

# Cura Aquarum in Israel

In memoriam Dr. Ya'akov Eren

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## Channel II in the City of David, Jerusalem: Some of its Technical Features and their Chronology

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Channel II is a major rock-cut water conduit along the eastern slope of the City of David in Jerusalem (Fig. 1). The existence of this water conduit, (named the "Second Aqueduct", as opposed to Hezekiah's Tunnel which was considered to be the first), was anticipated by W.F.Birch.<sup>1</sup> His arguments were highly criticized by C.R.Conder<sup>2</sup> and by A.H.Sayce.<sup>3</sup> Birch's theory was soon put to the test. It was C.Schick who was commissioned by the Palestine Exploration Fund to excavate at the suggested spots. The excavations, conducted in 1886 and 1890 were successful, as the anticipated aqueduct was indeed discovered (Fig. 1, between Points 6 and 7).<sup>4</sup>

In 1909-1911, the M.Parker expedition discovered the northern part of the channel, and recorded it, from the spring southwards, to a distance of c. 60 m, to a point where it bifurcates (Fig. 1, between Points 1 and 2).<sup>5</sup>

In 1913 R.Weill<sup>6</sup> reexposed the segment which was recorded by Schick, and added the discovery of a new segment, further to the south (Fig. 1, No. 9).<sup>7</sup>

In 1978, Y. Shiloh again cleared the central segment, already described by Schick and by Weill (Fig. 1, between Points 6 and 7). The report was recently published by D.T.Ariel and Y. Lender.<sup>8</sup>

In recent years (1995-2001) the authors have exposed several additional parts of the channel:

- In 1995, a 32 m long segment, which was previously unrecorded, was exposed at a distance of c. 290 m south of the spring (Fig. 1, No. 8).<sup>9</sup> This segment, which is cut as a tunnel, is located just south of the segment previously discovered by Schick and recleared by Weill and by Shiloh.

- In 1997-1998, the northern segment discovered by Parker was reopened and cleared.<sup>10</sup> Later, we continued its excavation further to the south up to a distance of c. 130 m from the spring (Fig. 1, between Points 1 and 3). Close to the southern end of this segment, we have exposed a small part of the channel by excavating from the surface (Fig. 1, No. 4).<sup>11</sup>

- Of the central segment of the channel, first discovered and cleared by Schick, and cleared again by Weill and by Shiloh, we cleaned an additional part of Channel II northwards, (Fig. 1, between Points 6 and 5). At the southern end of this segment (Fig. 1, Point 6), at a distance of c. 190 m south of the spring, is the point where this water conduit changes from a tunnel to an open channel. The former excavators (Schick, Weill and Shiloh) did not proceed northwards beyond this point, as it would have required much shoring up of the debris. We have cleared c. 13 additional meters of the open channel, from this point, where it was an open channel.

It seems now that most of the course of Channel II is known and recorded.

<sup>1</sup> Birch 1884a; 1884b; 1885.

<sup>2</sup> Conder 1884; 1887; 104.

<sup>3</sup> Sayce 1884.

<sup>4</sup> Schick 1884; 1886a; 1886b; 1890; 1891a; 1891b, 197-200.

<sup>5</sup> Vincent 1911, 6-8.

<sup>6</sup> Weill 1920, 139-157, Planche III.

<sup>7</sup> Weill 1947, 60-96.

<sup>8</sup> Ariel and Lender 2000, 13-18.

<sup>9</sup> Reich and Shukron 1998, 92.

<sup>10</sup> Reich and Shukron 2000.

<sup>11</sup> Reich and Shukron 1999b.

