



**The
Archaeology
of Jordan
and
Other Studies**

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**THE ARCHAEOLOGY
OF JORDAN
AND OTHER STUDIES**

**Presented to
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'Abel-beth-Ma'acah in the biblical tradition as the northern border of Israel ("from Dan to Beersheba," Jgs 20:1 and often) only because of the royal sanctuary there, associated with the magnificent springs.³⁵ But it is 'Abel-beth-Ma'acah which is the true "northern gateway" of ancient Israel.³⁶

Postscript:

After this article was in galleys, there appeared the treatment of J. Kaplan, "The Identification of Abel-Beth-Maachah and Janoah," *IEJ* 28 (1978):157-160. Kaplan construes the two Greek "boundary inscriptions" found some years ago southeast of Tell Âbil (cf. Y. Aharoni, "Three New Boundary-Stones from the Western Golan," *Atiqot* 1 [1955]:110-111) as confirmation of the identification advanced here, reading BEOAXWN as BEO[M]AXWN. He notes also that a later article of Tadmor (cf. the 1962 work cited above) does not support the reading of Âbil <ma>kka in the Tiglath-pileser III inscriptions; cf. H. Tadmor, "The Conquest of Galilee by Tiglath-pileser III," in H. Z. Hirshberg, ed., *All the Land of Naphtali* (Jerusalem, 1967: Hebrew).

³⁵On Dan in the Israelite period, see now the summary of Dr. Avraham Biran's excavations since 1966 in "Tel Dan," *BA* 37 (1974):34-51.

³⁶The importance of 'Abel-beth-Ma'acah is further emphasized by noting that it could illuminate cross-cultural currents in this unique hinterland where northern Israel, Aram, and southern Phoenicia come together. In this region today, southern Syria is virtually unknown archaeologically, and no site in Israel as far north as 'Abel-beth-Ma'acah has been dug. The only ancient site in the south Beqa' which has been excavated with any thoroughness is Kâmid el-Lôz, the Kumidi of the 2d millennium Egyptian sources, 35 miles north of 'Abel in southern Lebanon. Here the German work, beginning in 1963 on a small scale and continuing until the present, may eventually provide us with comparative material. See provisionally R. Hachman, et al., *Bericht über die Ergebnisse der Ausgrabungen in Kâmid el-Lôz (Libanon) in den Jahren 1963 und 1964*, Saarbrücken Beiträge zur Altertumskunde, 3 (Bonn, 1966); *idem*, *Bericht . . . in den Jahren 1966 und 1967*, Saarbrücken Beiträge . . . , 4 (Bonn, 1970); and later reports. The only substantial corpus of Iron Age pottery (coastal Phoenician) is that published recently from tombs near Tyre, robbed between 1920 and 1940; see Sussanah V. Chapman, "A Catalogue of Iron Age Pottery from the Cemeteries of Khirbet Silm, Joya, Qrayé and Qasimeh of South Lebanon," *Berytus* 21 (1972):55-194; P. M. Bikai, *The Pottery of Tyre* (Warminster, 1978). Thus there is published, stratified material from southern Phoenicia and Aram, and from the extreme north of Israel. Excavations at 'Abel-beth-Ma'acah can hardly fail to fill that gap.

THE ISLAMIC BATH AT TELL HESBÂN

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INTRODUCTION

A small but well-preserved bath of the Ayyūbid/Mamlūk period was discovered during the 1973 season of excavations at Tell Ḥesbân. The bath was located on the Acropolis in Area A, Squares 7 and 8, and was excavated under the supervision of Bastiaan Van Elderen.¹ What follows is a brief analysis of the architectural features of the bath.

The overall exterior plan measures 14.50 meters long (including the furnace room) by 4.00 meters to 5.50 meters wide. By comparison, the plan of Hammam as-Sarah measures 26.70 meters long by 14.90 meters wide for the audience hall and 9.80 meters wide for the bathing rooms, with a total area more than four times as large. The plan of the contemporary public Hammam al-Bu-zūriya in Damascus occupies an area over thirteen times as large.² The thirteen century private bath of Amir Usama al-Ḥalabi in Damascus is 12 x 12 meters in size excluding the audience room.³ The bath of Ḥesbân is therefore relatively small by comparison to the private baths of the Umayyad Caliphs and contemporary private and public baths in Damascus.

