavated in earlier seasons.

In D.5, immediately under the makeup for Pavement D.5:42, was the tan foundation soil for the church's south Wall D.5:12, which was apparently cut and filled at the beginning of Stratum 7. It extended southward as far as the confines of our sounding, 1.20 m., so the southern limit of the trench was not found but the nature and phasing of the wall masonry (Geraty's description and phasing in his 1973 report⁹ was confirmed in every detail) made it clear that we were in foundation material. This stratum's date probably belongs somewhere in the late Byzantine period. We cannot be more specific.

Stratum 8

While the foundation trench of Stratum 7 contained many tesserae and painted fresco fragments, and plenty of Byzantine pottery, the foundation trench soil corresponding to the lowest course of the unhewn foundation stones in Wall D.5:12 contained no fresco bits or tesserae and only a very few Byzantine sherds. It is thus possible that this foundation trench soil represented the founding of the earliest phase of the wall. Stratum 7 would then have been a second phase, when fresco fragments, possibly from the earliest phase of the church, along with tesserae from the tessellated floors were dumped into the foundation trench.¹⁰ Stratum 8 cannot be dated very closely, but it probably existed in early or mid-Byzantine times.

Stratum 9

At the bottom of D.5 just above bedrock was one soil layer which contained only Late Roman pottery. This may have been the soil that was present when the foundation trench for the church wall was dug.¹¹ This layer as well as the foundation soil

⁹ *H73*, pp. 191-192.

¹⁰ Note how this could correspond with the church phases found in Area A; see *H68*, pp. 156-164.

¹¹ It possibly corresponded to material found outside the foundation trench on the other side of Wall D.5:12 in Area A. See *H73*, pp. 129-130.