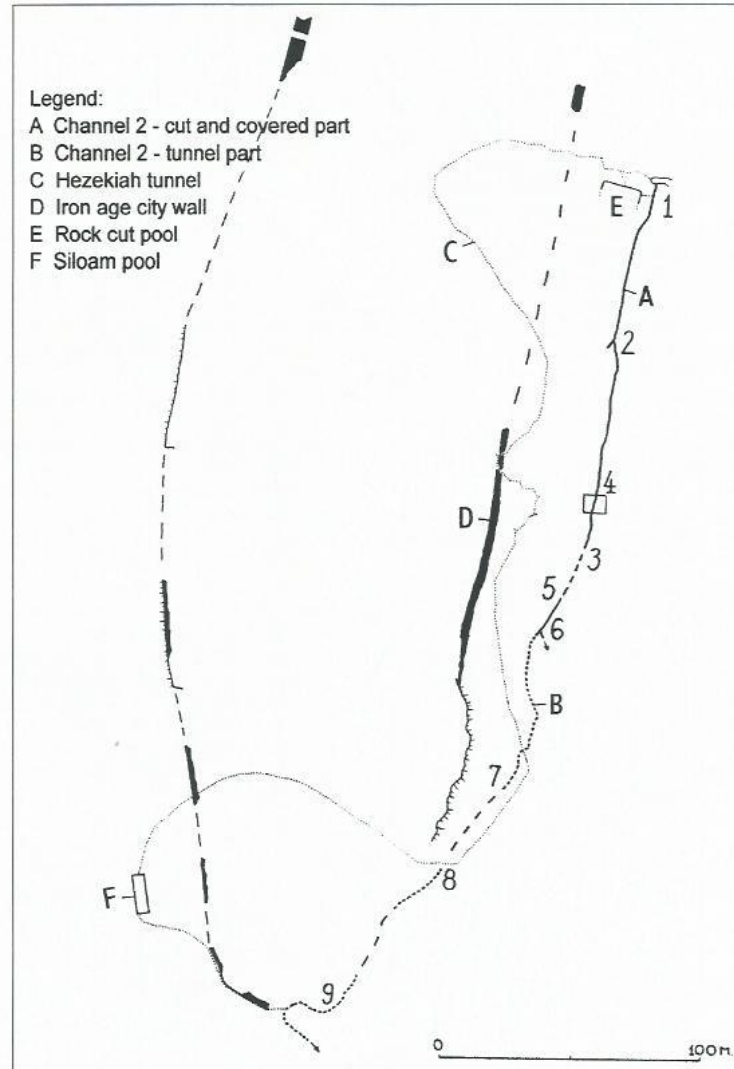


Fig. 1: Jerusalem, City of David. Channel II (after Weill 1947, Planche I). The segments excavated by various expeditions are marked by numbers (1 to 9). Note point 6, where Channel II changes from open channel in the north into a tunnel.

It should be noted that all the scholars who excavated and studied the various parts of Channel II, considered it to be a single water conduit, which was created in one continuous process, and which led water from the Gihon to the southern end of the City of David.<sup>12</sup>

Until the recent excavations carried out by the authors at the City of David, the prevailing theory recognized three water systems, which existed at the City of David: Warren's Shaft System; Channel II; Hezekiah's Tunnel.

Channel II was tentatively dated to the period between Warren's Shaft system and Hezekiah's Tunnel. W.F. Birch<sup>13</sup> was the first to suggest dating it to King Solomon's days (i.e. 10<sup>th</sup> century BCE). He also suggested naming it the "Siloam Channel" in which the waters "go softly".<sup>14</sup>

Our recent excavations near the Gihon and Warren's Shaft System have exposed new architectural elements previously unknown. These elements enable us to suggest a new interpretation of the water systems.<sup>15</sup> For our purpose, the following conclusions are of interest:

- Two different parts can be observed in the Warren's Shaft System, cut in two different periods. The early and original part was created in the Middle Bronze II period (18-17 centuries BCE). It included massive fortifications, a rock-cut pool and the upper part of the subterranean tunnel leading to it. The lower part, left unfinished, was cut later, in the Iron Age II (the 8<sup>th</sup> century BCE).

- The rock-cut pool was fed by the waters from the spring, by way of Channel II, and further by Tunnel III (the short tunnel, c.6 m south of the spring, which connects channel II and the pool).

- Channel II, at its northern end near the spring, was created as a channel cut in bedrock from the surface, and covered by large rock boulders. Above the covered channel the southern wall of the Spring-Tower was constructed. As this Spring-Tower is dated to the Middle Bronze II period (18-17 centuries BCE), it provides a *terminus ante quem* for the creating of Channel II in the area near the spring.

Examining Channel II along its entire route will reveal that it is clearly divided into two parts:

- The northern part, from the spring in the north to a distance of c. 190 m to the south (Fig. 1, between Points 1 and 6). This part was cut from the rock surface, as an open channel, covered with very large rock boulders. The boulders survived in the northern part, and a single boulder at its southernmost end.

- The southern part, from the point c. 190 south of the spring and southwards towards the Pool of Siloam, cut as a tunnel (Fig. 1, between points 6 and 9).

Although the southern tunnel-like part is a continuation of the northern channel-like part, these two parts reflect different rock-cutting traditions. The northern part of this conduit is clearly dated to the Middle Bronze II period (18 - 17 centuries BCE). There are no direct data for the dating of the southern part.

The technical features of the southern part, built as a tunnel, appear to indicate a date in the late Iron Age II. These include the following features:

- The small cross section of the tunnel. This is evident in the low height of the tunnel (c. 1.5 m on the average), as opposed to the considerable height of the open channel (up to c. 5 m !).

- The outline of the cross section, which is quadrangular and widest at its upper part, narrowing to the bottom. Walking in the channel-part is far easier than in the tunnel-part.

- The presence of short "dead-end" segments.

<sup>12</sup> Bieberstein and Bloedhorn 1994, III, 184-185.

<sup>13</sup> Birch 1884b, 77.

<sup>14</sup> Isaiah 8, 6.

<sup>15</sup> Reich and Shukron 1999a.

- The appearance of the tool marks on its rock sides. These are 'finer' than the rough tool marks in the northern channel-part. In places where upper openings are located in the tun-

nel's ceiling, it is evident that the segments of the tunnel, between these openings, were cut towards each other, as indicated by the direction of the tool marks on the rock walls.