The walls are preserved to heights ranging from .50 meters on the east wall to 1.50 meters on the west wall. The only lintel *in situ* is over the doorway between the audience/dressing room and the hallway. The height from the floor to the bottom of the lintel is 1.50 meters, supporting the assumption that the wall height in general was 1.50 meters. Several vousoirs (one in the bathing

¹B. Van Elderen, "Heshbon 1973: Area A," *AUSS* VIII:118-123; "Heshbon 1974: Area A," *AUSS* IX:17-23.

²M. Écochard and C. Le Coeur, *Les Bains de Damas* (Beirut: Institut Français de Damas, 1942), Part I, p. 20, fig. 7.

³J. Sauvaget, "Un bain damasquin du XIII siècle," *Syria* XI:380.

room, three in the hot water tank and one in the furnace room) *in situ* indicate that the rooms of the bath were roofed with barrel vaults. If this was the case, the ceiling height at the center of the rooms would have been about 2.50 meters.

The rooms of the bath, going from south to north, are the entry hall, the audience/dressing room, the hallway, the bathing room with hypocaust below the floor, the hot and cold water tanks above the furnace, and the furnace room (figs. 1 & 2). As is typical of Islamic baths, there is no access from the furnace room to the interior of the bathing area. The interior hallways, doorways, and partitions between rooms are arranged so that the privacy of the bather is ensured. It is impossible to see from the entrance into the audience/dressing room and from the hallway into the bathing room. The partitions also serve to block the circulation of air through the building in order to prevent the hot, moist air of the bathing room from escaping to the audience/dressing room.

It is worth noting that the plan of the bath is made up of rectangular rooms laid out in asymmetrical fashion to fill the available space. Écochard and Le Coeur call this type of layout a rectilinear plan ("*plan rectiligne*") in distinction from the more common centered plan ("*plan centre*") that is characterized by symmetrical room arrangement along diagonal as well as rectilinear axes and octagonal as well as rectangular rooms.⁴ They posit a separate evolution for these two types from the third and fourth century into the Middle Ages.

The rectilinear type, which has its prototype in the small private baths of the late classical period,⁵ includes the Umayyad baths of Transjordan and was last built in the fourteenth century.⁶ The centered type, which has its prototype in the monumental public baths of the late classical period,⁷ includes most of the public baths of Damascus and continued into the sixteenth and seventeenth centuries.⁸

⁴Écochard and Le Coeur, Part II, p. 125.

⁵H. Grotzfeld, *Das Bad im arabisch-islamischen Mittelalter* (Wiesbaden: Otto Harrassowitz, 1970), p. 26, n. 1.

⁶Écochard and Le Coeur. The authors provide a useful chart of the two types of plans in chronological arrangement in order to illustrate their architectural development from the classical period to the late Middle Ages (Part II, fig. 138).

⁷Grotzfeld.

⁸Écochard and Le Coeur.

Therefore, on the basis of these typological considerations, A.D. 1400 is a possible end date for the building of the bath at Hesbân. It should be observed, however, that none of the examples cited by Écochard and Le Coeur are from a rural village setting similar to that of Hesbân. The future discovery of other baths in geographic settings similar to Hesbân may change their dating scheme.

The plan of the bath at Hesbân varies from the typical Islamic bath in that it has only one bathing room. Practically all Islamic baths have three rooms: a cold room (closest to the dressing room), a medium heat room, and a hot room (closest to the furnace). Usually, the medium heat and hot rooms have their floors heated by the furnace. While the bathing proper takes place in the hot room, the medium heat and cold rooms serve as transitional spaces in which the bather spends time in order to acclimatize his body before returning to the relatively cold audience/dressing room. It appears that at Hesbân, for the sake of conserving space, the medium heat and hot rooms have been combined into a single bathing room and perhaps the hallway is a vestige of the cold room. This interpretation explains the presence of the small bench at the west end of the hallway on which a single bather could have relaxed or draped himself in a set of dry towels before returning to the audience/dressing room.⁹

The bath complex consists of three distinct sections, each of which will be described in some detail: the bathing area, the water system and the heating system.