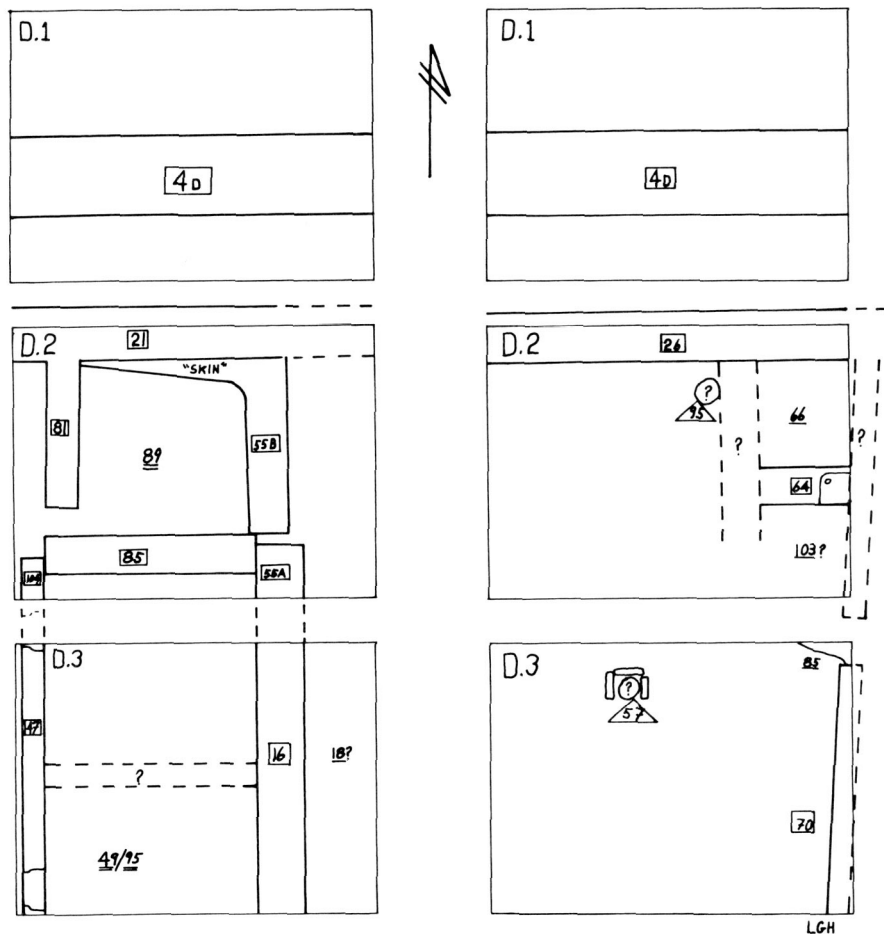


Fig. 15A. Schematic plan of Area D's Stratum 10 (scale, 1:100). Levels: Wall D.1:4, ca. 892.25; Wall D.2:21, 891.09 (founding, 888.80); Wall D.2:55B, 889.22 (founding, 888.11); Wall D.2:81, 889.93 (north), 888.29 (south; founding, 887.15); Wall D.2:85, 888.29 (founding, 887.15); Surface D.2:89, 887.30; Wall D.3:16, 889.95 (bottom so far, 887.22); Wall D.3:47, 887.18 (founding, 886.00); Surface D.3:49/95, 886.50; Surface D.3:18, 890.05 (north), 889.32 (south).

Fig. 15B. Schematic plan of Area D's Stratum 12 (scale, 1:100). Levels: Wall D.1:4, ca. 892.25; Wall D.2:26, 889.52 (founding, 888.56); Surface D.2:66, 889.07; Wall D.2:64, 889.19 (founding, 888.04); Surface D.2:103, 888.68 (north), 888.34 (south); Surface D.3:85, 888.25; Wall D.3:70, 889.50 (founding, 885.89); Silo D.3:57, 884.90 (lip), 885.62 (framing stones).

layers which ran up against Wall D.5:12 also ran up to the vault over Cistern D.5:5, indicating the probability that at least the cistern vault was in existence already at the building of the church, and possibly as early as Late Roman times. There is nothing except the Late Roman ceramic data that suggests placing this soil in Stratum 9, so it may be Stratum 10 as well.

Far more important were the Stratum 9 remains south of Wall D.1:4. Most of this material was excavated in 1973, since it included the Late Roman acropolis stairway found in D.2 and 3.¹² Since the stairway itself, its connection to Wall D.3:16 to the east, and the association of surfaces to the stairway have already been described¹³ it only need be said here that the 1974 excavations worked on the eastern portion of Surface D.3:45, which ran up to the southern edge of the bottom step of the stairway. This surface continued south as Surface D.4:64 and probably connected with one of the roadway layers in Area B.

It is clear that Wall D.3:16 was the eastern boundary of the stairway and thus of the Late Roman acropolis ascent. East of the wall Early Roman debris was found 1.60 m. higher than Surface D.3:45. We must thus conceive of our acropolis ascent as having been dug down into the contemporary surface on the east.

Closing out this stratum was the destruction of Wall D.3:16, rock and soil Tumble D.3:84 which was 1.25 m. thick next to Wall D.3:16 and spread out 3.50 m. to the west. Unfortunately, in spite of the wall tumble, no intact material remains were concealed beneath the debris except for large amounts of irreparable fragments of thin glass. For this stratum's date, see the 1973 report.¹⁴

*Stratum 10*¹⁵

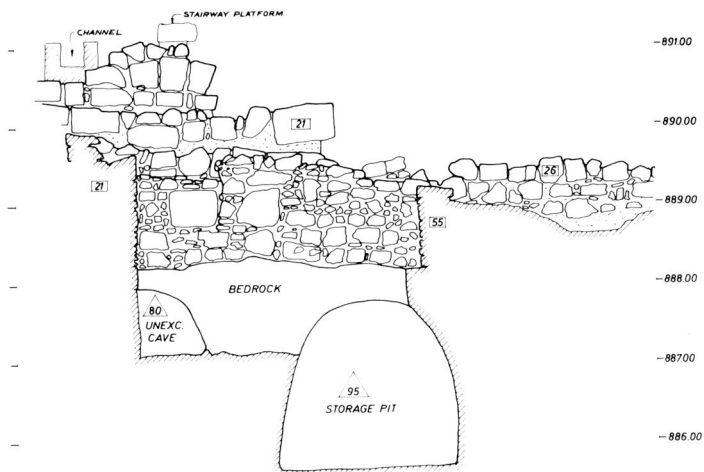
Stratum 10 included the most substantial architectural pheno-

¹² For a connection of the two separate stair remains, see *H73*, pp. 198-199.