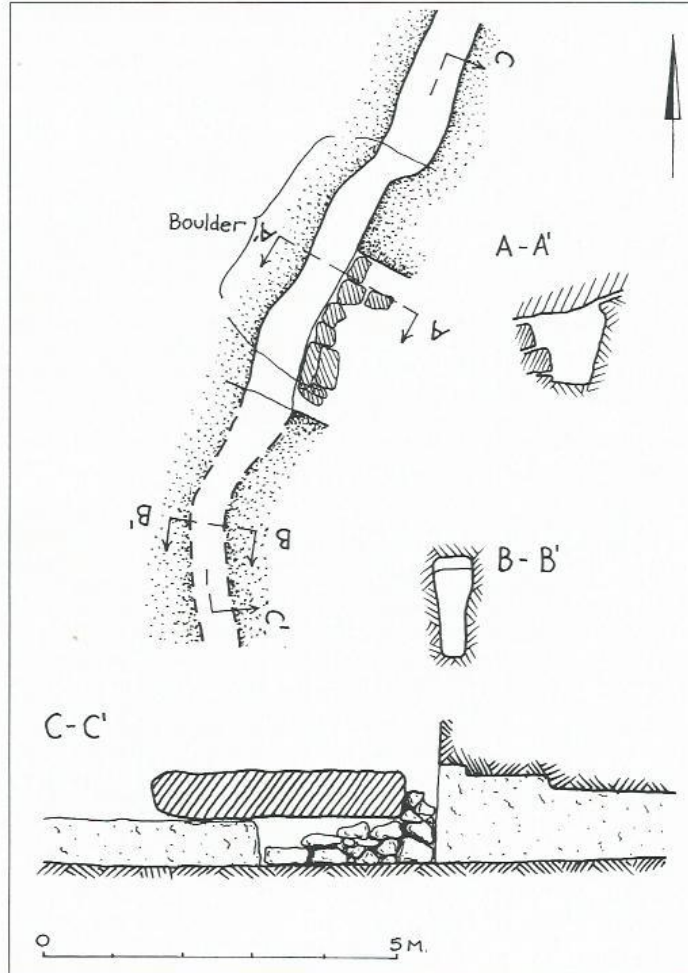


Fig. 2: Channel II, detailed plan and section of segment close to Point 6, where open channel turns into tunnel.

All these features are typical of the cutting of Hezekiah's Tunnel in the late 8<sup>th</sup> century BCE.

One main problem arises in relating the cutting of the two parts of Channel II to two different periods. If the southern part was developed about a thousand years after the northern part, the question arises what was the destination of Channel II in its earlier stage? Did the water carried by the channel reach a solid rock scarp, in which a tunnel was cut about a thousand years later? This leads to an apparently paradoxical situation.

We conducted a special clearance and examination of the water conduit at the spot where the channel is continued by the tunnel (Fig. 2). At this particular place, the channel is covered by a very long boulder (c. 3.5 m long). Furthermore, the eastern side of the channel, which is cut in bedrock all the way from the spring southwards, terminates with a rock-cut corner c. 2.5 m before the beginning of the tunnel, while its western rock-cut side continues as far as the tunnel. The missing eastern rock side of the channel is replaced by simple masonry made of fieldstones.

Unfortunately, it is impossible to conduct an excavation at this place, which would reach the spot from the surface. However, the data pointed to above, seems to be sufficient to suggest the following sequence of events:

Originally, in the Middle Bronze II period, the northern part of Channel II was cut from the spring southwards. On its way, close to the spring, it supplied water to the Warren's Shaft System through Tunnel III. At a distance of 62 m from the spring it made the first sharp turn to the east (Parker's bifurcation), probably to adapt itself to the local topography, so that the depth required for its cutting, from rock-surface to the planned level, should not exceed 4-5 meters. The channel continued southwards, and at a distance of c. 190 m from the spring, it made its second sharp turn to the east. We have no data to say whether at

this point it continued southwards, as a channel, on a more easterly course, on a lower rock terrace, or alternatively, it emptied into the valley of Kidron, to some reservoir. Only an excavation from the surface to this spot could clarify the problem.

At a later period, Channel II was continued southwards as a tunnel, starting from the second sharp turn. We presume that this continuation slightly predated the cutting of Hezekiah's Tunnel.