The Bathing Area

Access to the bathing area was gained through a door .84 meters wide in the south end of the east wall which opened into the entry hall. This hall (3.55 x .90 meters) is paved with flagstones. It slopes .17 meters down from the entrance to the west end. As noted above, the function of this hall was to insulate the bathing area from the outside and ensure the privacy of those in the lounging/dressing room.

The audience/dressing room consists of an aisle 1.14 meters wide, flanked by two lounging platforms which are raised .55 meters above the floor. The flagstone floor slopes .08 meters down from

⁹A similar though more elaborate bench was uncovered in the cold room at Hammam as-Sarah during excavations carried out by Ghazi Bisheh of the Jordanian Department of Antiquities during the spring of 1974.

south to north. Both lounging platforms as well as the walls of the rooms were plastered. The platform on the west of the aisle (2.00 meters long x .74 meters deep at the south end to 1.00 meter deep at the north end) has no special features. The platform east of the aisle (2.00 meters long x 1.60 meters deep), however, has three niches (.38 meters wide x .32 meters deep x .30 meters high) with pointed arches built in just above the floor (*fig. 1, section A-B*). In addition, a rectangular niche .26 meters wide x .32 meters deep was built into the south wall .60 meters above the platform.

While the bath was in use, these platforms were probably covered with rugs or mats. Here the bather would undress and receive towels from an attendant. After the bath he would return here draped in towels to lounge while his body cooled off and dried. He would spend this time socializing with fellow bathers and sipping refreshments. The floor niches are typical of dressing rooms in Islamic baths. They are used for storing personal footwear as well as the wooden clogs that are worn into the bathing room to protect the soles of the feet from the extreme heat of the floor. The wall niche may have been used to store towels.

The hallway (2.50 meters long x .78 meters wide) is paved with flagstones as well-finished limestone tiles (at the east end). The floor slopes down .15 meters from east to west. The space between the doorway to the lounging/dressing room and the west wall is filled with a plastered bench .78 meters wide x .26 meters deep x .30 meters high. As already noted, the hallway served as a heat barrier as well as passage between the audience/dressing room and the bathing room; it may have been a reduced form of the traditional cold room.

The bathing room (2.25 x 2.15 meters) was paved with smooth, well-fitted limestone tiles of irregular sizes (.35 x .35 x .03 meters on the average). This floor was heated by a hypocaust system which will be described below. The north wall of the room (*i.e.*, the south wall of the reservoirs) contains a partially preserved recess that begins .44 meters above the floor and is .43 meters deep (*fig. 3*). One remaining voussoir on the west side of the recess indicates that it was arched over with the arch sprung at .80 meters above the floor. On the basis of symmetry the reconstructed dimensions of the recess are 1.80 meters wide x 1.26 meters high (*fig. 4*). Centered in the bench created by the recess is a water basin (interior dimensions .80 meters long x .38 meters wide x .26 meters deep) made out of a single piece of limestone that received hot and cold water from clay pipes set in the back wall of the recess. There is enough room for one person to sit on each side of the basin. The top stone remaining in place in the back wall of the recess has a rectangular notch .50 meters wide x .10 meters high. This may be

the framing for an opening into the upper part of the hot water tank through which steam would have escaped from the tank into the bathing room.

All the walls of the bathing room were smoothly plastered. As one would expect, there are no windows (because they allow too much heat to escape). Light could have been provided by glass bottles set upside down in the roof and/or wall lamps. No evidence of these lighting devices remains, however.