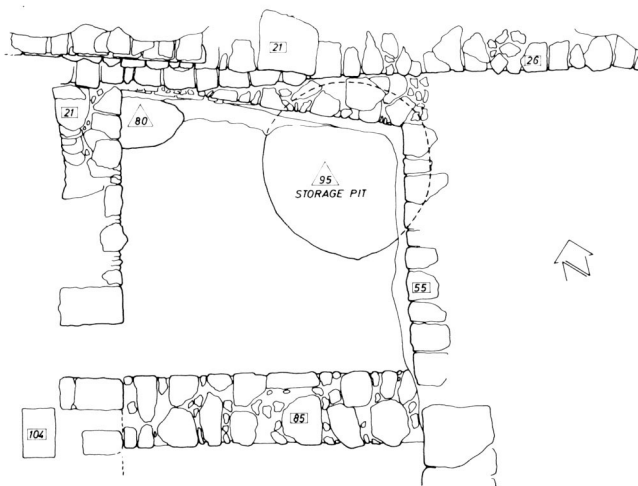
¹³ *H73*, pp. 196-199.

¹⁴ *Ibid.*

¹⁵ See Fig. 15A.



SOUTH ELEVATION of WALLS 21 & 26



PLAN of AREA D SQUARE 2

Fig. 16. Plan of room in Square D.2 with south elevation of Walls D.2:21 and 26.

mena found in Area D in 1974. The key to the stratum was the well-constructed north-south Wall D.3:47 parallel and adjacent to the west balk, which wall included two thresholds. During the season we continued the exposure of Surface D.3:49, which ran east from the wall, and found that it ran up to Wall D.3:16. To the north in D.2 a complete room (Pl. VII:B and Fig. 16) was excavated which apparently was connected with the southern structure by Wall D.2:104, the northward continuation of Wall D.3:47.

In D.2 all walls but one (the east) were solidly built of two rows of semi-hewn stones. The room's south wall, D.2:85, was founded on bedrock, and its western end, which butted up against Wall D.2:104, contained the ashlar southern jamb for a doorway leading out to the west. The room's western wall D.2:81 contained the ashlar north jamb of the door, was also founded on bedrock, and extended north to bond into Wall D.2:21, the room's north wall. At some point, probably when the room was constructed, a leveling of the bedrock took place which resulted in a bedrock cut of about 1 m. in height at the north wall of the room. This cut ran from west of the west wall to the east wall. An earlier wall, D.2:26, already ran in this general direction, upon which later builders set Wall D.2:21 and then aligned everything with the bedrock cut by constructing a "skin" against the two walls. When viewed from the south it seemed to be one homogeneous wall.

The east wall of the room, D.2:55B, extended south from the "skin" of the north wall and stopped when it reached the southern wall.¹⁶ Here again a cut had been made to level the bedrock surface, but only two courses of the wall were preserved. Like the north wall it was battered against the soil behind it and had no surviving east face. But unlike the other walls of the room it was only one row thick, though in its unpreserved higher courses it

¹⁶ Though seemingly on a line with Wall D.2:55A, the two were apparently different walls: A was wider than B; A had a clear surviving east face while B had none.

may have utilized the rock tumble against which it was battered as the footing for a second row. Surface D.2:89 connected all four walls and continued through the doorway into the west balk. The surface was laid just above bedrock and no objects were found to indicate the function of the room. From the bedrock cuts and the Early Roman and Hellenistic soil layers into which the room was cut on the north and east (possibly as much as 3 m. of Early Roman deposits had existed to the east) it would appear that the structure was in part subterranean (on the east and north).