### Bibliography

- Ariel, D. T. and Lender, Y., Area B: Stratigraphic Report, in: Ariel, D.T. *Excavations at the City of David 1978-1985*, Directed by Yigal Shiloh, Jerusalem (=Qedem 40), 1-32.
- Bieberstein, K. and Bloedhorn, H. 1994, *Jerusalem, Grundzuege der Baugeschichte vom Chalkolithikum bis zur Fruehzeit der Osmanischen Herrschaft*, Wiesbaden.
- Birch, W. F. 1884a, Notes on Prae-Exilic Jerusalem, *PEFQSt* 17, 70-75.
- Birch, W. F. 1884b, The Waters of Shiloah (or the Aqueduct) that Goes Softly, *PEFQSt* 17, 75-77.
- Birch, W. F. 1885, The Waters of Shiloah, *PEFQSt* 18, 60.
- Conder, C. R. 1884, Notes from the April Quarterly Statement, *PEFQSt* 17, 240-241.
- Conder, C. R. 1887, Notes from the Quarterly Statement 1886-7, *PEFQSt* 19, 103-106.
- Reich, R. and Shukron, E. 1998, Jerusalem, the City of David, *Excavations and Surveys in Israel*, 18, 91-92.
- Reich, R. and Shukron, E. 1999a, Light at the End of the Tunnel, *Biblical Archaeology Review*, 25/1, 22-33, 72.
- Reich, R. and Shukron, E. 1999b, Jerusalem, the Gihon Spring, *Hadashot Arkheologiyot. Excavations and Surveys in Israel*, 109, 77\*-78\*.
- Reich, R. and Shukron, E. 2000, Jerusalem, the Gihon Spring, *Excavations and Surveys in Israel*, 20, 99\*-100\* (Area F).
- Sayce, A. H. 1884, Prae-Exilic Jerusalem, *PEFQSt* 17, 171-175.
- Schick, C. 1886a, The Aqueducts at Siloam, *PEFQSt* 1886, 88-91.
- Schick, C. 1886b, Second Aqueduct to the Pool of Siloam, *PEFQSt* 1886, 197-200.

- Schick, C. 1890, Recent Excavations at Shiloah, *PEFQSI* 23, 257-258.
- Schick, C. 1891a, The "Second" Siloah Aqueduct, *PEFQSI* 1891, 13-18, Plan II.
- Schick, C. 1891b, Reports from Jerusalem, *PEFQSI* 24, 198-204.
- Vincent, L.-H. 1911, *Underground Jerusalem*, London.
- Weill, R. 1920, *La Cité de David, Campagne de 1913-1914*, Paris.
- Weill, R. 1947, *La Cité de David, Campagne de 1923-1924*, Paris.

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## A *Miqweh* at 'Isawiya near Jerusalem

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THE installation described here was found during an archaeological survey of the hills north-east of Jerusalem.<sup>1</sup> It is located on the upper edge of a south-facing slope on which the main part of the village of 'Isawiya is built (map ref. 1738 1342). The installation was cleared in a brief excavation by the present writer in May 1982.<sup>2</sup>

The entire installation is cut out of the bedrock. It comprises two distinct parts: an outer stepped vestibule and an inner chamber (Fig. 1). The outer part consists of a flight of five steps. The upper four are cut across the entire width of the vestibule (2–2.15 m.), while the lowest is divided, by a rock prominence left uncut, into two separate steps (Pl. 28:A). The steps lead into the inner part of the installation through two openings which correspond to the lowest steps. The openings are 0.72 m. wide and 1.63 m. high; they have arched lintels and a common central doorjamb, 0.48 m. thick (Pl. 28:B). This doorjamb emerges out of the divided lowest step.

The inner room measures approximately 3.15 × 3.2 m. It has rounded corners and a rough, flat ceiling. Its floor consists of five steps which occupy its entire width. The upper four steps have a mean rise of 0.2–0.25 m. (as have the outer steps), whereas the lowest step is 0.6 m. high. In order to overcome the height of the last step, a small auxiliary step was left in the north-western corner. The treads of the steps vary in length from 0.35–0.4 to 0.6–0.65 m. The entire installation, except for the ceiling, is plastered with a greyish plaster laid in several coats.

The installation should be identified as a *miqweh* (a Jewish ritual immersion bath), typical of the Second Temple period and particularly of the first century B.C.E. and the first century C.E. All its architectural components are characteristic of *miqwa'ot* of that period in Jerusalem and several other places.<sup>3</sup> However one architectural element merits further discussion.

I have demonstrated elsewhere that a certain sub-type of the Jewish *miqweh* is characterized by a double entrance and/or a low partition cut out of the rock or built on

<sup>1</sup> The survey was carried out by D. Cohen and S. Gibson on behalf of the Department of Antiquities and Museums; *Hadashot Arkheologiyot* 78 (1982), pp. 65–66. The surveyors brought the peculiar entrance of this installation to my attention, for which I am most grateful to them.

<sup>2</sup> The excavation was carried out on behalf of the Department of Antiquities and Museums.

<sup>3</sup> R. Reich: Archaeological Evidence of the Jewish Population at Hasmonean Gezer, *IEJ* 31 (1981), pp. 48–52; E. Netzer: Ancient Ritual Baths (*Miqwaot*) in Jericho, *The Jerusalem Cathedra* 2 (1982), pp. 106–119; N. Avigad: *Discovering Jerusalem*, Nashville, 1983, pp. 74, 85, 139–143. Photos 63, 93, 149, 160, 175, 202.