The Water System

The hot and cold water tanks are located directly behind the north wall of the bathing room. The two were separated by a narrow (.22 meters) partition constructed of fired bricks. Of the two, the cold water tank is in the worst state of preservation. On the west side, the plaster floor is still intact and measures 1.10 meters north-south; on the east side, however, the floor is broken off at a distance of .80 meters from the west side. A clay pipe, .10 meters inner diameter, extending from the southwest corner through the north wall of the bathing room was the means of supplying water to the basin in the bathing room. The hot water tank (1.50 meters north-south x 1.25 meters east-west) is situated directly above the furnace. Centered in its plaster floor is an irregular round opening .58 meters in diameter through the floor and the brick-lined ceiling of the furnace. This may have been a depression in the tank floor forming a circular bowl in which the water could have come to a boil quickly because of the relative thinness of the furnace ceiling at that point (*fig. 2*). It is also possible that a metal kettle hung suspended in the hole with its bottom protruding into the fire chamber of the furnace.¹⁰

The top course of the west wall of the hot water tank (preserved to a height of .70 meters) is made up of three voussoir stones. These indicate that the tank was roofed over with a small barrel vault. The tank was therefore actually a chamber with a ceiling just over one meter in height. In this low-ceilinged air space above the boiling water, steam built up sufficient pressure to force its way through the opening in the south wall of the tank into the bathing room. The vaulted ceiling made it possible to dismantle either the north or south wall of the tank in order to replaster the interior (the tanks were replastered at least seven times). This could most easily have been done by breaking through the back of the recess in the bathing room. At this point, the partition is

¹⁰Grotzfeld, p. 56.