The northern and eastern bedrock cuts intruded into two phenomena. The first was Silo D.2:95 in the northeast corner over the debris of which they simply laid their surface. The second was probably a cave (unexcavated as yet) which they walled up along the line of Wall D.2:21. All the above walls, certainly to be attributed to Stratum 10, have so far yielded no indication of having been built in Late Roman times. Indeed, all pottery so far removed from three walls points to an Early Roman date for the construction of the walls, but no surfaces were found to go with them. The Stratum 10 builders may have made the bedrock cuts and so wiped out earlier surfaces (see below, Stratum 11).

Wall D.3:47 also continued south into D.4 as Wall D.4:83 and may have cornered to the east just inside that Square. Moreover, Wall D.3:16, the eastern wall of the D.3 structure, also continued into D.4 as Wall D.4:32, but it stopped about 2 m. south of D.4's north balk.¹⁷ If Wall D.4:83 turned east it would have been another east-west wall along with D.2:85 and D.2:21 which connected the two north-south walls D.3:47 and D.3:16. Though the threshold in Wall D.3:47 next to the north balk of D.3 is our only clue, another east-west wall might be found under the remains of Stairway D.3:39 (Stratum 9). If so, we would have here a row of three rooms, all partly subterranean on the east

¹⁷ See the Area B report for a fuller description.

(but probably not in the west), which ran from north to south and which communicated to the west. All the walls of these rooms, except possibly the one in D.2, were of such strength that at least a second story could have been added, but Wall D.2:21, preserved to a height of 3.50 m., showed no signs of a second floor. Unfortunately, none of the surfaces yielded any objects which indicated the functions of the rooms.

Some of the D.3 white layers excavated in 1968¹⁸ east of Wall D.3:16 possibly ran up to unpreserved higher courses of the wall and thus may have been part of the Stratum 10 acropolis ascent (see below, Stratum 11).

In two isolated places where bedrock was not directly beneath the surfaces there were pockets of leveling fill. In D.2 it consisted of the top two layers of fill debris in Silo D.2:95 just beneath Surface D.2:89. In D.3 it was the debris (average depth, 0.20 m.) which separated Surface D.3:95 from the bedrock irregularities below. Since this leveling marked the beginning of Stratum 10 it is of interest to note the striking difference in the ceramic remains from the debris below the surface, which, while still Late Roman, were typologically of an earlier horizon. Stratum 10 must have thus existed for some time since no signs of abandonment were noted which could account for the ceramic differences. A date of A.D. 150 would not be far wrong.

The exact stratigraphic relation of Wall D.3:16 to the stratum is unclear. That it was later than the 2 m. thick Stratum 11 layers to the east is clear from the foundation trench, though Stratum 11 Surface D.3:19/67 on top of the debris may have run up to it (either the Stratum 3 pit or the wall's foundation trench cut the connection). Late Roman material (Stratum 10) was found against the west side of the wall (where the founding level has not yet been reached) so we know that the wall was in existence by then. A future season should show us to which stratum its construction belonged.

¹⁸ *H68*, pp. 214-216.

Stratum 11

Some Stratum 11 materials may possibly belong to Strata 12 or 13. Directly beneath the Byzantine layers in D.1 North we found Early Roman material. Problematic was the crude Drain D.1:80 (= H73 D.1:61 south of Wall D.1:4) running northeast-southwest. All ceramic evidence directly associated with the installation, its foundation trenches, and the surface from which it was dug were Early Roman, but above it no Early Roman surface was found and the crude construction of the drain was too weak to have survived if exposed (Pl. VIII:A). Perhaps it was related to Surface D.1:44 which was found in the east sector of the Square in 1971 but of which no trace in the west was found in 1974. This surface was of a proper level (891.17) to be served by the drain (891.03).

Drain D.1:80 was dug from Surface D.1:81/82, which was not hard packed and possibly was only temporarily exposed in the construction of Drain D.1:80. This accounted for the fact that no corresponding surface was apparent in the eastern part of the Square. No more surfaces were found in the Square and Early Roman leveling fill inside Wall D.1:4 lay ca. 0.75 m. deep over bedrock. In holes in the bedrock where no occupation had disturbed them were hard pockets of bright red virgin soil.