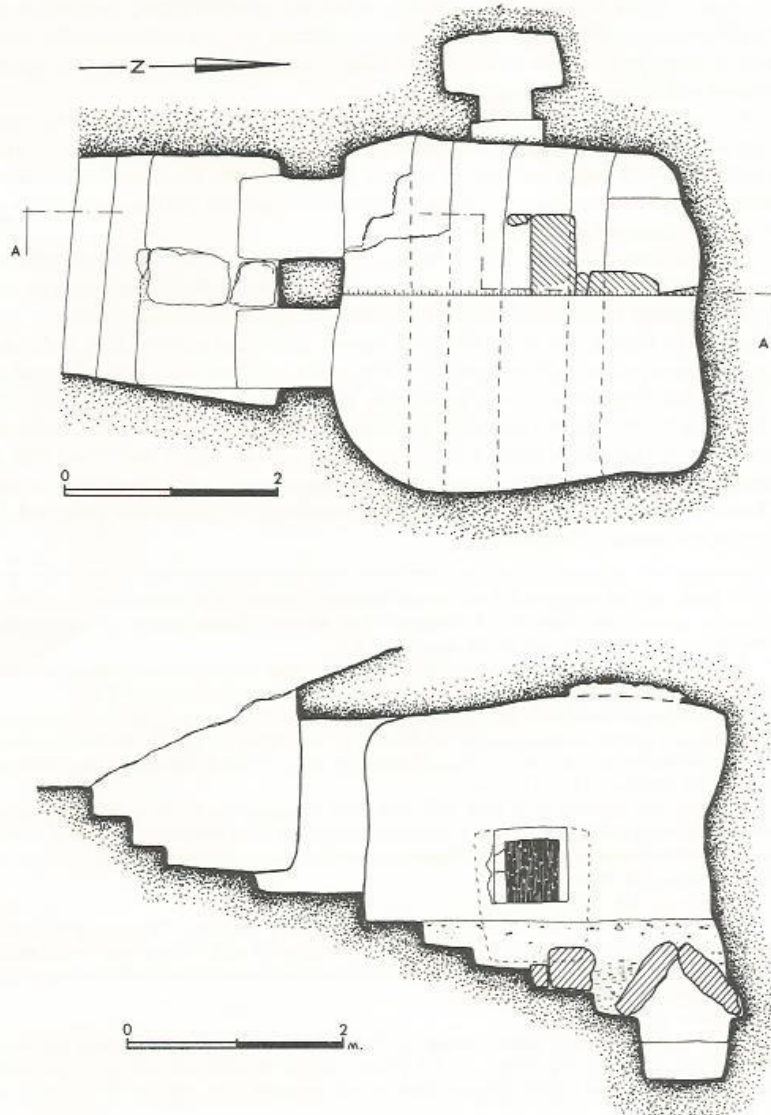


Fig. 1. Plan of the *miqweh* (above); section A-A (below.)

the stairs.<sup>4</sup> These elements are designed to create two separate paths. Comparison of this phenomenon with various literary sources indicates that one path served for entry and the other for exit, in order to avoid contact between the impure person entering the *miqweh* and the pure emerging from it.<sup>5</sup>

The installations in this sub-type can further be divided into those in which the lower part is cut out of the bedrock while their upper part is roofed by a stone-built barrel vault,<sup>6</sup> and those which are entirely cut out of the bedrock. The present installation belongs to the latter category. Some parallels to this category in and near Jerusalem will briefly be mentioned in the following.

An installation below the eastern Hulda Gate ('Triple Gate') of the Temple Mount, excavated by the expedition headed by Mazar;<sup>7</sup> a similar installation excavated by the same expedition to the south of the Temple Mount;<sup>8</sup> two installations excavated to the south of the Turkish wall of the Old City, between Zion Gate and the Dung Gate;<sup>9</sup> an installation excavated by Crowfoot in the 'City of David';<sup>10</sup> an installation excavated in 1942 by the Department of Antiquities near the Jericho road, to the east of the Old City;<sup>11</sup> the 'Grotte Sainte', excavated by Germer-Durand on the site of the Church of St. Pierre in Gallicantu, which I believe was originally a stepped installation with a double entrance;<sup>12</sup> the larger water installation (known as Cistern B) adjacent to the 'Tomb of the Kings';<sup>13</sup> and an installation excavated by Benoit and Boismard in Bethany to the east of Jerusalem.<sup>14</sup>

<sup>4</sup> R. Reich: Mishnah, Sheqalim 8:2 and the Archaeological Evidence, in A. Oppenheimer *et al.* (eds.): *Jerusalem in the Second Temple Period: Abraham Schalit Memorial Volume*, Jerusalem, 1980 (hereafter *Sheqalim*), pp. 225–256 (Hebrew); English summary, p. XIV.

<sup>5</sup> S. Lieberman: Notes, in E.S. Rosenthal (ed.): *P'raqim: Yearbook of the Schocken Institute for Jewish Research of the Jewish Theological Seminary of America*, 1, Jerusalem, 1967–1968, pp. 97–98.