Figure 1

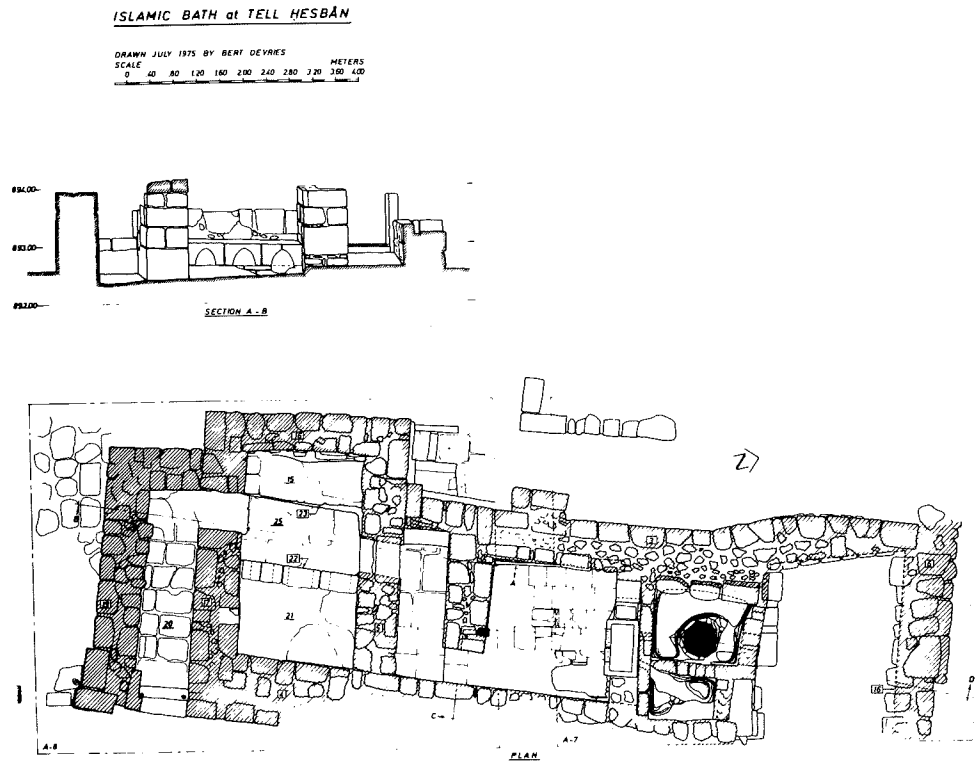


Figure 2

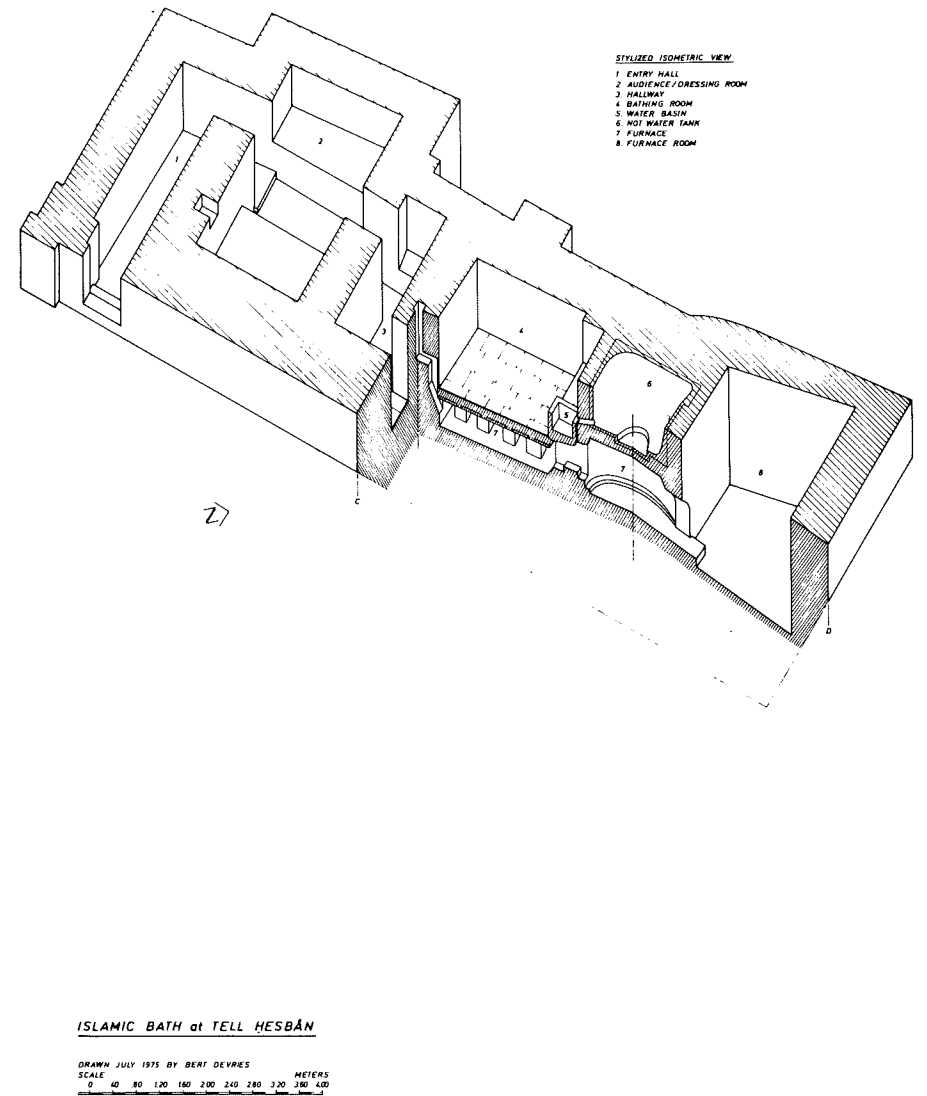
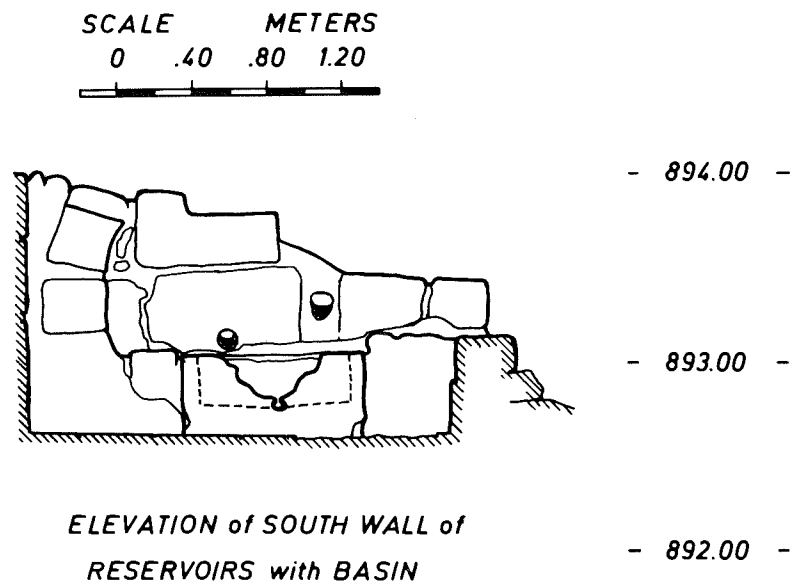