The sector east of Wall D.3:16 had not been excavated since 1968. Left for us to remove were parts of the white layered Surface D.3:19 (our D.3:67), the last of the "roadway"¹⁹ layers found in Areas B and D during the last three seasons. The ceramic evidence from both the 1968 and 1974 seasons points to an Early Roman date. At first it was hypothesized that this white layer extended westward to join the earliest white layer of Area B,²⁰ though no direct stratigraphic linkage could be seen since later pitting completely severed the connections. It is interesting to note: 1) Area B's white layer was level and did not slope in any direction; 2) In D.3, 8 m. to the east, Surface D.3:67 was

¹⁹ See Sauer's discussion in H71, pp. 48-50.

²⁰ Stratum 12 in Area B. See H71, p. 63.

ca. 2.25 m. higher than the B.3 layer though in the 1.30 m. east-west dimensions of the layer, no east-west slope was noted. It would thus appear that Area B's Stratum 12 "roadway" should *not* be given an east-west stratigraphic connection with Surface D.3:67.

Possibly the connection may still be observable on the south. Though Surface D.3:19=67 did not slope in an east-west direction, it went from 888.72 m. in the south of the Square to 889.82 m., 6 m. away in the north. As seen above, in Stratum 10 there was no acropolis ascent where the later one was built in Stratum 9. Therefore it may be that the white layers found in the eastern part of D.3 were the remains of an acropolis ascent prior to the construction of the monumental stairway farther to the west.²¹ If so, it would appear that this ascent ramp would have begun near the southeast corner of the Area B/D white layers²² and would have ascended northward to the acropolis. Unfortunately all remains of this stratum have been lost to the Stratum 3 pit in D.2, so at present it cannot be traced northward.

The function of Wall D.2:21 and possibly also of Wall D.2:26 (discussed above, see Stratum 10) may be seen in conjunction with the proposed acropolis ascent ramp. Presuming that the ramp led straight up toward the acropolis perimeter Wall D.1:4, it would have met the wall near its southeast corner. The original Early Roman gate through the perimeter wall may have stood at that point, but it is just as likely that the Early Roman gate was situated in the center of the acropolis south perimeter wall. If it was there, it would have been necessary to connect the top of the ramp with the gate by a road built along the edge of a steep slope. A retaining wall would thus have been necessary to support the roadway's southern side. This would also explain the 1.50-2.00 m. of soil between the perimeter wall and Wall D.2:21, which had an apparent function as fill.

²¹ If so, it is possible that the yet undiscovered Early Roman gate through Wall D.1:4 may lie just east of our excavations.

²² Here interpreted as a plaza.

To put more of the Area in context we need to view our structures from Area B since Wall D.3:16 cut so many Area D layers. If Surface D.3:19=67 can be equated with the earliest white layer in Area B we note that that layer ran up to Curb Stones B.3:31.²³ These would have formed the eastern boundary of an Early Roman plaza in Area B. East of the curbing was another white layer which was probably a narrow street bordering on the Early Roman phase of Wall D.3:47. If Wall D.3:47 and its Early Roman Surface D.3:52 were thus connected to the ramp we have indications of structures having lined the ramp to the west. Further, if Wall D.3:47 belonged to this stratum it may have bounded a series of structures similar to that of Stratum 10. This hypothesis could explain the solid Early Roman ceramic remains in the walls of D.2 (see Stratum 10).

If Surface D.3:19=67 was an ascent ramp to the acropolis the deep debris beneath the Surface, which consisted of many layers full of small pieces of pottery, ash pockets and loose dirt, might be considered as the makeup for the ramp. Thus the three coins from the early 1st century A.D. (two of Aretas IV, 9 B.C.-A.D. 40, and one of Pontius Pilate, ca. A.D. 30) which came from that makeup would help give a *terminus post quem* for the building of the ramp in the late Early Roman III period, the middle of the 1st century A.D.

*Stratum 12*²⁴

As mentioned above, the Stratum 3 pit robbed out the tell-tale remains of the acropolis ascent ramp in D.2, making the sequence between Strata 11 and 12 uncertain since Stratum 12 was found only in D.2. This seems to have been a re-use of Stratum 13 with the addition of Wall D.2:64, a one row wall made of very large semi-hewn stones in its one surviving course. Laid up to and slightly over the interior lip of the wall's threshold (next to the east balk) was Surface D.2:66 which lay to the north and seems

²³ See Sauer in *H71*, pp. 63-64.