<sup>6</sup> For examples of this sub-type, see Avigad (above, n. 3), Photos 93 (in which in a later period the steps were cut away), 100 (which also appears on Fig. 84:13), Fig. 146, Photos 147 and 160 (in which the central doorjamb is missing, leaving a wide opening); *Sheqalim*, pp. 229–233; R.A.S. Macalister: *The Excavation of Gezer*, III, London, 1912, Pl. LIV; etc.

<sup>7</sup> B. Mazar: *The Mountain of the Lord*, New York, 1975, photograph on p. 146, upper left; *Sheqalim*, pp. 235–236, locus 13053. The location of this installation gives it a firm *terminus ante quem*, i.e. it went out of use when the *temenos* of the Temple Mount was extended southwards by King Herod.

<sup>8</sup> *Sheqalim*, p. 238, locus 12051.

<sup>9</sup> *Sheqalim*, pp. 238–239.

<sup>10</sup> J.W. Crowfoot: Ophel Again, *PEQ* 77 (1945), installation No. 11 on Plan I. The traces of the central rock-cut doorjamb can be seen on Pls. X:1, XI:1. The short description on p. 76 dates these installations to the Byzantine period. In my opinion this is the date of the secondary use of these installations, while their original use was in the Second Temple period.

<sup>11</sup> *Sheqalim*, pp. 250–251.

<sup>12</sup> *Sheqalim*, pp. 241–242; J. Germer Durand: La Maison de Caïphe et l'Église Saint-Pierre à Jérusalem, *RB* 23 (1914), pp. 26–27, Fig. 4 on p. 27, Fig. 20 on p. 44, Pls. IV, IX:1; R.P. Marchet: *La véritable emplacement du Palais de Caïphe et l'Église Saint Pierre à Jérusalem*, Paris, 1927, pp. 78–79, Fig. 17 on p. 80, Pl. VI.

<sup>13</sup> *Sheqalim*, pp. 251–253; M. Kon: *The Tombs of the Kings*, pp. 35–38, Figs. 2, 3.

<sup>14</sup> *Sheqalim*, pp. 253–255; P. Benoit and M.E. Boismard: Un ancien sanctuaire chrétien à Béthanie, *RB* 58 (1951), pp. 200–251, Pl. i–ii.

The present installation is one of a considerable number of installations<sup>15</sup> and tombs<sup>16</sup> with which the hills of 'Isawiya are honeycombed. Additional surface pottery and building remains indicate an extensive occupation in ancient times, most of which dates from the Second Temple period. It is difficult to determine whether these remains indicated an ancient village (i.e. a rural settlement living mainly on agriculture), or whether one should presume that on this hill were located several private estates belonging to wealthy Jerusalem families. These estates included private buildings with purification facilities (a *miqweh*), similar to those in use within the city, and separate areas reserved for burial. The latter included the western hill of 'Isawiya (Ras el-Jami', map ref. 1735 1342) and the northern slopes of Mount Scopus, areas which are a continuation of the large necropolis of Jerusalem.

The installation was reused in a later period, as indicated by the following details. The greater part of the two upper steps inside the chamber was demolished and the rock was levelled to the height of the third step, leaving only a small part of the original steps on the western side to permit entry into the chamber. It seems therefore that only the left-hand (western) opening continued to serve as an entrance.

The lower part of the installation was turned into a burial-place.<sup>17</sup> It was covered with flat stones leaning against one another to form a simple gabled roof. The bases of one row of stones were leaned on the fifth step, just above the burial-place; for the other row a narrow niche was cut into the back of the chamber at a level corresponding to that of the fifth step. In this manner the lower eastern part of the chamber was covered while on the western side the steps enabled easy access to the tomb. A square opening was cut into the western wall, leading into a deep niche of unknown purpose.

Secondary use of *miqwa'ot* of the Second Temple period for a purpose different from their original use can be traced in several of the above-mentioned installations.<sup>18</sup> In most of these, considerable changes were made, such as the cutting away of the inner steps, in whole or in part, to increase the capacity so that the installation could be used as a cistern; the blocking of the double entrance; the removal of the central doorjamb; the replastering of the inner chamber; the opening of a manhole in the ceiling; and the like.

The few pottery sherds found in the debris cleared from the installation contained a mixture of types dated to the Second Temple and the Byzantine periods. These date the original and secondary uses of the installations.

<sup>15</sup> G. Hill: A Remarkable Cistern and Newly Discovered Spring at Aisawiyeh, *PEFQS* (1899), pp. 45-47, Fig. 1.

<sup>16</sup> E.L. Sukenik: Two Jewish Hypogea... 2. The Cave near Isawiyya, *JPOS* 12 (1932), pp. 27-31, Figs. 4-5, Pls. IV-V; idem, A Jewish Tomb in the Vicinity of Isawiyeh, *Qedem* 1 (1942), pp. 29-31, Figs. 1-3 (Hebrew); C. Graessner Jr.: Ras el-Jami' (Notes and News), *IEJ* 20 (1970), p. 120; A. Kloner: *The Necropolis of Jerusalem in the Second Temple Period*, unpublished Ph.D. dissertation, Hebrew University, Jerusalem, 1980, pp. 17-19 (Hebrew).