Figure 3



ELEVATION of SOUTH WALL of RESERVOIRS with BASIN

Figure 4

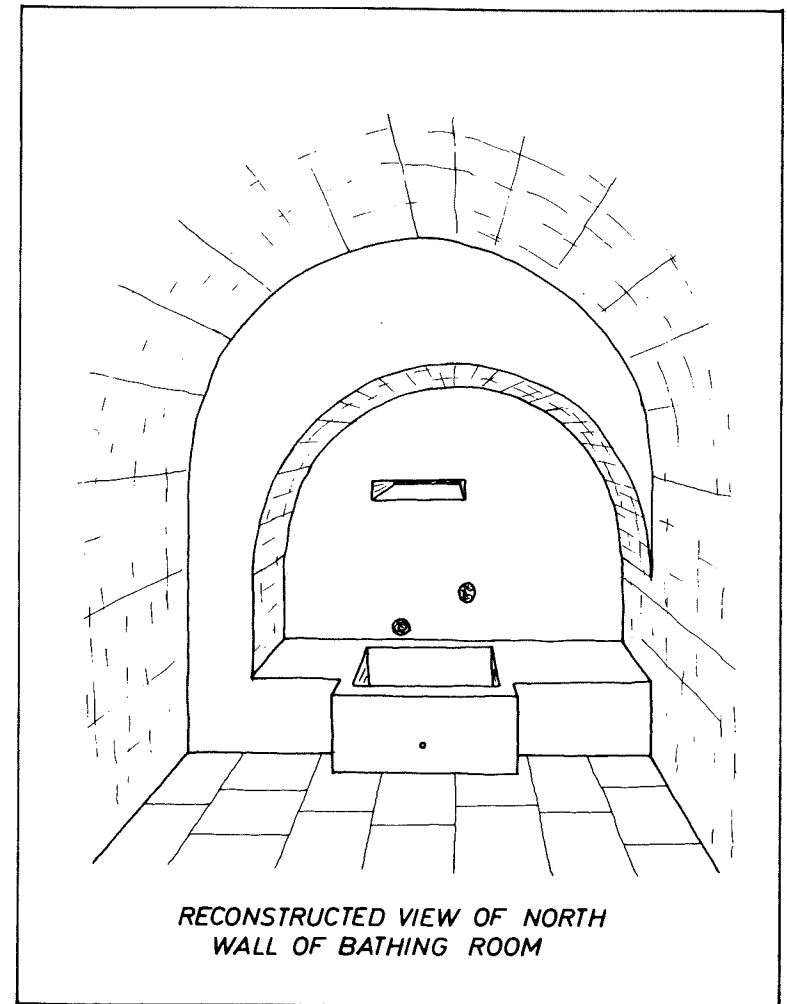
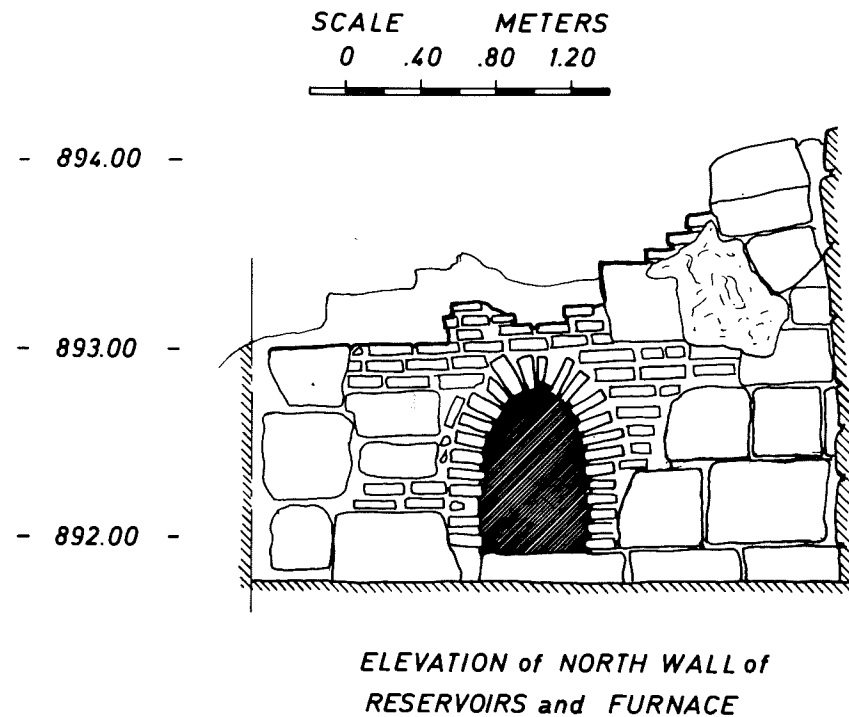