²⁴ See Fig. 15B.

to have continued up to the second phase of Wall D.2:26. It appeared that these two walls were the north and south boundaries of a room. Its east wall lay outside the limits of our excavation and the west wall was probably robbed by builders of Wall D.2:55B who also robbed the western end of Wall D.2:64.

The sector south of Wall D.2:64 was problematic as no surface was found to go with the wall use, though it is possible that there was re-use of the Stratum 13 surface, 0.40 m. deeper. It is difficult to date Stratum 12, but to place it in the first half of the 1st century A.D. would probably not be far wrong.

Stratigraphically disconnected from but possibly associated with the end of Stratum 12 were the fill layers in two subterranean installations, the function of which will be discussed below with Stratum 14. The installations had been dug about 2 m. deep into bedrock in a cistern-like shape and now stood filled with debris which contained pottery homogeneous with that of the Stratum 11 ramp (one of them, Silo D.3:57, contained an Aretas IV coin, as did the Stratum 11 debris. The construction date of the installations is unknown though a similar one (D.2:77) clearly belonged to the Late Hellenistic period (Hasmonean). D.2:95 was found in the northeast corner of the D.2 room where the bedrock cuts for Walls D.2:55B and D.2:21 had intersected the installation. A very similar installation, D.3:57, was found near the north balk of D.3. Remarkable was the debris in it which included 55 full pails of pottery and almost 1,000 registered bones (clearly a garbage dump).

Also unclear in stratigraphic relations was Cave D.3:83. It was left unexcavated, but a meter tape could be slid into its spaces for at least 5 m. down and east.

Stratum 13

Wall D.2:26, the north wall of the Stratum 12 structure, was founded in this phase with no visible foundation trench. After a destruction it was re-used in Stratum 12. Surface D.2:74, cut by Wall D.2:55B on the west, was laid over Hellenistic debris and

seems to have extended southward under Wall D.2:64 and into D.3 as Surface D.3:85, which was laid up to Wall D.3:70, a rather frail one row, four course wall, which ran north-south right along our east balk line. Plastered Surface D.3:85 was preserved only in a very small patch in the northeast corner of D.3, since its extent southward seems to have been cut possibly by a pit, the origin of which we do not yet know. The north end of Wall D.3:70 stood 0.40 m. south of the north balk of D.3 in typical doorjamb or corner masonry, that is, the ashlar blocks making up the doorjamb or corner were much larger and more carefully laid than the unhewn stones of the remainder.

If this was all the architectural evidence from this stratum which survived, a reconstruction of its extent and function would be impossible without guesswork. As for a date, we suggest the first half of the 1st century A.D. for its destruction. Construction may have been around the turn of the era or in the late 1st century B.C., Early Roman II.

Stratum 14A

Stratum 14, Phase A, was found only in the northeast corner of D.2 and its original horizontal extent remained unknown. A clear layer composed of white decayed straw extended from a vertical cut in bedrock northward, but it could not be traced farther than the north and east balks, and west to Wall D.2:55B, which cut it. The nature of the surface composition indicated that it was a sunken, open storage bin. Ceramic evidence was dated to the Late Hellenistic period (Hasmonean).²⁵

Stratum 14B

Stratum 14, Phase B, (Fig. 14B) was very similar to Stratum 14, Phase A. We have made a distinction only because Silo

²⁵ The ceramic evidence led me to suggest a slightly more advanced horizon than the Hellenistic pottery found at Beth-zur. (See Paul W. Lapp, *Palestinian Ceramic Chronology* [New Haven, Conn., 1961]). A date in the early 1st century B.C. would thus be favored.

D.2:77 was in use with Phase B, while the surface of Phase A sealed over it. Surface D.2:84, a very hard dark gray clay, was laid tightly on the smoothly cut bedrock. On top of this were many very thin colorful layers of decayed straw (each were ca. 0.003 m. thick) lensing in and out. The total thickness was about 0.06 m. and its extent was the same as that of Phase A, limited in lateral extent for the same reasons.