<sup>17</sup> Fragmentary human remains were found on the floor and were examined by J. Zias of the Department of Antiquities and Museums. All that could be determined is that they belong to a male aged 30-40.

<sup>18</sup> E.g. Avigad (above, n. 3), Photo 93; Marchet (above, n. 12).

287 (194) Z  
p. 134 n. 2

20. פטרי ואליס (לעיל, הערה 9), לוח XXXI: Babylonian Shrine: Section and Plan. שם, עמ' 6.

21. פדסטאלים אלה עשויים אכן במרבית המקדשים כאשר (ראה לעיל, הערה 18). על הפדסטאלים במקדש האשורי כבוצורה, עכריהירדן המזרחי, ראה להלן (הערה 23). פדסטאלים מאבן גיר, הנחשים עליגביהם אבנים מעוגלות מכולת, מצויים במקדש האשורי שכתל חלאף. ראה: R. Nauman et al., *Tell Halaf, II*, Berlin: 1935, pp. 349-357, Fig. 165, Tabls. 66:1; 67:2.

23. ראה, למשל, זוגות חדרים במצודת שלמנאסר הג' בנסרט, חדרים 8-9, 4-5, 10-11, 16-17, 6-7, 2-3, 14-15, 18-19 — כולם יחודית-מגורים סביב החצר הדרומית-מזרחית של המצודה. ראה: M.E.L. Mallowan, *Nimrud and its Remains*, London 1966, Maps, Pl. VIII.

24. ראה: C-M. Bennett, 'Excavations at Buseirah, Southern Jordan, 1974 — Fourth Preliminary Report', *Levant*, IX (1977), pp. 5-6, Fig. 1A. חדר V-8 הוא המקדש עצמו ואילו מובילה מערכת מדרגות-אבן, אשר בראשה, בשני קצותיה, מצויים שני פדסטאלים מאבן. החופרת מציינת אמנם, שלדעתה שימש חדר זה כמקדש, אך אינה מביאה לכך שום הקבלות או נימוקים ארכיטקטוניים (הפצי פולחן חסרים לחלוטין). עמ' 6.

25. פטרי ואליס (לעיל, הערה 9), לוח X, עמ' 6.

26. בנוסף למקדשים שנמנו לעיל (הערות 10, 18, 21) ראה גם: G. Turner, 'The Palace and Bâtiment aux Ivoires at Arslan Tash — A Reappraisal', *IRAQ*, XXX (1968), pp. 62-68, Pl. VI, NT 5, NT 4, NT 3, NT 2, NT 1.

27. ראה, למשל, המקדשים שנחפרו בבבל: R. Koldewey, *Die Tempel von Babylon und Borsippa*, Leipzig 1911, Tabls. III, V, VII. מעניינת העובדה, שעיקרון ארכיטקטוני זה מבוזר גם בין חדרים-הכס בחדרים-האשוריים הראשיים שבארמנות בחדרים-הכס בחדרים-אורד, ליום. בארמנות האשוריים נעשה השימוש בחדרים-הכס בחדרים-אורד, כאשר הכס צמוד אל אחד הקירות הקצרים. על כך ראה: G. Turner, 'The State Appartements of Late Assyrian Palaces', *IRAQ*, XXXII (1970), pp. 177-213. מוצאים את הכס צמוד למרכז קיר-האורד, ממול לפתח, ראה, למשל, את חדרים-הכס וחדרי-הקבלה הרבים שנחפרו בארמנות השנים בבבל: R. Koldewey, *Die Königsburgen von Babylon — I*: Die Südburg, *VWDOG* 54 (Nachdruck, Osnabrück 1969), Tab. 2; 'Anbauhof', 'Westhof', האולמות שמדרום ל', 'Mittelhof' II: Die Hauptburg und der Sommerpalast Nebukadnezars im Hügel Babil, *VWDOG* 55, Tab. 8; האולמות שמדרום ל-'Osthof'; האולמות שמדרום ל-'Osthof', Tab. 32, 'Osthof', 'Westhof', האולמות שמדרום ל-.

28. על ממדי הלכנים במבנים אשוריים ראה: מאלוואן (לעיל, הערה 23), עמ' 464. וראה הבחנתו של מאלוואן, כי לבנים גדולות (48x48 ס"מ) אופייניות לשלב הקדום של האימפריה האשורית כאלף הראשון לפנה"ס, בעוד שלבנים אחרות (35x35 ס"מ) הן: 'a size characteristic of the Sargonid dynasty'. על לבנים בחורסבאד ראה: לאוד ואלטמן (לעיל, הערה 10), עמ' 13-14.

29. על ממדי הלכנים בתקופה הניארכיבלית, ובעיקר בבבל, ראה: R. Koldewey, *VWDOG* 55 (supra, note 26), p. 4.