Figure 5



made of single limestone slabs only .22 meters thick. A clay pipe (.10 meters inner diameter) through this partition supplied the basin in the bathing room with hot water.

From the existing ruins, it is not possible to determine how the two tanks were supplied with water. There are no remains of water channels or pipes leading into the tanks, nor is there a contemporary reservoir or cistern nearby. Because the bath is located on the highest point of Hesbân, it is safe to speculate that some water storage facility did exist. It could have been supplied by water collected from the roofs in winter, but in summer, water would have been available only by transport from lower elevations. Perhaps the water was carried by hand from such a storage facility to the bath tanks. A .30-meter wide ledge on the north side of the cold water tank may have served as a vantage point from which an attendant poured water into the two tanks.

The means of discharge of waste water from the bathing area is also unclear. There is no evidence of drains through the walls at floor level, and thus far, excavation has turned up no floor drains. However, both from the entrance and from the bathing room, the floors slope perceptibly down to a low point in front of the bench in the hallway (a drop of .20 meters from the bathing room and .46 meters from the entrance).

Further excavation may disclose a floor drain at this point. If so, one would expect a channel from that point in a westerly direction under the bench and under the west wall of the hallway. In the last days of excavation in 1974, an installation was uncovered outside the west wall of the hallway (*fig. 1*, the corner formed by walls 3 and 5) that may be a latrine or toilet. This is in the exact location where a channel from inside the hallway would come out and provide a steady stream of water to flush the latrine while the bath was in operation.¹¹

The Furnace System

The service area for the furnace system is the furnace room (*figs. 1 & 2*). This room (2.40 meters north-south x 3.20 meters or more east-west) is the most haphazardly constructed of the bath. It had an earth floor and walls on three sides. The east wall was either entirely ruined or did not exist. At least a large opening would have been necessary on the east side in order to supply the

¹¹This system of floor drains and subfloor discharge channels routed through the latrines is commonly used in the baths of Damascus.

furnace with sufficient air draft. A single remaining voussoir in the south wall at the southwest corner indicates that the room was partially or entirely roofed over with a vault built on an east-west axis. This room functioned as a storage facility for fuel as well as a work area from which an attendant stoked and cleaned out the furnace.