Extruding from the east balk was the round mouth of a cistern-like facility now common at Heshbân, D.2:77 (compare the similar structures D.2:95 and D.3:57). Cut into bedrock, its bell shape was ca. 2 m. deep and 2 m. in diameter at the bottom. The earlier identification of these structures as cisterns had always been questioned because of the absence of plaster linings. With the discovery of this installation, perfectly preserved with virtually no post-abandonment accumulation (unlike the others), our conclusion was made nearly certain. The unplastered walls and the large numbers of solution cavities which were clearly in existence prior to the cutting of the installation led the geologist to the conclusion that they could not have held water for an extended period of time.²⁶ The remarkably well-preserved state of D.2:77 (kept clear of later debris by a sealing cover stone) supported this, since no hint of any water lines was visible on the side walls. Indeed, the walls looked as if they had been freshly carved. Moreover, at the very bottom, where a small bit of rain water had periodically gathered, the soft *nari* bedrock was extensively stained, and the tool marks, which elsewhere had been clearly evident, were hardly visible because of the solution activity. Certainly this particular installation had never held water and probably was dug with another intent. What then was its function? On the bottom of D.2:77 was one layer of soil, about 0.01-0.04 m. of decayed straw like the surfaces surrounding the mouth of the installation. This pointed to a grain

²⁶ See Harold E. James, Jr., "Geological Study at Tell Heshbân, 1974," in the present issue, pp. 168-169.

or straw storage facility. Upon the floor of the silo were fourteen pyramidal clay weights (Pl. VIII:B), which indicated the possible weighing out (selling?) of the stored material. Therefore we have begun to call this type of facility a "silo."

If one presumed that the Stratum 14 surfaces went through the north balk and were laid up against the bedrock cut in D.1 South, the diagnosis of a sunken grain storage depot would emerge. Moreover, since the northern bedrock cut extended westward it might be presumed that the southern one also did so before it was cut by the later D.2 room builders. Thus Silo D.2:95 could very easily have been part of the same storage complex.

Apparently sealed and forgotten at this time was the probable Stratum 16 cistern which the northern bedrock cutters intersected and filled. If we presume that Wall D.1:104, one row wide and two to four surviving courses high, was built both to block the mouth of this cistern and to continue the vertical face of the bedrock cut (it was perfectly aligned), it may be concluded that the construction of the wall was contemporary with the cutting of bedrock. The debris within the cistern and upon which the wall was founded bore this out, though very Late Hellenistic sherds were found.

As the stratigraphic connections cited above seemed weighty one was led to a conclusion regarding Wall D.1:4 similar to that of the 1973 excavators, namely that the acropolis perimeter wall was Hellenistic in origin, since Hellenistic soil was sealed against its lowest outside courses. On the other hand if one leaned more heavily on the ambiguous ceramic evidence (all sherds that seemed more Early Roman than Hellenistic were body sherds) one had a stratigraphic anomaly, not the least of which was that a Hellenistic surface would appear to have been placed on top of a horizontal shelf cut into bedrock in Early Roman times!

Stratum 15

Though most of the layers within the D.1 South cistern seem to have been Hellenistic, above the bottom soil layer was one that contained only late Iron II pottery, Layer D.1:63E. Perhaps this was deposited during that period, or more likely by Stratum 14 occupants from a source containing only Iron II pottery, since it was laid against soil containing Hellenistic sherds.

Stratum 16

The bottom soil layer inside the cistern was different from all those above it in that it was spread over the complete floor of the cistern and was composed of very fine soil typical of cistern silt. It seemed clear that this was the soil layer reflecting the use of the cistern. Since the ceramic evidence pointed to an Iron I date, the cistern had apparently been sealed well during the Iron I period and subsequently forgotten until the bedrock cutters of the Hellenistic period accidentally cut into it. Given the parallel of Silo D.2:77 in Stratum 14B, which remained closed and empty for more than 2000 years, this was deemed likely.