30. הניארכיבלית נעשה שימוש רב יותר בלבנים צרופות. גם לבניית קירות, ולא רק לריצוף כמו בבנייה האשורית. הלכנים בבבל קטנות יותר וממדיהן 33x33 ס"מ.

31. חקופות הברונזה הברזל, ראה: יי אהרונס, 'סקר בין רפיח לנחל מצרים', עתיקות ז (תשל"ד), עמ' 88-90; הנ"ל, ארץ ישראל בתקופת המקרא — גיאוגרפיה היסטורית, ירושלים תשכ"ג, עמ' 135, 273, הערות 21, 22. אך ראה גם הצעתו של אלט (A. Alt), *ZDPV-XXIX* [1926], p. 236. לזהות את לבן גביהם לבני.

32. התרגום לפי תדמור: H. Tadmor, 'The Campaigns of Sargon II of Assur', *JCS*, XII (1958), p. 34, lines 18, 46.

33. על המונחים Kanku (כמל), Kāru(m) (חמים) ראה: W. Von Soden, *AHW* (1963), pp. 437, 451-452. לבני המונח Kāru כמושבה מסחרית ראה: J. Lewy, *HUCA*, XXVII (1956), pp. 35 ff.

34. הצעות שונות הועלו עד כה לזיהוי של ה-Kāru החתום: באל-עריש, סכנת ברדוויל, פלוסיום, סילה. ראה: תדמור (לעיל, הערה 1), עמ' 272; H. Tadmor, 'Philistia under Assyrian Rule', *BA*, XXIX (1966), p. 92. חקופת מסעות מלכי אשור לפלשת', בתוך: עזה ובנותיה, תלאביב 1972, עמ' 111) לזיהויה במלחמת 'חמים' ולראותה כמבטאת את ההופעה של הצבאיות החול במפתח האלגונה של סכנת ברדוויל ומיתמם.

35. שטרן הוא היחיד שהיפנה בשנים האחרונות את תשומת הלב לפירושיו של פטרי בתל אבי סלימה. שטרן סכנה כצדק את שרידי שכבה G בשם 'ארמון אשורי', אלא שגם הוא לא עמד על נתוני הארכיטקטוניים המיוחדים של המקדש. ראה: E. Stern, 'Israel at the Close of the Period of the Monarchy — An Archaeological Survey', *BA*, XXXVIII (1975), p. 37, note 7.

36. ראה: F. Petrie & J.C. Ellis, *Anhedon, Sinai*, London: 1937.

37. ראה: פטרי ואליס, שם, לוח II: 6; וכן, G. Loud & C.B. Altman, *Khorsabad, II*, Chicago 1936, Pl. 26: E.

38. תצלום זה שמור בחיק מס' 213 — 'Egypt', שבארכיון מחלקת העתיקות המנדטוריות ופרטיו הם: מס' התצלום 6.B.V.R. 7969, צולם ביום 2.7.1935, בשעה 0750, מוגבה 800 רגל, בעדשה שמקדקה 6". כיוון הצילום לדרום. רצוני להודות לא' איתן, מנהל אגף העתיקות והמוזיאונים, על מתן הרשות לפרסם תצלום זה.

39. ראה: א' שטרן, התרבות החומרית של ארץ ישראל בתקופת הפרסית, ירושלים תשל"ג, עמ' 31.

40. ראה: פטרי ואליס (לעיל, הערה 9), עמ' 6-7, לוחות II: X, XXXI.

41. שם, לוח IX, עמ' 6; לוח II: 7.

42. שם, לוח XI, עמ' 8.

43. שם, לוח I: 5.

44. שם, לוח XVI.

45. שם, לוח II: 7, עמ' 6.

46. בהשוואתו של פטרי מצוי אידיוק בפרט קטן. חדרים 23, 24 כמקדש נבו בחורסבאד מרוצפים לוחות אבן ולא לבנים צרופות. ראה: לאוד ואלטמן (לעיל, הערה 10), לוח 84. מקדש אחר, קטן בממדי (5.80x4.70 מ'), המצוי בתוך מתחמו הגדול של מקדש נבו, מהווה הקבלה טובה יותר למבנה הנדון כאן. זהו חדר מס' 14, שאליו ניתן להיכנס מן החצר החיצונה של מתחם המקדש. ראה: שם, לוחות A-C: 18, F-F, E-E. במקדש זה מובילה מערכת של ארבע מדרגות, אשר משני צדדיה מעין פדסטאלים, אל משטח מוגבה מרופף בלבנים צרופות, המהווה את הדביר. על מקדשים נוספים בתוך תחומי ארמון סרגון בחורסבאד, שרובם בנויים לפי המתכונת הנדונה כאן, ראה: G. Loud, H. Frankfort & T. Jacobsen, *Khorsabad, I*, Chicago 1936 (OIP XXXVIII), Pl. 76, מס' 165, 166, 169, 173, 177, 192, וככל הנראה גם מצדדי-חדרים 143-146, 147-148.