The furnace itself was located under the hot water tank and constructed of red baked brick (.22 x .22 x .05 meters on the average). An arched brick opening (*fig. 5*) leads into an oval-shaped vaulted fire chamber (1.90 meters long x .95 meters wide x .95 meters high). At the south end, a .45 x .45-meter flue raised .24 meters above the furnace floor connects the firing chamber to the hypocaust under the floor of the bathing room.

The hypocaust consists of a hollow area somewhat smaller than the bathing room floor and .44 meters high. This space was created by setting the bathing room floor up on eight square limestone pillars (.28 x .28 x .44 meters high), which support a subflooring of flat (.05 meters thick) basalt beams. This system has its antecedent in classical baths as well as the Umayyad baths at Khirbet el-Mefjer and Hammam as-Sarah. Usually, however, the pillars were constructed of stacks of round baked clay disks rather than of single pieces of stone. In most contemporary Islamic baths, this hypocaust system was abandoned for a simpler system of flue channels--a main channel connecting the furnace to the chimney with side channels to the extremities of the bathing rooms.¹² The system of hollowing out the entire floor is preferable, because it provides even heat to the entire surface of the floor, whereas the use of channels localizes the heat along the lines of the channels, thus creating areas of extreme heat and areas of insufficient heat on the surface of the floor.

The hot air was drawn from the furnace through the hypocaust by means of a chimney built into the partition wall between the bathing room and the hallway (*figs. 1 & 2*). The use of a single chimney is not as efficient for distributing the heat under the bathing room floor as the use of multiple chimneys around the perimeter of the room.¹³ Perhaps the relatively small size of the bathing room made a more complex chimney system superfluous, however.

¹²Écochard and Le Coeur, Part I, p. 26, fig. 11.

¹³At Hammam as-Sarah nine chimneys are distributed around the perimeters of the hot and medium heat rooms in order to distribute the hot air evenly under the floors.

From what has been said above it is clear that the bath at Ḥesbân is an example of small bath architecture of the Ayyūbid-Mamlūk period in which the typical features of larger contemporary baths have been simplified, but in which some of the sophisticated techniques of earlier bath construction have nevertheless been preserved.

This bath is an isolated example of baths in a rural setting and the first such discovered in Jordan.¹⁴ Its presence supports the thesis that Ḥesbân was a major town in the Ayyūbid-Mamlūk period with sufficient resources to build and maintain such a sophisticated structure and a sizable enough population to make use of it. A bath of this size would require about six attendants to keep it in operation--two in the audience/dressing room, two in the bathing room, one in the furnace room and one in charge of the water supply. With this number of personnel, the bath could accommodate a maximum of six bathers at one time--four in the audience/dressing room and two in the bathing room. The bath could therefore accommodate about sixty bathers in a full day's operation. It is possible that the bath was open only one or two days per week, perhaps on Thursday when bathing was necessary for religious as well as hygienic and social reasons. Relevant here too, is the question as to whether this is to be considered the private bath of a local lord residing in the building complex surrounding the structure, or a public bath open to the entire population of the town. The answer will have to await further excavation for the determination of the relationship of the bath to the buildings contiguous to it.

Finally, the discovery of the bath at Ḥesbân is an indicator that the bathing practices taken over by Islamic civilization from late classical antiquity were prevalent in rural areas as well as in major urban centers. Whether this was the case from the beginning of Islamic civilization or whether these practices spread from urban centers during the Middle Ages, is not clear at present. The information gap of three centuries between the Umayyad baths of the eighth century and the urban baths of the twelfth century is still a major problem. Since the study of baths in major urban centers like Damascus has failed to fill this gap, the answers to these questions may have to await the excavation of other significant rural Islamic sites like Tell Ḥesbân.

¹⁴L. T. Geraty, "The Excavations at Tell Ḥesbân, 1974," *ASOR Newsletter* (November, 1974):8.